U.S. President Age, Height, and Facial Feature Changes with the Social and Economic Climate

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Abstract

Age, height, and facial characteristics of U.S. presidents over the past 75 years were identified and investigated to explore their relationships with social and economic factors. Consistent with the *Environmental Security Hypothesis*, presidents with more mature features (taller, older, smaller eyes, and larger chins) were predicted to be elected in conditions of social and economic threat. Results revealed that in more difficult times, U.S. presidents who were taller, younger, and who possessed smaller eyes and larger chins were elected to office.

Introduction

Past archival studies have found societal measures of threat in America have been related to powerful and charismatic presidential candidate preferences (McCann & Stewin, 1987; McCann, 1991, 1997). But what characteristics connote power? Height, age, and facial features may offer insight into the voting habits of the American people during presidential elections in fluctuating socioeconomic states.

Taller individuals are believed to be stronger, more independent, and more dominant than shorter individuals (Melamed, 1992; Adams, 1980; Young & French, 1998; Boyson, Pryor, & Butler, 1999), while older individuals are believed to be more responsible and mature than younger individuals (Adams, 1980).

Past research has also shown that facial features, such as eye size and chin size, are associated with specialized sets of attributes (see Zebrowitz, 1997). Small eye size and large chin size are components of a mature face, which is associated with the attributes of strength, dominance, competency, expertise, maturity, independence, status, and shrewdness.

The Environmental Security Hypothesis

Pettijohn & Tesser's (1999) *Environmental Security Hypothesis* is a context-dependent theory of attraction and preferences drawing on evolutionary theory and ecology. The theory suggests that when social and economic conditions are threatening, individuals will prefer others with more mature characteristics compared to non-threatening conditions because maturity is associated with the ability to handle threatening situations. Past archival research on American actress facial features (Pettijohn & Tesser, 1999), *Playboy* Playmate facial and body features (Pettijohn & Jungeberg, 2004), *Billboard* music and musical artists (Pettijohn & Sacco, 2009), as well as experimental studies (Pettijohn & Tesser, 2005) have supported this theory. See Nelson, Pettijohn, & Galak (2007) for a review.

Current Study Hypotheses

When economic security is threatened, attributes associated with mature individuals should become more important and preferred in order to assist with the demands of a more threatening situation. In accordance with the *Environmental Security Hypothesis,* a relationship between threatening social and economic conditions and U.S. president height, age, and facial characteristics was hypothesized. In particular, U.S. presidents who were relatively taller, older, and who had smaller eyes and larger chins were predicted to be popular with the voting public in poor social and economic times. In good social and economic conditions, U.S. presidents who were relatively shorter, younger, and who had larger eyes and smaller chins were predicted to be elected to office.

Method: Data Collection

General Hard Times Measure
To test the hypotheses, U.S. social and economic statistics (unemployment rate, change in disposable personal income, change in consumer price index, death rate, birth rate, marriage rate, divorce rate, suicide rate, and homicide rate) for each year (1929-2004) were collected and standardized to create a General Hard Times Measure (GHTM). Higher values on the GHTM indicate more threatening social and economic conditions. The GHTM for the election year and three years prior to each president's election were averaged and used as the dependent measure in this study.

President Features
Each of the 11 elected Presidents of the United States of America from the 19 elections between 1932-2004 were identified (see Table). Age at elected term and height measurements were collected from historical records. Complete, face-front images of each of these presidents were collected and two independent researchers completed facial feature measurements on these images (see Cunningham et al., 1995, for exact measurement schema) with aid of computer software. Facialmetrics related to eye size and chin size were the focus of this investigation due to their relation to maturity dimensions in previous research.

Rationale for the Current Sample
Standardized measures regarding social and economic statistics in the U.S. were not available or consistently collected before the 1920s. In addition, more recent presidential elections were more widely covered by the press and presented in the media, thereby making appearance and body features of candidates more salient. For these reasons, we chose to begin our investigation with the 1932 election of Franklin D. Roosevelt.

At the time of data analysis, some social and economic statistics for 2008 were not yet available, so the 2008 election of Barack Obama could not be included in the current results.

Table. Age and Height of Presidents of the United States by Election Year (1932-2004)

Election Year	Name	Age (years)	Height (inches)
1932	Franklin D. Roosevelt	51	74
1936	Franklin D. Roosevelt	55	74
1940	Franklin D. Roosevelt	59	74
1944	Harry S. Truman	60	69
1948	Harry S. Truman	64	69
1952	Dwight D. Eisenhower	62	70.5
1956	Dwight D. Eisenhower	66	70.5
1960	John F. Kennedy	43	72
1964	Lyndon B. Johnson	57	75
1968	Richard Nixon	56	71.5
1972	Richard Nixon	60	71.5
1976	Jimmy Carter	52	69.5
1980	Ronald Reagan	69	73
1984	Ronald Reagan	73	73
1988	George H. W. Bush	64	74
1992	Bill Clinton	46	74.5
1996	Bill Clinton	50	74.5
2000	George W. Bush	54	72
2004	George W. Bush	58	72
Mean		57.84	72.29
StDev		7.65	1.93
Max		73	75
Min		43	69

Results

Overall, in threatening social and economic conditions, U.S. presidents were taller, $r(17)=.60$, $p<.01$ (see Figure 1), younger, $r(17)=-.28$, $p=.12$ (see Figure 2), and had larger chins, $r(17)=.31$, $p=.09$ (see Figure 3), and smaller eyes, $r(17)=-.24$, $p=.17$.

Figure 1. U.S. President Height and General Hard Times Measure Across Time (1932-2004)
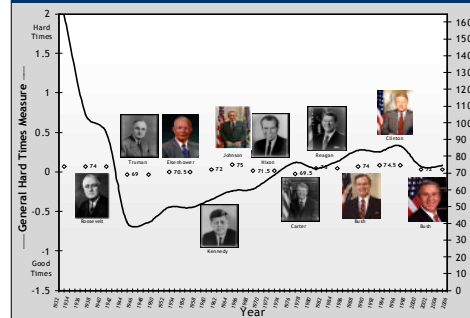

Figure 2. U.S. President Age and General Hard Times Measure Across Time (1932-2004)
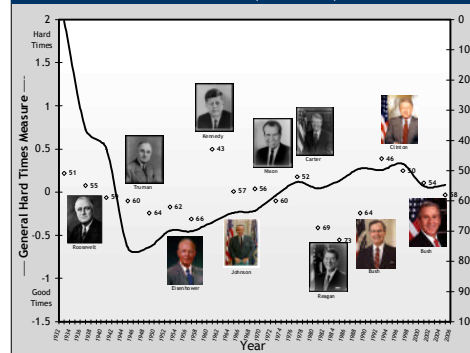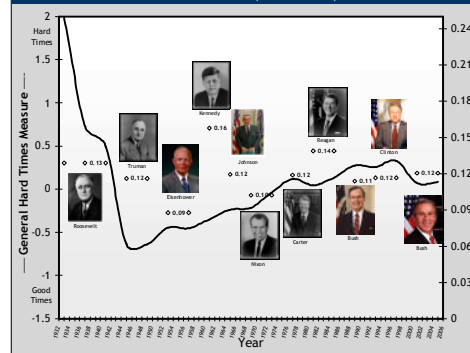

Figure 3. U.S. President Chin Area and General Hard Times Measure Across Time (1932-2004)

Discussion

Consistent with the *Environmental Security Hypothesis*, U.S. presidents who were taller and who had larger chins and smaller eyes were elected to office during times of social and economic threat. Contrary to predictions, U.S. presidents who were younger were elected when times were difficult. Younger presidents may have been perceived as more charismatic (McCann & Stewin, 1987; McCann, 1991, 1997) and able to handle the responsibilities and challenges of a difficult economy and social state.

These results support recent investigations considering how face shape of political candidates across war and peace times can influence voting patterns (Little et al., 2007). Masculine, dominant manipulated faces were preferred during war-time contexts and feminine faces were preferred during peace-time contexts. Similarly, the current study finds presidents with more mature facial features (smaller eyes and larger chins) and who were taller (social dominance feature) were preferred during more threatening times.

Although correlational, and based on a very limited sample size, these results suggest that environmental security may influence perceptions and preferences for U.S. presidents with certain age, height, and facial features.

Future research may consider the relative difference between presidential candidates in each election to determine whether the more mature, socially dominant candidate is more likely to win during more difficult times. Other studies may focus on local elections, cross-cultural elections, and consider how the features of female candidates determine election outcomes.

These results have important implications for future political races. While physical appearance is only one dimension of consideration when voting, it may be more important than previously believed.

Selected References

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