



## Two Years of Ups and Downs: Barack Obama's Patterns of Integrative Complexity, Motive Imagery, and Values

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*President Obama's weekly radio addresses to the nation during his first two years in office were scored using thematic content analysis (TCA). TCA is a method for deriving quantitative data from qualitative materials through the use of detailed scoring manuals applied to oral or written texts by trained, reliable scorers. We scored the addresses for integrative complexity (IC), motive imagery (MI), and universal values. Obama's mean IC was second highest among recent presidents. His IC fluctuated in response to situational parameters, rising when he was negotiating and maneuvering his policies through Congress, falling when stress was high and a problem seemed amenable to a simple solution. His MI showed Achievement as his predominant motive. Achievement, Security, and Power were highest in his value hierarchy, which remained stable throughout the period; surprisingly, his ranking of Self-Direction was much lower than a previously published pan-cultural average. Last, we identified six clusters, time periods when his IC and Power imagery moved in opposite directions. The implications of this pattern for cooperative versus adversarial approaches in problem solving are discussed.*

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**KEY WORDS:** Thematic content analysis, integrative complexity, motive imagery, universal values, President Obama

Among historians, political scientists, journalists, and the general public, there is a long-standing interest in the psychological functioning of U.S. presidents. Presidential personality and cognitive processing are important in guiding the policies of the country—and, given the international influence of the United States, those of the world. Furthermore, the relationship of the psychological variables to how the president makes decisions may enable social scientists to understand and predict the resolution of political issues. Political psychologists have accordingly addressed questions of presidential personality, character, ideology, decision making, small-group as well as national leadership, and so on (see Knutson, 1972). Barack Obama, the most recent in the line of American presidents, who is now near the middle of his term of office, is of obvious interest in this context. In addition, interest in him and his leadership is now sharp for various reasons: his ethnic and biographical background, his charisma and oratory, the many domestic and international problems which he has faced during the past two years and with which he is now grappling, and the fact that political maneuvering in anticipation of the 2012 presidential election has already begun.

High-level officeholders are rarely accessible to such direct research methods as laboratory experiments, psychometric measures, face-to-face interviews, and questionnaires; their inaccessibility can result from a variety of circumstances, such as distance, age, historical era, language, or unwillingness to participate. To make research feasible despite these drawbacks, a toolbox of methods collectively called “leader assessment at a distance” has been developed (Post, 2003).

Assessment at a distance overcomes the difficulties noted above by basing conclusions on the analysis of verbal materials that are available to the researcher. These may be speeches, interviews, debates, letters, diaries, memoranda, books, memoirs, etc., and they may be oral, written, broadcast, electronically recorded, or disseminated via the “new media” of the Internet. Because the material is stored in such archives, personal access to the individual or group being studied is unnecessary.

This solution to the accessibility problem has problems of its own. A major drawback is the inability of the researcher to ask questions related to the subject matter (as opposed to the subject) of interest. That is, if the leader has not produced any available archived material on a particular topic or during a specific time period, there is no way to obtain relevant data on his or her thoughts and opinions, regardless of how crucial they might be to the research. Another question that has been raised about the “distance” methodology is the possibility that the texts being analyzed were actually produced by an aide or speechwriter rather than by the leader. However, it is highly likely that leaders select and retain speechwriters whose ways of thinking are not too different from their own; and memoirs of speechwriters themselves attest to the fact that their principals engage in heavy editing, revising, and sometimes rejecting submissions that are not to their liking (Donaldson-Evans, 2005; Frum, 2003). Repeated studies addressing this issue have had reassuring results. There are high correlations between conclusions based

on possibly ghostwritten materials and those unquestionably written by the leader (e.g., handwritten memos; e.g., Suedfeld & Tetlock, 1977), between spontaneous and prepared materials (e.g., Ballard, 1983), and between public documents and private ones such as diaries and family letters (e.g., Suedfeld & Tetlock, 1977).

In our study of President Obama's functioning at the middle of his term of office, we used techniques drawn from the general category called thematic content analysis (TCA; see Smith, 1992). TCA is one kind of tool in assessments at a distance and differs from such alternatives as interpretations based on computer-based counts of words or phrases or on biographical information (Hermann, Preston, Korany, & Shaw, 2001; Post, 2006).

TCA uses qualitative material and the analysis of themes and emphases (not merely specific words or phrases), but applies objective and scientifically rigorous methods in the process of deriving quantitative data. Entire texts or excerpts are duplicated, material that would identify the source or occasion (depending on the focus of the study) is removed as much as possible, paragraphs are randomly ordered, and the material is then scored by trained personnel whose interjudge reliability has been tested and documented. The scores can be analyzed by standard methods of inferential statistics.

#### *Variables of Interest*

In the current study, we chose three sets of variables that have previously been scored by TCA methods applied to various kinds of archived materials and in fact have been applied to Barack Obama in the course of studying the presidential candidates in the 2008 election (Cassel et al., 2007; Jhangiani et al., 2008) as well as to previous U.S. presidents (e.g., Donby & Winter, 1970; Preston, 2001; Preston & Hermann, 2004; Tetlock, 1988; Thoemmes & Conway, 2007; Winter, 1987).

One variable, integrative complexity or IC, is in the domain of cognitive processing (Suedfeld, 2010); one is a measure of motive imagery (MI), concentrating on three important motives: the needs for achievement, power, and affiliation (Winter, 1991, 1996, 2002); and the third indicates how relatively important the subject considers each of 11 categories of universal values and their more specific components (Schwartz, 1992; Schwartz & Bardi, 2001; Schwartz & Bilsky, 1990).

*Integrative Complexity.* IC is a state variable, measuring the structure of cognitive processing across situations. It is explicitly not a personality variable, and IC scoring explicitly implies nothing about the source's personality. IC has two components, differentiation (the recognition of more than one legitimate point of view and/or relevant dimension relevant to the topic) and integration (the recognition of relationships among the differentiated items, through, e.g., interaction, trade-off, synthesis, or incorporation within a higher-level system). The scoring is used to track or monitor changes in the individual's complexity of thought in a specific context and time period and to use these scores as signals forecasting the decisions that follow. Previous research has found that IC increases

as the individual addresses and tries to solve important problems. Decreases can occur in several cases: if a simple solution is considered adequate, if the problem appears unsolvable, if the decision has been made, or if the resources needed for a solution are expended and the situation reaches the level of “disruptive stress” because of external or internal factors (e.g., information overload/underload, time pressure, fatigue) and the decision maker is about to either leave the field or resort to a drastic simplifying strategy (Suedfeld, 1992).

*Motive Imagery.* Motives are considered to be somewhat stable aspects of personality, although their prominence relative to each other can be modified by circumstances and change to some extent as people age (Veroff, Reuman, & Feld, 1984). The three major categories of motive imagery (MI) scored via TCA are the needs for Achievement (*nAch*: the motivation to excel, create, compete successfully, live up to one’s potential), Power (*nPow*: motivation to exert influence on others while retaining one’s own autonomy), and Affiliation (*nAff*: the desire for warm, close personal relations). Political leaders are more likely to be successful if they are high in *nPow*; for example, Winter (2005) has found a correlation of  $r = 0.40$ ,  $p < 0.05$ , between the *nPow* and the greatness of U.S. presidents as rated by historians (correlations with the other two motives were zero-order), as well as  $r = 0.52$ ,  $p < 0.01$ , between *nPow* and the country being involved in a war during the president’s term in office. The correlation between *nPow* and the president falling into Barber’s (1972) “active, positive” category was an impressive  $r = 0.87$ ,  $p < 0.001$  (Winter, 2005). Interestingly, high achievement motivation, which is correlated with success in business, does not predict the same in politics (Winter, 2010a).

Although there is a general trend for individuals to emphasize the three categories in fairly consistent order, under specific conditions this order may alter quite drastically. Thus, increases in *nPow* and decreases in *nAff* in the communications of national leaders involved in serious international confrontations are associated with the impending outbreak of war (Winter, 2004).

*Universal Values.* The scale of universal values (Schwartz, 1992) identifies 11 major value categories, each of which includes a number of subordinate values called markers. Values are important guides to how one lives (and should live) one’s life; the hierarchy of values is considered to be a highly stable personality factor, although it—as in the case of motives—can be changed by circumstances and personal experiences. Some values are oriented toward benefiting the individual, while others are directed toward a more general welfare. Average scores across 88 samples in 40 countries have been developed for how important each value is considered by people of various cultures and both genders, showing a fairly high degree of consistency both in the nature of specific values and in their relative importance to people (Schwartz & Sagiv, 1995). Schwartz and Sagiv (1995) refer to these as pan-cultural norms. In the TCA version of values scoring, the frequency of words related to each value appearing in the text is considered to be an indicator of how important that value is in the subject’s hierarchy.

All of these measures raise a question that is not universal to all TCA techniques: whether the material to be scored reflects impression management rather than the true opinions or thoughts of the leader. That is, the speaker or writer may say what he or she wants the audience to believe, rather than the actual truth. This kind of manipulation is certainly possible, and under some circumstances highly probable, as concerns the content of the text. However, IC, motive imagery, and values are nonobvious characteristics that are not easily recognized and manipulated, and their implications are so subtle that the “desirable” message is not clearly identifiable. As one example, how would an image manipulator decide whether it is “best” for a president to speak of dealing with other nations through an appeal to amicable cooperation for common goals, bringing to bear the economic and military power of the country, or reaching unprecedented levels of prosperity and international progress (respectively, *nAff*, *nPow*, and *nAch*)?

There is another reason why IC in particular is especially resistant to impression management: the score is based on the structure, not the content, of the underlying cognitive process. Structure is a much more subtle variable: for example, “War is the only solution” and “Peace is the only solution” are opposite in content, but identical in structure and would receive the same IC score. A number of studies have shown that structure is to a great extent independent of—and less susceptible to manipulative distortion than—content. In many historical cases, changes in cooperative or competitive content have not been matched by changes in structure; and structure-based IC scores proved to be better predictors of future decisions (e.g., Suedfeld, Tetlock, & Ramirez, 1977). Furthermore, the optimal level of IC depends on the situation, so that any attempt to build a desirable façade runs into serious difficulties.

### *Hypotheses*

This is to some extent an exploratory study, as no extensive social science research has yet been published about President Obama. Our tentative hypotheses are based primarily on how he has been viewed by political analysts and journalists.

*Integrative Complexity.* Media descriptions of the president’s intellectual and decision making approaches emphasize his high intelligence, flexible planning, and dedicated attempts to see the point of view of the foreign leaders with whom he has contact, even those whose policies are hostile to the United States. On the other hand, he has taken strong adversary positions with domestic critics such as Fox News and with foreign counterparts whom he considers uncooperative (e.g., his dismissive treatment of Benjamin Netanyahu). He has not only continued the wars in Iraq and Afghanistan and escalated drone attacks on targets in Pakistan, but has—without consulting the Congress—committed American forces to combat over Libya. Accordingly, we predict that he has a generally high level of IC, but will

show serious decreases when under stress. It is worth remembering that descriptions of President Clinton's decision-making style were quite similar to those dealing with Obama; yet, the actual IC of Clinton's speeches was relatively low (Suedfeld & Wallace, 1995). The appearance of flexibility and information orientation may have reflected the fact that Clinton changed his mind frequently, a series of differentiations that journalists holistically interpreted as integration.

*Motive Imagery.* As a campaigner, Obama placed great emphasis on two goals. One was to bring the country together, and similarly to pursue cooperation and reconciliation with other countries that had been distancing themselves from President Bush's policies; the other, related goal was to shift the government's course drastically away from the priorities and attitudes of the Bush administration. From these themes, we predict high levels of *nAff* and *nAch*, with a lesser role for *nPow*. We also predict that he will show a rise in *nPow* when faced with what he perceives as intransigent opposition.

*Values.* Specific hypotheses concerning values are difficult to derive. Both the president's previous work and his oratory imply values that are other- rather than self-oriented. We would expect someone in his position to value autonomy (Self-Direction) and Achievement.

## Method

### *Scoring Methods*

*Integrative Complexity* (Baker-Brown et al., 1992). All IC scoring for research is performed by trained and qualified scorers, who have reached a correlation of  $r = .85$  with expert scoring on a test set of paragraphs; qualification can be achieved through training at one of several research nodes or through an online training program. All of these use the same manual, test materials, and criteria.

The scoring of integrative complexity (IC) begins with the identification of relevant documents. Depending on the volume of material available, either the entire set of materials or randomly selected excerpts are copied. The material to be scored is divided by paragraphs, the basic unit in IC scoring. Each paragraph is assigned a code number, after which the paragraphs are reassembled in random order.

Coder bias is a serious potential threat to the validity of archival research, in the same way as experimenter expectancy is to the validity of laboratory research, and all feasible steps are taken to avoid it. Blind scoring procedures are used. Extracts are randomized to limit inferences about chronology and the source, identifying information (names, places, etc.) is removed, and, when possible, excerpts being scored for several studies are mixed together to further obscure the source of the material.

**Table 1.** Scoring Criteria for Integrative Complexity

Score	Description/Criterion
X	Unscorable: The author's rule structure for drawing inferences or making decisions is not evident. Examples: Sarcasm, clichés, proverbs, quotes from other sources, confusing or incomprehensible content
1	Undifferentiated: One dimension or perspective; inclusion-exclusion
2	Some indication of differentiation, but not clear enough for 3
3	Differentiated: Several dimensions or perspectives recognized
4	Some indication of integration, but not clear enough for 5
5	Integrated: Relationships among differentiated units recognized
6	Some indication of overarching cognitive schema, but not clear enough for 7
7	Hierarchically integrated: Integration within an overarching conceptual schema

**Table 2.** Speech Extracts Scored for IC (Figures in parentheses show the percentage of extracts scored in each category.)

Score	Excerpt	IC Scoring Explanation
1 (35%)	The bad news is well known to Americans across our country as we continue to struggle through unprecedented economic turmoil. Yesterday we learned that our economy shrank by nearly four percent from October through December. That decline was the largest in over a quarter century, and it underscores the seriousness of the economic crisis that my administration found when we took office.	<p>Untrained scorers may conclude that they see two dimensions: learning that the economy shrank by some 4%, and the emphasis this places on the seriousness of the economic crisis. However, much of this extract is deemed “unscorable,” as it is merely description. If we remove what is pure description, we are left with:</p> <p><i>The bad news is well known to Americans across our country as we continue to struggle through unprecedented economic turmoil. [ . . . ] it underscores the seriousness of the economic crisis that my administration found when we took office.</i></p> <p>Thus we are left with bad news that is well known as the country struggles through economic turmoil. New information simply confirms this point of view and does not modify it. In other words, a single dimension (“the economy is in a bad state”).</p>
2 (23%)	The way the system is currently set up, these banks are at a disadvantage because while they are often playing by the rules, many of their less scrupulous competitors are not. So, what reform will do is help level the playing field by making sure all our lenders—not just community banks—are subject to tough oversight. That's good news for our community banks, which is why we've received letters from some of these banks in support of reform.	<p>A score of 2 is given when there is emergent differentiation; insufficient to warrant a score of 3, but beyond the one-dimensional requirements of a 1. This is what we see in this example.</p> <p>The initial sentence is one-dimensional. There is no indication of differentiation. However, the speaker indicates that reform will “help level” the playing field (reform isn't the only thing that will “level” the playing field). Further emergent differentiation appears with “not just community banks” which is capped off with “letters from <i>some</i> of these banks”—again suggesting there is a differentiation among and between banks.</p>

**Table 2.** (cont.)

Score	Excerpt	IC Scoring Explanation
3 (39%)	It began with the passage of comprehensive health insurance reform that will begin to end the worst practices of the insurance industry, rein in our exploding deficits, and, over time, finally offer millions of families and small businesses quality, affordable care—and the security and peace of mind that comes with it. And it ended with Congress casting a final vote on another piece of legislation that accomplished what we've been talking about for decades—legislation that will reform our student loan system and help us educate all Americans to compete and win in the 21st century.	<p>A 3 requires “clear specification of at least two distinct ways of dealing with the same information or stimulus.” In this example, we are uncertain what “it” refers to. However, this ambiguity isn't sufficient to warrant an “X” (e.g., scorer uncertainty or breakdown in understanding).</p> <p>The speaker refers to something that began with the passage of health insurance reform and ended with the passage of legislation reforming student loan and education systems. Although there is no or only limited differentiation within each of these discussions (e.g., there is a list within the discussion of health reform, which is defined as a 1: “end the worst practices of the insurance industry, rein in our exploding deficits, and, over time, finally offer millions of families and small businesses quality, affordable care—and the security and peace of mind that comes with it”), it is clear that at least two distinct ways exist of understanding what occurred during “it,” and the passage thus meets the criteria for a 3.</p>
4 (3%)	As we move forward in the coming weeks, I understand that members of Congress from both parties will want to engage in a vigorous debate and contribute their own ideas. And I welcome those contributions. I welcome any sincere attempts to improve legislation before it reaches my desk. But what I will not accept are attempts to stall, or drag our feet. I will not accept partisan efforts to block reform at any cost. Instead, I expect us to move forward with a spirit of civility, a seriousness of purpose, and a willingness to compromise that characterizes our democratic process at its very best. If we do that, I am confident that we will pass reform this year, and help ensure that our entrepreneurs, our businesses, and our economy can thrive in the years ahead. Thank you.	<p>Scores above 3 require that differentiation is clearly evident and that we see emergent or clear integration of concepts.</p> <p>The initial signal that we may score differentiation is: “members of Congress from <i>both</i> parties.” This by itself is insufficient for a 3, so we continue. This is followed by “vigorous debate;” “contribution” of ideas, and “sincere attempts at” improving legislation. There is also “willingness to compromise” which is indicative of democratic process. Clearly the speaker understands that there will be debate between or among various positions. While there is a fair bit of material that would be categorized as a 1 (i.e., an “if-then” construction indicative of categorical rejection, along with “not accept partisan efforts;” or “not accept attempts to stall,” plus a list at the end “our entrepreneurs, our businesses, and our economy”), there is an indication that debate is welcomed.</p> <p>While negotiation can be scored a 5, simply the mention of the word “negotiation” is insufficient. Rather, we see what is best described as “tension between alternatives”: The manner in which alternatives are presented suggests that tension exists between or among them—that is, an indication that a dynamic relationship exists between the alternative perceptions or dimensions. When scoring IC, we score an extract with the highest justified score: therefore, this paragraph receives a 4.</p>
5, 6, 7	<i>There were no excerpts in these categories</i>	



**Table 3.** Themes Scored for Motive Imagery (Examples)

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*Power* (see Winter, 1991)  
 Actions that express power (impact, control, or influence over others)  
 Actions that arouse actual strong positive or negative emotions in others  
 Concern for reputation or position

*Affiliation* (see Heyns, Veroff, & Atkinson, 1992)  
 Desire to be liked, accepted, or forgiven  
 Liking another person  
 Friendly, nurturing or companionate activities

*Achievement* (see McClelland, Atkinson, Clark, & Lowell, 1992)  
 Competition with a standard of excellence  
 Unique accomplishment  
 Long-term involvement

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**Table 4.** Examples of MI Scoring

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Motive	Example
Achievement	In the weeks and months ahead, we have the opportunity to build on the work that we've already done. An opportunity to rebuild our global economy <u>stronger than before</u> .
Power	So today, I am <u>urging</u> the House and the Senate, Democrats and Republicans, to seize the opportunity, and vote for reform that gives the American people the best care at the lowest cost.
Affiliation	This week, I <u>spent some time with Americans across the country who are hurting</u> because of our economic crisis . . . They've been looking to those they sent to Washington for some hope at the time they need it the most.

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**Table 5.** Major Value Categories and Selected Markers (Schwartz, 1992)

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Value Category	Sample Markers
Power	Social power Authority Preserving public image Social Recognition
Achievement	Successful Capable Ambitious Influential Intelligent Competitive
Hedonism	Pleasure Enjoying Life Humor
Stimulation	Daring A varied life An exciting life

**Table 5.** (cont.)

Value Category	Sample Markers
Self-Direction	Curious Creative Freedom Choose own goals Self-respect
Universalism	Protecting the environment A world of beauty Social justice Equality A world at peace
Benevolence	Helpful Honest Loyal Responsible True friendship Mature love
Tradition	Humble Respect for tradition Detachment
Conformity	Obedient Politeness Self-Discipline
Security	National security Reciprocation of favors Social order Family security Sense of belonging Patriotism
Spirituality	Inner harmony A spiritual life Meaning in life Unity with nature Belief in God Discovering one's true self Membership in a religion

**Table 6.** Examples of Scoring for Universal Values

Value	Example
Achievement	We will emerge from this trying time <u>even stronger and more prosperous than we were before.</u>
Security	Many have risked their lives. Many have given their lives. And as a grateful nation, humbled by their service, <u>we can never honour these American heroes or their families enough.</u>
Power	As long as I am your President, <u>I'll never stop fighting</u> to make sure that the most powerful voice in Washington belongs to you.
Universalism	And in Ghana, I laid out my agenda for <u>supporting democracy and development in Africa and around the world.</u> NOTE: May also be scored for Power.

The paragraphs are then scored on a 1–7 scale by a qualified scorer who is unfamiliar with the hypothesis of the study and with the source of the texts (see Table 1). Some proportion of the text, usually about 20%, is independently scored by another qualified scorer. Interjudge reliability must reach at least  $r = .85$  for the scores to be considered useable in research. There must be a minimum of five paragraphs from each document (more is preferable), and the mean score is calculated for all paragraphs scored for a given time period, individual, topic, or other relevant category. Table 2 gives examples of speech extracts used in this study and how they were scored for IC.

*Motive Imagery* (Winter, 1994). The scoring for motive imagery (MI), reflecting the subject's needs for achievement, power, and affiliation (*nAch*, *nPow*, and *nAff*, respectively), is also performed by qualified scorers with reliabilities of  $r = .85$  or higher, using Winter's standard scoring manual. Table 3 shows some of the themes scored for each motive, and Table 4 gives examples of speech extracts and how they were scored for MI. The number of references to each value per 1,000 words of text constitutes the data for analysis.

*Universal Values* (Schwartz, 1992; Suedfeld, Legkaia, & Brcic, 2010). Schwartz and his colleagues have devised the widely used list of universal values referred to previously. Originally measured through a questionnaire, values became available for TCA scoring through a scoring manual as with other TCA methods (Suedfeld et al., 2010). The unit of scoring is the paragraph, and any paragraph can be scored only once for a reference to any value *marker*, although it can be scored for several individual markers of the same value. Unit length is held approximately constant by breaking very long paragraphs into several scoring units and combining very short ones into one unit. Paragraphs that contain no references to values are deleted from scoring. Mean scores are calculated by dividing the number of scored mentions for each value by the number of scores for all values. The resultant number was multiplied by 100 to increase clarity.

For the current study, two trained scorers noted mentions of each of the 11 values. Any discrepancy was resolved through discussion. Values were scored as President Obama's own if the mention was accompanied by a pronoun or noun such as I, we, my, etc. Mean scores were calculated by dividing the number of mentions of each value by the number of scores for all values within the particular statement.

Table 5 presents the major value categories and samples of the markers subsumed within each, and Table 6 shows a few examples and their scoring.

### *Materials Scored*

Our study used a single type of source material in order to maximize consistency of medium, format, and context across the texts.

For IC and MI, the full texts of each of President Obama's weekly radio addresses to the end of 2010 to the nation, posted on the White House website (<http://www.whitehouse.gov/briefing-room/weekly-address>), were compiled into

a database. The date and the broad issue area discussed (i.e., domestic or international policy as well as topics such as taxation, health care, or education, etc.) were recorded. For comparison purposes, the same procedure was applied to radio speeches broadcast prior to Obama's presidency, when he spoke on the "Democratic Weekly Radio Address" (available via LexisNexis). A total of 104 weekly radio addresses appeared in the database (one week the address was given by Vice-President Biden and was not included). Prior to Obama's inauguration, he spoke four times on the program "Democratic Weekly Radio Address"; these speeches were scored as the baseline.

Each speech compiled into the database was taken "as is" in terms of paragraphs (the basic scoring unit). Unless a trained TCA coder felt that a paragraph would receive a different code if more material were included, the paragraphs were left unchanged. The single exception to this rule while coding IC was the appearance of single sentences reading something akin to "Thank you for listening" or "Thank you for listening and God bless America" or similar clichés, which are unscorable according to the rules laid down in the IC scoring manual (Baker-Brown et al., 1992).

Data were sampled for both IC and MI as follows. We took all of the paragraphs that appeared within a specific month and randomly sampled 10 extracts per month. This is more than the minimum outlined in the IC coding manual (Baker-Brown et al., 1992). By focusing on monthly segments, this procedure avoided a misleading emphasis on meaningless week-to-week fluctuations in the scores, as well as the need to score an unwieldy number of units, while retaining a large enough sample (242 scored units, plus 30 from the period prior to the Obama administration taking office) and a solid basis for identifying changing emphases and trends over time.

The extracts were then scored in accordance with the blind scoring procedures described above. Reliability scoring was performed on all extracts in the study by two qualified scorers. Interscorer reliability was over  $r = .85$  for IC and close to 1.0 for MI and values.

Because value hierarchies are theoretically considered to be highly stable across situations and time periods, it seemed inappropriate and unnecessary to track possible changes on a month-by-month basis as with IC and motive imagery, both of which are more environmentally reactive. Instead, the number of references to each value was calculated from entire texts at five points in time: pre-inauguration broadcasts in November 2008; January and February 2009 in order to compensate for insufficient data in January alone; and then in each July and January (i.e., at six-month intervals). We included the broadcasts of November 2010 in order to have a "midterm" endpoint. Twenty-eight complete texts were scored for values. We scored 5.6 complete radio addresses per month, with an average of 12 paragraphs per statement. This resulted in about 67 paragraphs per month, a sufficient number to minimize variation related to momentary or irrelevant influences.

## Results

### *Speech Contents*

Of the 272 extracts scored for IC and MI, 250 dealt exclusively with domestic issues and another 20 addressed a mixture of domestic and foreign topics. The pre inauguration extracts were even more skewed: domestic policy content was 100%. The most frequently mentioned topics were the economy, health care reform and related matters, energy and environmental issues (among them the Gulf oil spill), defense and veterans' affairs, and domestic politics.

### *Quantitative Analyses*

To observe patterns across time, the data from January 2009 to December 2010 were analyzed using one-way repeated measures ANOVA in SPSS version 16.0.

*Integrative Complexity.* The overall IC score was  $M = 2.12$ ,  $SD = 0.92$ . This is the second highest mean score reported among post-World War II presidents, John F. Kennedy having the highest ( $M = 2.18$ ; Thoemmes & Conway, 2007). Interestingly, no extract reached the range of clear integration (scores of 5–7). Figure 1 shows the changes in IC over the entire period of scoring. Across time, IC changes showed a significant pattern, polynomial of order 8,  $F(1,7) = 15.28$ ,  $p = 0.006$ , partial  $\eta^2 = .69$ . Although there was frequent fluctuation in the president's IC, overall he began at a higher level than he showed at the end of the period,  $M = 1.87$  vs.  $1.38$ ,  $t(7) = 2.65$ ,  $p = 0.03$ .

Table 7 shows significant trends in IC patterns during periods of particular success or uncertainty/failure (presumably, periods of low and high stress, respectively) for the President's policies. In total, six such time periods were found.

*Motive Imagery.* Figure 2 shows the changes in all three motive imagery categories throughout the period being studied. Across the entire database, Achievement imagery predominated, with Power and Affiliation far behind and almost tied: respectively,  $M_s = 8.66$  ( $SD = 8.68$ ),  $3.86$  ( $6.58$ ), and  $3.47$  ( $7.45$ ). Repeated measures ANOVAs were calculated for each of the three motives separately. Power imagery showed significant changes across time, polynomial of order 13,  $F(1, 7) = 6.13$ ,  $p = 0.04$ , partial  $\eta^2 = .47$ . There were overall changes in Affiliation imagery, polynomial of order 9,  $F(1,7) = 7.63$ ,  $p = 0.03$ , partial  $\eta^2 = .52$ . There were no significant differences between the beginning and the end of the total scoring period for any of the motives.

Other significant MI changes during specific time periods are shown in Table 7.

*Values.* Table 8 shows changes in President Obama's value hierarchy averaged over the two-year period, and his hierarchy compared with the pan-cultural norms (averages) published by Schwartz (1992). There were no statistically significant changes in Obama's hierarchy during the period.

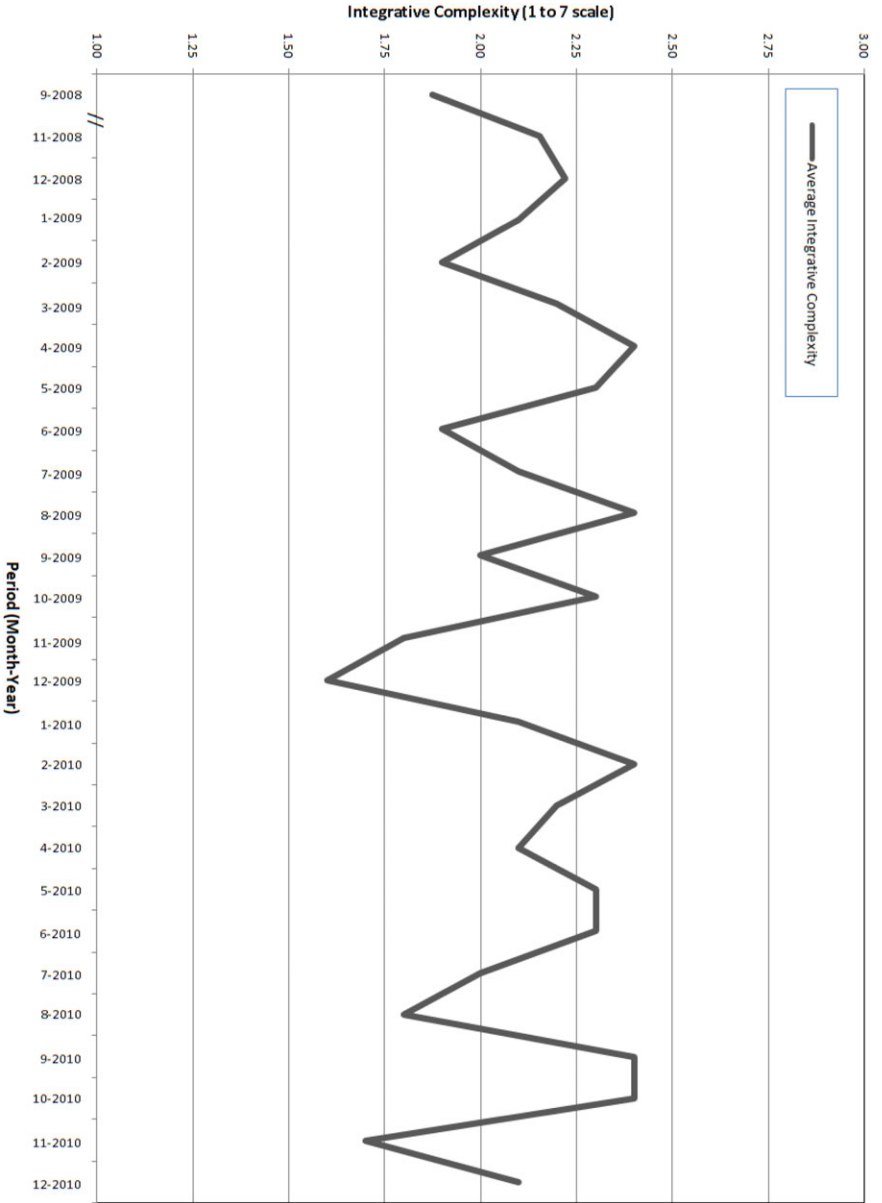


Figure 1. IC of President Obama, month by month.

**Table 7.** Significant IC and MI Trends during Selected Periods (“*eta*” refers to partial  $\eta^2$ )

Dates	Events	IC	MI
Jan.–April 2009	Obama enters presidency	Linear trend: $F(1,9) = 4.70$ , $p = 0.05$ , $\eta = .34^*$	<i>nAch</i> : Quadratic trend: $F(1,9) = 4.97$ , $p = 0.05$ , $\eta = .36$ <i>nAff</i> : Linear trend: $F(1,9) = 3.86$ , $p = 0.08$ , $\eta = .30^*$
April–Sept. 2009	Health care discussions begin	Polynomial order 4: $F(1,9) = 7.63$ , $p = 0.02$ , $\eta = .46^*$	
Sept. ‘09–Feb. 2010	Health care debates & votes; Afghanistan surge	Quadratic trend: $F(1,9) = 9.00$ , $p = 0.02$ , $\eta = .50^*$	
Feb.–May 2010	Health care debates; bill passed and signed	Quadratic trend: $F(1,9) = 6.00$ , $p = 0.04$ , $\eta = .40^*$	<i>nPow</i> : Linear trend: $F(1,9) = 5.65$ , $p = 0.05$ , $\eta = .41^*$
May–Aug. 2010		Linear trend: $F(1,8) = 11.64$ , $p = 0.01$ , $\eta = .59^*$	<i>nPow</i> : Linear trend: $F(1,8) = 11.29$ , $p = 0.01$ , $\eta = .56^*$
Aug.–Dec. 2010	Midterm campaign & election; tax bill; “Don’t ask, don’t tell”; nuclear arms treaty with Russia	Cubic trend: $F(1,9) = 12.94$ , $p = 0.01$ , $\eta = .59^*$	<i>nPow</i> : Linear trend: (Sept.–Dec.): $F(1,9) = 5.56$ , $p = 0.04$ , $\eta = .38^*$

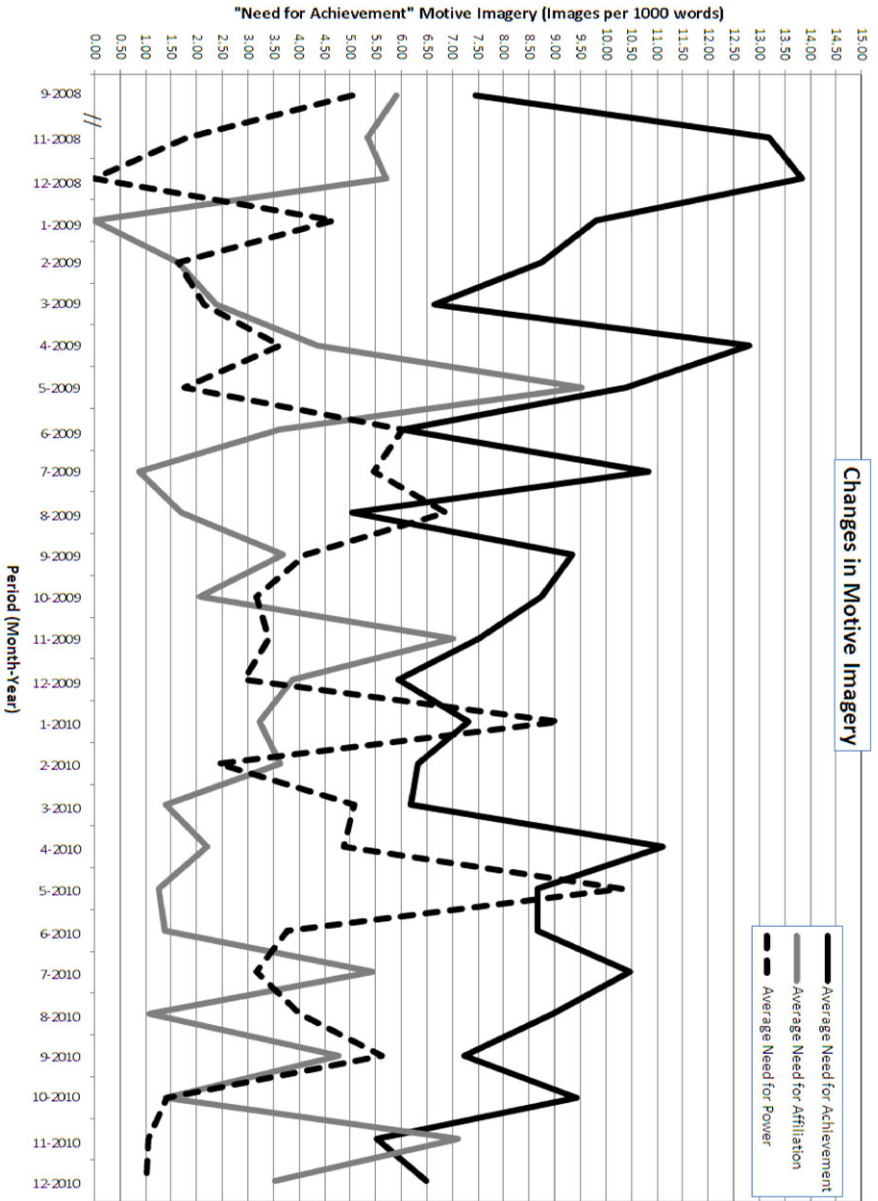
*Relationships between IC and MI.* The data identify six time periods during which negative relationships existed between IC and Power imagery (see Table 9). These are periods during which there is either a simultaneous increase in IC and a drop in Power imagery, or vice versa. The first pattern is considered to imply a cooperative strategy toward the major problem of that period; the second, an adversarial strategy. We shall label these time periods “clusters”; their implications are examined in the Discussion section.

## Discussion

### *Speech Contents*

As noted in the Results section, the overwhelming majority of the speeches concentrated on domestic issues and policies. Considering that during the first two years of President Obama’s term he had to deal (and presumably knew in advance that he would have to deal) with such issues as the wars in Iraq and Afghanistan, the nuclear programs of North Korea and Iran, the increasing assertiveness of Russia and China, the Middle East problem, anti-U.S. policies among nations in Latin America, electoral fraud and violence in several countries around the world,

Figure 2. MI of President Obama, month by month.





**Table 8.** Value Hierarchies: Barack Obama and Pan-Cultural Norms

Value	Obama Mean	SD	Rank in Obama Hierarchy	Rank in Pan-Cultural Norms
Achievement	30.62	14.69	1	6
Security	27.06	19.96	2	2.5
Power	18.00	10.66	3	4
Benevolence	9.60	9.98	4	1
Universalism	8.27	9.29	5	5
Conformity	2.35	4.29	6	10
Self-Direction	1.67	4.68	7	2.5
Stimulation	1.18	5.26	8	9
Enjoyment	0.78	2.63	9	7
Tradition	0.45	2.03	10	8
Spirituality	0.00	0.00	11	Unranked

**Table 9.** Time Clusters Showing Adversarial and Cooperative IC-*nPow* Patterns

Month-Year	Cluster No.	Average IC	Average <i>nPow</i>	Change in IC	Change in <i>nPow</i>	Interpretation
9-2008		1.88	5.03	n/a	n/a	n/a
11-2008	1	2.15	1.83	0.28	-3.20	Cooperative
12-2008		2.22	0.00	0.07	-1.83	Cooperative
1-2009		2.10	4.69	-0.12	4.69	Adversarial
2-2009		1.90	1.65	-0.20	-3.04	
3-2009		2.20	2.15	0.30	0.50	
4-2009		2.40	3.64	0.20	1.49	
5-2009		2.30	1.76	-0.10	-1.88	
6-2009	2	1.90	6.03	-0.40	4.27	Adversarial
7-2009		2.10	5.47	0.20	-0.56	Cooperative
8-2009		2.40	6.88	0.30	1.41	
9-2009		2.00	4.14	-0.40	-2.73	
10-2009	3	2.30	3.16	0.30	-0.98	Cooperative
11-2009		1.80	3.41	-0.50	0.25	Adversarial
12-2009		1.60	2.94	-0.20	-0.47	
1-2010		2.10	9.08	0.50	6.14	
2-2010	4	2.40	2.42	0.30	-6.66	Cooperative
3-2010		2.20	5.09	-0.20	2.66	Adversarial
4-2010		2.10	4.88	-0.10	-0.21	
5-2010		2.30	10.31	0.20	5.43	
6-2010		2.30	3.77	0.00	-6.55	
7-2010		2.00	3.18	-0.30	-0.59	
8-2010	5	1.80	4.02	-0.20	0.85	Adversarial
9-2010		2.40	5.63	0.60	1.61	
10-2010		2.40	1.43	0.00	-4.20	
11-2010		1.70	1.05	-0.70	-0.38	
12-2010	6	2.10	1.01	0.4	-0.04	Cooperative

etc., this was an amazing finding. Whether it reflects the President's own priorities or an effort to target the radio addresses to salient issues facing Americans in their day-to-day lives is an interesting question.

### *TCA Patterns*

*Integrative Complexity.* President Obama's overall mean IC score of 2.12 was consistent with his score for campaign speeches up to December 2007 ( $M = 2.02$ ; Cassel et al., 2007), but a major decrease from a speech in summer 2008, which was scored at 2.58 (Jhangiani et al., 2008).

Reflecting the importance of studying the psychology of U.S. presidents, there have been several previous TCA studies of presidential speeches. Those that addressed IC or MI used the same scoring manuals, and scorers qualified to the same reliability criterion as the current article. Most of these studies concentrated on iconic occasions such as the inaugural address, but one study (Tetlock, 1981) compared campaign speeches with speeches from the first post-inaugural month for 20th Century presidents in their first term. Tetlock found that most presidents' IC increased between the two speeches, supporting the challenger-incumbent difference described below and perhaps also reflecting the increased information and accountability of the sitting president. Presidents who showed only a small increase, or none at all, subsequently attained less than stellar success in office: Wilson, Nixon, Carter, Harding, Clinton (first term), and Hoover. Another study (Suedfeld & Wallace, 1995) analyzed Bill Clinton's IC during his first election campaign and sampled from other speeches given in the first month, second year, and third year of his first administration. The mean scores declined in every sample, from a high of 2.31 during the campaign to a low of 1.68 in October–December 1993.

The current results show a peak in Obama's IC soon after his electoral victory. Although there was a decrease in February 2009, it was not statistically significant and thereafter his IC continued to rise. We hypothesize that the increase followed from the fact that being president requires mustering cognitive resources for the new, powerful—and very important—decision making position. The pattern is consistent with the pre- to postelection changes found among other newly elected presidents.

There were two unusually volatile areas later in the IC pattern. One was a large drop during late 2009, the period of the acrimonious debates and uncertain outcome related to the health care bill, a predominant issue in Obama's policies. In late December 2009, for example, Obama stated, on the passage of healthcare reform bills:

Both the House and Senate bills would make it against the law for insurance companies to deny you coverage on the basis of a pre-existing condition or illness. [. . .] Simply put, the protections currently included

in both the health insurance reform bill passed by the House and the version currently on the Senate floor would represent the toughest measures we've ever taken to hold the insurance industry accountable [ . . . ].

The excerpt receives an IC score of 1, as Obama disregards any criticism of or any other component of the bills. The statement concludes, "Anyone who says otherwise simply hasn't read the bills" (Obama, 2009).

When the bill was gathering momentum in early 2010, and leading to the point when the bill was passed, an equally steep rise in IC occurred. This is seen in the following example, which received an IC code of 4 for its recognition that there were two sides with legitimately different views (differentiation) and with a sense of tension between them (emergent integration), as well as its acceptance of an open-ended future resolution:

On Thursday, we brought both parties together for a frank and productive discussion about this issue. In that discussion, we heard many areas of agreement. [ . . . ] And I heard some ideas from our Republican friends that I believe are very worthy of consideration. [ . . . ] Some of these disagreements we may be able to resolve. Some we may not. And no final bill will include everything that everyone wants. That's what compromise is. [ . . . ]. (Obama, 2010)

In late 2010, Obama maintained a relatively high level of IC as the election approached, followed by a significant drop immediately after the Republican victories. In previous studies of election campaigns, incumbents defending their and their party's record were higher in IC than challengers: policy makers must justify their decisions, some of which have been unpopular and others may have been failures, in either case requiring the recognition of nuances, different perspectives, and a variety of relevant variables. Policy critics, on the other hand, are free to attack with much less discrimination and balancing (Tetlock, 1981). Presumably, in the lead-up to the midterm election President Obama had recognized that he was facing serious political challenges and activated his cognitive resources in response.

When the election was over and the results were in, Obama's stress level may have reached the point of disruptive stress, leading to the decline in his IC. However, soon afterward, his IC rose again. This can be interpreted in the same way as previous findings of both revolutionary and elected leaders rising in IC as they grapple with the problems of establishing cooperative relations with former opponents, trying to convert neutrals, and moving on with their political and social agendas while having to maneuver and make compromises (Suedfeld & Rank, 1976; Tetlock, 1981).

*The IC Hypotheses.* As predicted, Obama's IC was quite high compared to other American presidents soon after their election, but dropped remarkably during

episodes of high stress. One surprising finding was that, despite the high mean score, not one of over 280 paragraphs reached the level of clear integration. The usual interpretation of such a pattern is that the individual perceives and takes into consideration divergence among issues, positions, opinions, and so on, but is less inclined or able to consider how these can affect each other, be combined, or how mutual compromises might be worked out.

*Motive Imagery.* The earliest period of the Obama administration, January to April 2009, was the only one that showed significant change in two MI categories, Achievement and Affiliation, as well as in IC (discussed earlier). The foundation of the MI changes is intuitively clear: a feeling of wide-open opportunity to act on his idealistic agenda and a feeling of warmth and friendship toward the electorate and his newly elected supporters in Congress.

President Obama's MI shows a large gap between the Achievement motive and both Power and Affiliation. According to Winter (2010a), high achievement as the dominant motive can lead to frustration in politics, because achieving one's goals requires a higher degree of control over events than most political systems provide for any one person. Even dictators must depend on the cooperation of many subordinates within a variety of hierarchies, eroding the sense of personal control and the satisfaction of achievement needs.

Winter has argued that political leaders who are primarily motivated by *nAch* (Woodrow Wilson being one American example) tend to be idealists, who over their time in office become frustrated because not all influential leaders, the media, and members of the general public share the president's vision, and many oppose the actions proposed in the service of that vision. Leaders who are more highly motivated by *nPow* do better, because they do understand and use persuasion, negotiation, reinforcement, and the other crucial tools of political leadership. It is worth noting that at specific critical periods in Obama's presidency, his Power motivation does in fact show changes (Table 4). Incidentally, *nAch* is a more favorable characteristic in business leaders, whose constituency does not harbor many people with close to equal power and widely different goals and ideas.

Recently, Winter (2010b) described a TCA analysis of President Obama's inaugural address. He found the MI raw scores (the same metric we used) to be Achievement = 7.10, Affiliation = 6.68, and Power = 13.78. The inaugural address thus showed a quite different pattern from our data: higher overall motive imagery level across all three components and a preponderance of Power rather than Achievement. Whether these differences are related to the very different source material (the inaugural address versus weekly radio speeches over two years), to the unique salience of the inaugural speech versus the more routine radio addresses, the perceived difference in the audiences, or changes in the president's actual motive levels cannot be ascertained at this point. For example, we found a spike in his Power references in January 2009, the period that included his inaugural address (scored by Winter) as well as radio speeches (scored by us). Becoming president of the United States is likely to imbue most people with an

increased sense of influence over others. Other changes occurred in conjunction with changes in IC; see below.

*The Motive Imagery Hypotheses.* We predicted the high level of Achievement motivation that was actually found. However, the prediction of a high score for Affiliation was not supported; Power was also relatively low, except in periods when the president was experiencing especially strong and important opposition to his policies. Winter's (2010a) characterization of high *nPow* presidents as more successful than predominantly *nAch* presidents does not present data concerning those whose primary motive changes according to circumstances from the latter to the former, or vice versa.

*Values.* As pointed out in the introduction, the lack of changes in the value scores was expected, given the theoretical definition of the universal values as stable aspects of personality. They can change during or after highly unusual events, such as participating in space flight (Suedfeld et al., 2010), but the political ups and downs of the first two years of the Obama administration apparently did not have so drastic an impact.

However, the president's value hierarchy is interesting. Achievement, Security, and Power are the first three values in his hierarchy, compatible with his MI scores and not an unexpected pattern in a national leader. The major differences between his hierarchy and that of the pan-cultural norm group are his much higher ranking of Achievement, his somewhat higher ranking of Benevolence, and his lower ranking of Self-Direction. The high Achievement score appears to be counterproductive for political leaders, as discussed above. Benevolence refers to care for those close to oneself; it differs from *nAff*, which is oriented more broadly toward cooperation, friendliness, and warmth. The fact that President Obama's *nAff* score is comparatively low, coupled with his relatively high ranking of Benevolence, may indicate that his circle of emotionally close relationships is relatively restricted.

*The Values Hypotheses.* The surprise is his low ranking on Self-Direction, the opposite of our prediction. From his speeches during the campaign, and some actions during the early part of his administration, he was seen by many as someone who confidently charted his own course, expecting others to support and follow him. His positions in both domestic and foreign policy tend to reinforce this view. The inference would be that self-direction and autonomy would be important values for him; the contradictory finding is an interesting anomaly. The dominance of Achievement is no surprise, given the similar MI datum and President Obama's adult history. The high placement of Power was unexpected, given the low *nPow* scores, as was that of Security, which includes national security, social order, and patriotism—topics that did not predominate either in Obama's campaign or in how observers viewed his priorities.

*Relationships between IC and MI.* A number of previous studies have shown that changes in IC and *nPow* tend to be negatively correlated (Suedfeld, 2010;

Winter, 2007). For example, in international confrontations, the outbreak of war is regularly preceded by a simultaneous drop in IC and rise in *nPow*. In the current study, we see several instances of both this pattern and its opposite, a rise in IC and a drop in *nPow*. Our hypothesis is that the first combination indicates that the president is taking an adversarial approach to a situation, whereas the second implies a cooperative orientation. Adversarial and cooperative strategies may appear in close temporal conjunction, especially when (a) a situation changes rapidly, (b) the decision maker's attitude or strategy changes rapidly, or (c) when two or more problems are being considered and reacted to differently at almost the same time.

Figure 3 shows the conjoint changes in IC and Power imagery, identifying six clusters. Although it is not a cluster because there are no baseline scores, the pattern in September 2008 is interesting (Table 9). In the heat of the campaign, Obama expressed very high *nPow* and relatively low IC. This pattern implies a very adversarial outlook, consistent with his situation at that time.

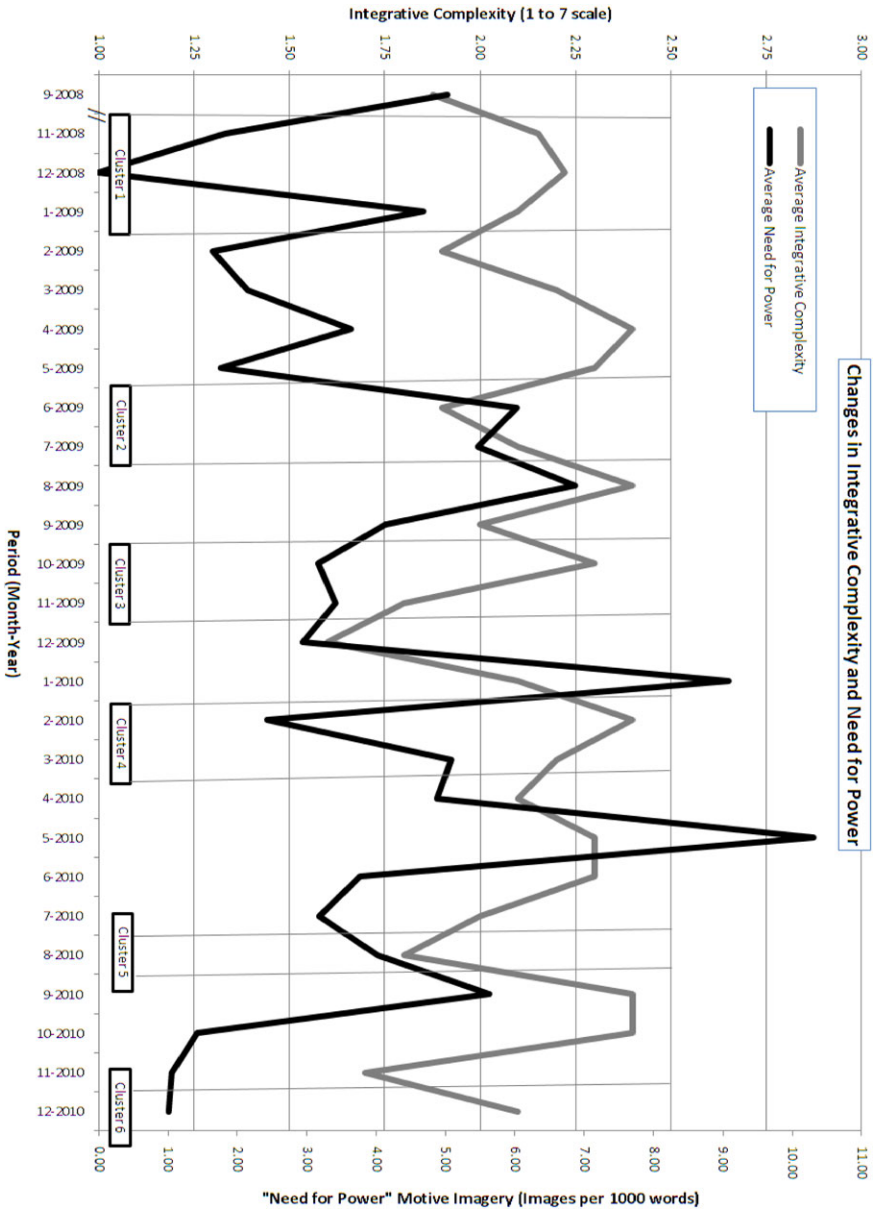
The first actual cluster in our data (Table 9) occurred from the period before Barack Obama's inauguration through January 2009. Obama signaled cooperative intentions as his IC increased and *nPow* decreased. This is broadly consistent with his "Change" message during the period following his electoral victory, which sought to elevate the level of political debate and avoid obstructionist politics.

Throughout the summer of 2009, Obama and the Democrats engaged in intensive lobbying in support of Obama's health care reform initiative. The May to July cluster showed both of the opposing trends, but the adversarial component was stronger, with an especially large increase in Power imagery as the President focused on rallying support and deflecting opposition while trying to avoid having to make significant changes to accommodate critics. September 2009 opened with the President addressing a joint session of Congress, followed by separate House and Senate versions of the bill being passed in November and December, respectively. This represents the second cluster.

The third cluster resulted when Obama entered into a discussion of strategy for the war in Afghanistan. The review lasted for almost three months, extending through the final months of 2009. Pronounced decreases in IC throughout this period, coupled with notable shifts in *nPow*, suggest an increasingly adversarial policy, culminating in a war decision on December 1, when Obama announced a troop surge as the new strategy for the Afghan campaign. This declaration increased the U.S. commitment to a war that Obama had originally sought to conclude as swiftly as possible. Although the health care debate was occurring during the same time period, we know that decisions involving war generalize across policy domains, whereas economic issues do not (Porter & Suedfeld, 1981; Suedfeld, 1985).

The fourth cluster occurred in the period leading up to the final vote on the "reconciliation" health care reform bill in March 2010. Intensive lobbying by the President and by the Democratic congressional leadership preceded the vote, in

Figure 3. Relations between IC and *nPow* (clusters).



the face of countervailing efforts by Republican lawmakers. It is not surprising that we see both cooperative and adversarial signals in this period. The latter tendency was to the fore as Obama called for a “straight up and down vote” on the issue—a decidedly confrontational (and low complexity) call directly before the vote occurred (Associated Press, 2010).

The fifth cluster was a single adversarial marker in August 2010. Although there seem to be no compelling events that explain this, a more general “read” of the political climate during the summer of 2010 suggests an increasingly challenging political climate for the president and for Democrats in general. He and his party declined in preelection polls, and the populist conservative movement gathered momentum (and media attention), including many local “Tea Parties” around the country and culminating with the large “Restoring Honor” rally in Washington at the end of the month.

Finally, we see a significant upward trend in IC in December 2010, following the midterm elections and their immediate aftermath in November 2010. Although *nPow* was low from the start and then only decreased marginally, IC rose. This suggests a cooperative stance by the president, hardly surprising given that the House of Representatives had changed from Democratic to Republican control and Democrats had a considerably lessened majority in the Senate. For the president’s future legislative initiatives to pass, compromise and negotiation with the opposing party are a necessity, as Obama has himself signaled following the midterm elections.

## Conclusion

TCA scoring of President Obama’s radio addresses to the nation shows an overwhelming focus on domestic rather than foreign affairs. His IC is high relative to other modern U.S. presidents and shows his responsiveness to environmental (political) pressures as these rise and fall. This pattern is found among most successful problem solvers, although there have been exceptions in the political world (Wallace & Suedfeld, 1988). His motive hierarchy appears to have changed somewhat since his inaugural address, generally elevating Achievement motivation and reducing the level of Power motivation, which is a combination that is typical of idealistic presidents but may lead them eventually to become frustrated and unhappy.

Although his value hierarchy also shows Achievement at a high level, Security (which includes national security) and Power rank second and third. As values are theoretically considered more stable than MI, they may be better predictors of his future direction. His next highest-ranked values are generally in line with his liberal politics: Benevolence, caring for those close to him, and Universalism, an egalitarian attitude toward people regardless of their nationality, ethnicity, etc. (Schwartz, 1992).



The cluster analyses show what appear to be Obama's choices of either cooperative or adversarial approaches to solving various problems that he has faced during the tumultuous first half-term of his presidency. The year 2010 ended with some signal successes for the President, along with the electoral defeat of his party in November; it will be interesting to see how the continuing *sturm und drang* of politics will affect his cognitive and motivational characteristics in the next two years.

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