



Development of outstanding leadership: A life narrative approach [☆]

Gina Scott Ligon ^{a,*}, Samuel T. Hunter ^b, Michael D. Mumford ^b

^a Villanova University, Department of Psychology, 800 Lancaster Avenue, Villanova, PA 19805, USA

^b The Pennsylvania State University, Department of Psychology, 112 Moore Building, State College, PA 16803, USA

ARTICLE INFO

Keywords:

Leadership development
Life narratives
Pragmatic leadership
Ideological leadership
Charismatic

ABSTRACT

Developmental events of a sample of outstanding leaders experienced in early life were examined. Relevant sections of 120 biographies of outstanding leaders in the 20th Century were content coded using a life narrative framework. The results indicated that individuals evidencing a particular leadership type (charismatic, ideological, or pragmatic) and orientation (socialized or personalized) were linked to certain types of developmental events. Similarly, event content was found to vary between the leader styles. Specific kinds of experiences were also related to various indices of leader performance. Practical and theoretical implications of these findings are discussed.

© 2008 Elsevier Inc. All rights reserved.

1. Introduction

The lives of outstanding leaders have captivated us for years. We are drawn to them, seeking some sense of clarity as to why—and how—these individuals came to be the forces they did. The early life experiences of outstanding leaders, similar to those of most people, appear characterized by some degree of continuity. Such is the case in Hargrove's (1990) biography of David Lilienthal, former director of the Tennessee Valley Authority (TVA). Early inklings of his leadership strategy were evident during his college years on the DePauw University debate team where he gained experiences influencing people from “Quaker congregations to a high school crowd” (Hargrove, 1990). It was here he may have learned the value and technique of appealing to a wide variety of constituencies to garner support—a practice he carried throughout his career.

Although stories such as Lilienthal's offer somewhat readily identifiable patterns and themes in leaders' lives, exactly how such early incidents operate in determining the course of their careers is, at this point, unclear. Thus, the intent of the current exploratory effort is to examine how outstanding leaders' early experiences are related to their subsequent careers. Specifically, we will examine how developmental experiences begin moving a leader along a charismatic, ideological, or pragmatic pathway as well as how these early experiences are related to either a socialized or personalized orientation.

1.1. Outstanding leadership

The most heavily researched style of outstanding, or historically notable, leadership has been affective, vision-based and has been aptly coined charismatic leadership (Bass, 1985). Though less emphasized, alternative frameworks have been developed to describe other types of leaders. For example, ideological leadership, or belief-based leadership, is a strategy that employs personal values and beliefs in decision-making and motivating (Strange & Mumford, 2002). Pragmatic, or problem-based, leadership is focused on the careful analysis and solution of day-to-day issues in the immediate environment (Mumford, & Van Doorn, 2001). Another discrepancy between leadership strategies is that each can be associated with positive or negative behaviors for attaining

[☆] This research was conducted as part of Gina Scott Ligon's doctoral dissertation at the University of Oklahoma under the supervision of Michael Mumford.

* Corresponding author. Tel.: +1 610 519 8915.

E-mail address: gina.marie.ligon@villanova.edu (G.S. Ligon).

outcomes (O'Connor, Mumford, Clifton, Gessner, & Connelly, 1995). This distinction has been labeled as two integrity-related orientations: socialized (i.e., focused on increasing performance of the group) or personalized (i.e., focused on personal glorification) (House & Howell, 1992; McClelland, 1975).

1.1.1. Charismatic leadership

Descriptions of charismatic leaders point to the presence of a passionate vision of a future radically different from present conditions (House, 1977; Shamir, House, & Arthur, 1993; Weber, 1947). Such vision statements promise a dramatically improved state of existence for followers if they accept the leader's movement (House & Howell, 1992). Following from this, House & Podsakoff (1994) illustrated that charismatic leadership relies on inspirational communication to followers. Visions of charismatic leaders tend to point to the positive aspects of the future goals, while at the same time conveying negative aspects of the present conditions (Conger, 1999). For example, Franklin Roosevelt was able to attract multiple types of followers with his vision for a better future through government sponsored projects during a time of marked hardship on Americans (Morgan, 1985).

1.1.2. Ideological leadership

Ideological leaders focus on past conditions, and they often point to positive examples of a group's history such as prior group status and ownership (Post, Ruby, & Shaw, 2002). Their visions are predominantly defined by a commitment to their personal beliefs and values (Strange & Mumford, 2002). Ideological leaders use such belief systems to guide their decision-making, which leads to selective interpretation or discounting of alternate views that disagree with those personal beliefs (Robinson, 1996). In addition to discounting ideas that do not corroborate with their principles, ideological leaders also tend to dismiss individuals who do not share in their beliefs (Post et al., 2002). Such discounts impact their followers in that ideological leaders define clear prescriptions or standards of acceptable behavior, and they tend to punish those who deviate from those principles (Ibrahim, 1977).

1.1.3. Pragmatic leadership

Functional, problem-based leadership differs markedly from the aforementioned vision-based styles of leadership (Mumford & Van Doorn, 2001). Pragmatic leaders are concerned with characteristics of the present situation, and are constantly scanning the environment to gather information about key issues and concerns (Qin & Simon, 1990). This surveying of their surroundings exposes pragmatic leaders to a diverse array of people, places, and ideas. Acquired knowledge may help them in their subsequent problem-based analysis efforts. Pragmatic leaders exhibit flexibility in adapting strategies when faced with incoming feedback that a particular strategy is not working (Mumford & Van Doorn, 2001). This is sharply contrasted by ideological styles, which appear to be more committed to their initial action plans and resistant to redirection.

1.1.4. Personalized versus socialized distinction

In addition to exhibiting charismatic, ideological, or pragmatic styles of problem solving, leaders also evidence one of two orientations toward followers. Socialized leaders base the identification and solution of problems on the good of others, or for the collective interests of their group (House & Howell, 1992). They are more concerned with group survival than of protection of their own position within the group (O'Connor et al., 1995). In a study of socialized leaders, McClelland (1975) illustrated that they tend to be more altruistic, self-controlled, and follower-oriented. Such leaders tend to have a commitment to others, and they instill followers' self-responsibility, self-initiative, and autonomy when solving organizational problems (House & Howell, 1992).

Alternatively, personalized leaders are motivated by personal dominance regardless of the consequences for others (McClelland, 1975). In a study by O'Connor et al. (1995), personalized leaders tended to control others with threat, and their goals were usually to subvert others' to their own personal agendas. It appears that personalized leaders often distrust others, viewing followers as objects with little regard for their well-being, safety or happiness (House & Howell, 1992). Personalized leaders' need for power is unfettered by responsibility or activity inhibition (O'Connor et al., 1995). Because of low affiliative needs coupled with high dominance drives, times of perceived threat may lead to personalized leaders taking impulsive actions to protect themselves at the expense of their group (McClelland, 1975).

1.2. Sensemaking

While these pathways of leadership are markedly different, a commonality that can be identified among all types of outstanding leaders revolves around crises (Rivera, 1994). Outstanding leaders generally emerge when a social system is experiencing a crisis, or a set of events creating turbulence and placing institutions at risk of experiencing sub-optimal performance. Such instability disrupts the way people construe their worlds and make "typical" operating patterns unclear. Crises associated with outstanding leadership are threatening, complex, and anxiety provoking (Hunt, Boal, & Dodge, 1999).

Under such conditions of ambiguity, there is a need for a leader who can define and build support around a strategy for dealing with the crisis. In other words, crises create the opportunity for outstanding leadership because people seek leaders who can make sense of events in a way that provides a clear and obtainable target resolution (Drazin, Glynn, & Kazanjain, 1999). Such sensemaking activities on the part of the leader reduce anxiety, provide a framework for collective action, and, thus, preserve maintenance of the group and followers' personal identities (Shamir et al., 1993).

Leaders, like people in general (Hogarth, 1980), cannot work with all of the causal variables associated with a complex crisis. Instead, they simplify the problem by applying a mental model, or cognitive representational system, in their sensemaking efforts

(Holyoak & Thagard, 1997; Johnson-Laird, 1983). Moreover, a mental model provides a conceptual depiction of interrelationships among the goals and actions in a system that is used to a) understand the system, and b) guide responses to it (Sein & Bostrom, 1989). These mental models identify important causal events that call for action and bring about goal attainment within a system by articulating associations, or causal linkages among variables (Holyoak & Thagard, 1997; Largan-Fox & Code, 2000). Thus, mental models act as a heuristic device to understand a new situation in terms of a similar past situation (Gioia & Poole, 1984; Keller, 2003).

What differentiates outstanding leaders from people in general during crises, however, is their abilities to move beyond description of current system operations to prescription of a system as it could be. In other words, outstanding leaders have the ability to conceptually combine and reorganize descriptive mental models to design an actionable plan as to how to deal with a given crisis. In a theory proposed by Mumford & Strange (2005), sensemaking activities occurred through reflection on a) the goals that should be pursued by the organization, b) the causes of goal attainment or failure, and c) alternative models that might be used to understand the current system. This framework of leadership sensemaking holds that prescriptive mental models arise from reflection on and analysis of the current crisis in terms of their personal history. Social perception theory also follows that it is the interpretation of the crisis, not the crisis itself, that gives rise to subsequent action steps and outstanding leader behavior (Lord & Maher, 1991; Gioia & Chittipeddi, 1991).

This proposition of leader sensemaking was supported empirically in a recent study where college students were asked to form a vision for a new elementary school (Mumford & Strange, 2005). After having been presented with good and poor benchmark models, a search for goal and/or causes was activated. The positive effects of a search for goals when poor models were presented were moderated by reflection on past experiences in reaction to these goals and causes. Strong prescriptive models and compelling vision statements were produced when people reflected on their life experiences in relation to the situation at hand. This finding is of importance because it indicates that leaders' understanding of themselves and their experiences may play a key role in shaping the kind of prescriptive mental model they construct.

1.3. *Life narratives*

Early life experiences have been linked to instances of outstanding leadership by several scholars (Erikson, 1969; Freud, 1922; Fromm, 1973). Life narratives, or life stories, have been described as an economic summary of life's experiences (Anderson & Conway, 1993; Bluck & Habermas, 2000). These conceptually related events may not be purely cognitive in nature, but instead a combination of cognition and emotion that can be used to understand and make sense of events that have occurred in people's lives (Pillemer, 2001). This narrative summarization, with a distinct, temporal causation (Sarbin, 1986), is used as an explanatory structure that allows people to maintain a sense of personal identity (McAdams, 2001; Neimeyer & Metzler, 1994).

Life narratives also serve two other key functions (Bluck, 2003). First, events used to construct life narratives serve directive functions, providing life lessons in episodic form used to define goals, causes, actions, and context in the present (Baumeister & Newman, 1994; Pillemer, 2003). Central to the present study, available evidence suggests that when people are exposed to crises, particularly complex, ill-defined events, they are likely to apply life narratives as a mechanism for understanding and responding to new events (Bluck & Staudinger, *in press*; Pillemer, 1998; Reiser, Black, & Abelson, 1985).

Second, life narratives provide a vehicle for people to communicate personal understanding of their lives in reference to the current situation (Alea & Bluck, 2003; Fitzgerald, 1995). Conveying meaning through life narratives may foster identification with followers, providing a basis for common understanding which permits more automatic, intuitive social interaction between followers and leaders (Keller, 2003). This communication also allows the leader to test and refine their understanding of a situation in terms of its implications for themselves and for others based on follower feedback and commitment (Barclay, 1995).

Given the impact of life narratives on formation of prescriptive mental models, it is plausible that life narratives represent a key underlying mechanism by which life experiences are related to differential development of and actions taken by outstanding leaders. Following from this influence of life narratives on leadership, it is important to understand the content, structure, and development of narrative schema. In Bluck and Habermas (2000) view, coherent narratives are comprised of four distinct mechanisms that are used to organize life's events.

First, narrative coherence is derived from cultural expectations about the narratives of autobiographical material. Second, coherence is often related to the imposition of a temporal sequence of life tasks (Havighurst, 1953). Third, coherence may be based on the abstraction of general causes of life influencing events, particularly goal relevant ones or consequential life steps (Bluck, 2003). The fourth source of life narrative coherence might be found in the themes, or underlying principles, that bind causes, outcomes, and events together. One critical implication of Bluck (2003) coherence theory is that autobiographical reasoning and life narratives will tend to emerge in late childhood and adolescence as people acquire the ability to think about events in terms of abstract causes (Bluck & Habermas, 2001; Habermas & Paha, 2001). Simonton's (1981, 1994) work has also supported that events that occur in adolescence are related statistically to instances of greatness in leadership and creativity.

1.4. *Events*

While life narrative formation depends on the construction of a schema or organizing framework based on coherence and thematic principles, the overarching life story appears to be built around prototypic exemplars, ongoing episodes, and key life events (Mobley, Doares, & Mumford, 1992). The role of exemplar events in the formation of life narratives has been discussed by

Korte (1995), McAdams (2001), and Pillemer (1998, 2001). People tend to remember unusual, unexpected life events that had important consequences and were emotionally evocative (Brewer, 1986). These unique, emotionally-laden events, appear to provide the substantive basis, or key exemplars, around which life narratives are constructed. Certain events endow more lessons learned, integrative themes, and personal meaning than others (McAdams, 1985). Pillemer (1998, 2001) and McAdams (2001) have delineated six kinds of life events that may be used in the construction of life narratives: 1) originating events, 2) turning points, 3) anchoring events, 4) analogous events, 5) redemptive events, and 6) contaminating events.

Originating events, or experiences that mark the beginning of a career path, come to be tied to long-term goals and to an implicit plan of action for meeting those goals (Pillemer, 1998, 2001). These experiences are viewed as integral to shaping downstream outcomes in individuals' lives, and they continue to command attention and evoke strong emotions. Relatedly, turning points are concrete episodes that suddenly revise a life direction. Although they tend to alter previously held plans, turning points are similar to originating events in that they become tied to future goals and motivate life actions. These two types of events promote inferences of causality in that they are tied to life choices that followed their occurrences (Conway & Pleydell-Pearch, 2000).

While originating and turning point events mark the beginning of a new life plan, anchoring events provided an instantiated foundation for a belief system. The resulting mental model serves as an enduring reminder of how the world works and one's place in it (Pillemer, 2001). Anchoring events contain signals of what is to be valued and warnings of what is to be avoided. Retrieval of such experiences from memory continually grounds beliefs and values. Analogous events occur when a present circumstance triggers a memory of a structurally similar past event, which then may inform current decisions. This type of event has some structural similarities to old events. Lessons or directives from these types of events seem to reoccur throughout life, reminding a person of what to do or what not to do based on previous experiences (Schank, 1990). Following from that, analogous events may be more evident later in life when there is a richer database or more instantiations of life directives readily available for analogical reasoning processes.

McAdams (2001) added to these four types of events by delineating two other categories that are important components of life narratives. Redemption events, or negative events that are later viewed to have had a positive life impact, also serve as motivational mechanisms for guiding decisions. They may provide individuals with mental models that bad situations can be turned around to have positive outcomes. Conversely, contaminating events are experiences that seemed to have emotionally positive attributes and then later went suddenly wrong. These once-positive events tend to have negative downstream consequences and serve as potent reminders of failure.

Although types of events that comprise a life narrative are important for understanding the life narratives of outstanding leaders, inferences will be augmented by the inclusion of thematic information about the content as well as structure (Pillemer, 2001). The thematic underpinnings, or content, of events may be just as important as the event types in terms of understanding their effects on leadership sensemaking. For example, Simonton (1994) illustrated that early incidents of trauma, such as parental loss, physical or mental disability, or poverty, were prevalent in the early lives of great leaders and creators. Thematic similarity, or common event content, has been assessed by rating life narratives for basic motives such as need for power and need for intimacy (McAdams, Diamond, Aubin, & Mansfield, 1997; Singer & Salovey, 1993). McAdams and colleagues (1982; McAdams, Hoffman, Mansfield, & Day, 1996) have conducted a series of studies that showed that the content of life narratives is especially relevant for identifying individual differences in personal goals and motives, coping strategies, values and beliefs, and domain-related skills and interests. It follows then that such content differences should be helpful in distinguishing leadership styles as well.

1.5. Differential development

While life narratives and their development are a plausible means for understanding leadership sensemaking, how do these narratives lead to the differential development of the alternative styles of outstanding leadership? The structure of life narratives suggests that differences among charismatic, ideological, and pragmatic leaders, and the socialized and personalized variants of each, will be most evident in at least two domains. First, one might expect that outstanding leaders will differ in the types of events that shape their life narratives or life stories. Second, outstanding leaders may differ with respect to the themes evident in key life events.

These observations about development indicate that the kind of life narratives constructed by leaders in late childhood, adolescence, and young adulthood will represent a powerful influence on the prescriptive mental models constructed by outstanding leaders. The nature of these life narratives suggests that a systematic pattern of differences will be observed between charismatic, ideological, and pragmatic leaders with respect to a) the type of events found important in leaders' lives, and b) the thematic content with these important events. These differences in narrative content may also explain the adoption of a socialized versus personalized orientation to leadership. These observations lead to the following propositions:

Proposition 1. *Charismatic, ideological, and pragmatic styles of outstanding leadership will be associated with different types of life defining events.*

Proposition 2. *Personalized and socialized orientations within the three styles of outstanding leadership will be associated with different types of life defining events.*

Proposition 3. *Event content of charismatic, ideological, and pragmatic styles of outstanding leadership will differ.*

Proposition 4. *Event content of personalized and socialized orientations within the three styles of outstanding leadership will differ.*

2. Method

2.1. Sample

To examine the types and content of experiences of outstanding leaders, a sample of 120 historically notable leaders was used. Given the intent of the present study—to distinguish developmental experiences of charismatic, ideological, and pragmatic leaders—the individuals included in this sample were selected because they manifest a charismatic, ideological, or pragmatic style. Additionally, to examine orientation, socialized versus personalized (House & Howell, 1992), half of the leaders selected within each type were chosen because they display a socialized orientation while the remaining half of the leaders selected within each type were chosen because they display a personalized orientation. Thus, 20 leaders were selected for examination in each of the following categories: 1) socialized charismatics, 2) personalized charismatics, 3) socialized ideologues, 4) personalized ideologues, 5) socialized pragmatics, and 6) personalized pragmatics. Table 1 provides a list of leaders included in the present set of studies listed by category assignment.

There are three important characteristics of this sample. First, the sample size of 120 leaders provided sufficient power to detect differences among charismatic, ideological, and pragmatic leaders taking into account the demands made by content coding. Second, use of 20th century leaders was attractive because while time was available to fully assess the outcomes of the leaders' efforts, leadership could still be examined in the context of modern institutional settings. Third, an attempt was made to include in this sample leaders working in different fields (e.g., business, politics, non-profit organizations, and the military). No attempt was made, however, to ensure equal representation of leaders drawn from different domains in the six categories under consideration due to the tendency of charismatic, ideological, and pragmatic leaders to gravitate to different organizations (Weber, 1947).

Table 1
Leader sample

Orientation	Type		
	Ideological	Charismatic	Pragmatic
Socialized	1. Jane Addams	1. Mustafa K. Ataturk	1. Warren Buffet
	2. Susan B. Anthony	2. David Ben-Gurion	2. Richard Daley
	3. Dietrich Bonhoeffer	3. Cesar Chavez	3. Walt Disney
	4. Michael Collins	4. Winston Churchill	4. John Foster Dulles
	5. Eugene V. Debs	5. Henry Ford	5. Alfred Dupont
	6. John Dewey	6. Samuel Gompers	6. Dwight D. Eisenhower
	7. W.E.B. du Bois	7. Lee Iacocca	7. Felix Frankfurter
	8. Betty Friedan	8. John F. Kennedy	8. Berry Gordy
	9. Indira Gandhi	9. Jomo Kenyatta	9. Katharine Graham
	10. Mohandas Gandhi	10. Martin Luther King, Jr.	10. Oliver W. Holmes
	11. Charles de Gaulle	11. Fiorello H. LaGuardia	11. George Marshall
	12. Emma Goldman	12. Douglas MacArthur	12. Mikhail Gorbachev
	13. Dag Hammarskold	13. Louis B. Mayer	13. Thomas Watson
	14. John L. Lewis	14. J.P. Morgan	14. George H. Rickover
	15. Kwame Nkrumah	15. Edward R. Murrow	15. Erwin Rommel
	16. Ronald W. Reagan	16. Gamal Abdel Nasser	16. George Soros
	17. Eleanor A. Roosevelt	17. Sam Rayburn	17. Josip B. Tito
	18. Theodore Roosevelt	18. Franklin D. Roosevelt	18. Harry S. Truman
	19. Lech Walesa	19. Anwar Sadat	19. Sam Walton
	20. Woodrow T. Wilson	20. Margaret Thatcher	20. Booker T. Washington
Personalized	1. Lavrenti Beria	1. Idi Amin	1. Al Capone
	2. Fidel Castro	2. Neville Chamberlain	2. Andrew Carnegie
	3. Georges Clemenceau	3. John Delorean	3. Otis Chandler
	4. Ferdinand Foch	4. Porfirio Diaz	4. Lyndon B. Johnson
	5. Francisco Franco	5. Francois Duvalier	5. Al Dunlap
	6. Marcus Garvey	6. Hermann Goring	6. Henry Ford II
	7. Warren Harding	7. Assad Hafaz	7. Carlo Gambino
	8. Rudolf Hess	8. Adolf Hitler	8. Leslie Groves
	9. Heinrich Himmler	9. Jimmy Hoffa	9. Leona Helmsley
	10. Ho Chi Minh	10. Herbert R. Hoover	10. Reinhard Heydrich
	11. Vladimir Lenin	11. J. Edgar Hoover	11. Horatio Kitchener
	12. Joe McCarthy	12. Huey P. Long	12. Alfred Krupp
	13. Pol Pot	13. Ferdinand Marcos	13. Robert Moses
	14. John D. Rockefeller	14. Benito Mussolini	14. Rupert Murdoch
	15. Josef Stalin	15. Manuel Noriega	15. George Patton
	16. Leon Trotsky	16. Eva Peron	16. Jackie Presser
	17. Kaiser Wilhelm II	17. Juan Peron	17. Richard M. Nixon
	18. Deng Xiaoping	18. Rafael Trujillo	18. David Sarnoff
	19. Emiliano Zapata	19. W. C. Westmoreland	19. Martha Stewart
	20. Mao Ze-dong	20. Malcolm X	20. Lew Wasserman

2.2. Leader identification

Leader identification procedures involved a number of steps. Initially, a list of candidate leaders was developed. Development of this list began with a review of general history texts and biographical web sites to identify historically notable 20th century leaders for whom at least one academic biography was available. In addition, investigators attempted to select leaders from multiple fields, and preference was given to those leaders who had more than one academic biography published about his/her life. Application of these procedures resulted in the identification of 221 20th century leaders who were plausible candidates for inclusion in the sample.

Once the pool of 221 candidates had been identified, it was necessary to screen this over-selected group in an attempt to include only prototypic members for each of the six leadership styles. A key criterion used for leader retention in this study was that the leader was required to fall into one of the six groupings based on agreement by three independent raters. This prevented the emergence of mixed leadership styles (e.g., leaders evidencing a mix of charismatic and ideological behaviors, *Strange & Mumford, 2002*) in these classifications.

To classify leaders with respect to orientation, socialized versus personalized, the criteria suggested by *O'Connor et al. (1995)* were applied. Specifically, upon reviewing 10–20 pages of blinded (i.e., identities of leaders were unknown to judges) summary material obtained from general historical texts (e.g., *Worthington, 2003*) and websites (e.g., www.biography.com) describing these leaders' visions and problem solving strategies, judges, all doctoral candidates in industrial and organizational psychology familiar with leadership theory, were to classify a leader as socialized if he/she initiated action for the betterment of people, society, or institutions regardless of personal consequences (e.g., Gerald Ford), or as personalized if he/she initiated action to acquire, maintain, and enhance personal power (e.g., Joseph McCarthy).

These judges were also asked to classify leaders, based on the source of the leader's vision or problem solving strategy, as charismatic, ideological, or pragmatic. In accordance with the observations of *Strange & Mumford (2002)*, a leader was classified as charismatic if he/she articulated a vision based on perceived social needs and the requirements for future-oriented change (e.g., J.P. Morgan). A leader was classified as ideological when he/she articulated a vision based on strongly held personal beliefs and values (e.g., Ronald Reagan). Criteria from *Mumford & Van Doorn's (2001)* study was used as a basis for identifying pragmatic leaders with leaders being classified as such if their efforts were focused on the solution of immediate social problems (e.g., Benjamin Franklin).

Application of these criteria resulted in a high level of agreement ($\kappa = .81$) among the three judges about their assignments of a leader to one of the six categories. In cases where the judges disagreed in their assignments to a category, the leader was dropped from the candidate list. This point is of some importance for two reasons. First, by dropping cases where there was disagreement, the sampling plan efficiently prohibited examination of mixed-type leaders. Second, it became unattainable for the present effort to say much about alternative pathways to outstanding leadership outside the charismatic, ideological, and pragmatic pathways. To further reduce this candidate list, the three judges were asked to review the available descriptive material pertaining to the leaders falling into the six categories under consideration (e.g., socialized and personalized charismatic,

Table 2
Benchmark examples of event types used in event identification

Event type	Benchmark example
Originating event	"From an early age, the young Rupert [Murdoch] was aware of the power and the glory and the sheer fun which accrued to his father from newspapers. Keith [Rupert's father] used to take his son around the Herald's office on Flinders Street, and Rupert often said later that the smell of the ink, the noise of the presses and the highly charged atmosphere were irresistible. 'The life of a publisher is the best life in the whole world. When kids are subjected to it there's not much doubt they'll be attracted to it.'" (<i>Shawcross, 1992 pp.27</i>)
Turning point event	"The most dramatic story concerns Lewis's involvement in the 1903 disaster at the Union Pacific Railroad Company's coal mine in Hanna, WY. Passing through the area by chance, Lewis arrived in time to assist a rescue team in carrying out the torn, charred bodies of 234 miners... 'what ripped his emotions to shreds was the sight of the numb, mute faces of the wives now suddenly widows of the men they loved.'" (<i>Dubofsky & Van Tine, 1986 pp. 14–15</i>)
Anchoring event	"In what Fidel calls, 'a decisive moment on my life,' Angel Castro decided during the boys' summer holiday after the 4th grade that they would not go back to school... But Fidel was determined to return to school. As he tells the story, 'I remember going to mother and explaining to her that I wanted to go on studying; it wasn't fair not to let me go to school. I appealed to her and told her I would set fire to the house if I wasn't sent back... so they decided to send me back. I'm not sure if they were afraid or just sorry for me, but my mother pleaded my case.' Fidel was learning quickly that absolute and uncompromising stubbornness was a powerful weapon. This may have been the most important lesson he had drawn from his young years at the <i>finca</i> , and he never forgot it.'" (<i>Szulc, 1986 pp. 112</i>)
Analogous event	"Almost forty years later, on the occasion of a commencement address at Fisk, and perhaps under the influence of the occasion, DuBois recalled those three years of "splendid inspiration" and nearly "perfect happiness" with teachers whom he respected, amid surroundings which inspired him. The ten years after Fisk he chronicled as "a sort of prolongation of my Fisk college days." I was at Harvard, but not of it. I was a student of Berlin but still a son of Fisk. I used my days there to understand my new setting..." (<i>Broderick, 1959 pp. 9</i>)
Redemption event	"She [Betty Friedan], who had been the ringleader and chief instigator, the one who generated all the excitement, was suddenly alone, abandoned by her friends. The creator of clubs was not chosen for the most exclusive club at all—the high school sorority. She was desolate... The year of loneliness that followed was the lowest point of her life. She blamed it primarily on anti-Semitism... The sight of the car full of friend, a vision that she yearned for, triggered something in her, and she made a promise to herself: 'They may not like me now, but [someday] they are going to look up to me.'" (<i>Hennessee, 1999 pp. 15</i>)
Contaminating event	[After receiving average marks on his officer's appraisal, [Charles] de Gaulle was given a lackluster assignment.] "Indeed, for a soldier with his innate conviction of his intellectual superiority, the choice of a department concerned with such routine matters as transport and supply was humiliating. At Mayence, in fact, he was put in charge of refrigeration, which must have seemed an insulting punishment for an unwelcome independence of spirit... [de Gaulle after receiving the news] 'Those c...s of the Ecole de Guerre! I shall only come back to this dirty hole [sale boite] as Commandant of the Ecole! And you'll see how everything will change!'" (<i>Crozier, 1973 pp. 39</i>)

ideological, and pragmatic leaders). The final set of leaders to be examined was determined through application of the following criteria: 1) the volume of biographical material available for the leader, 2) representation of multiple fields (e.g., business, politics, non-profit organizations, the military) in each category, 3) representation of non-western leaders, and 4) representation of women. These criteria led to the final list of leaders to be examined—the list presented in [Table 1](#).

2.3. Biography selection

The historic data that provided the basis for the present study was drawn from biographies describing the early life and careers of the selected leaders. Such retrospective material has been used by other researchers (Cox, 1926; Simonton, 1994) in order to examine the antecedents of outstanding creative and leadership behavior. Autobiographies were not used in order to standardize objective reporting of events across leaders as much as possible. Because autobiographies may have been subject to instances of selective interpretation from the leader, employing their use in this study might have led to particular problems when analyzing the material from personalized leaders who may have been prone to self aggrandizing behavior (O'Connor et al., 1995). Thus, in order to maximize the likelihood of obtaining objective accounts of as many verifiable life experiences as possible, biographic material written by independent researchers was relied upon in this study.

Because these biographies provided the data used as a basis for content coding, careful attention was given to the selection of appropriate biographies. Initially, a reference search was conducted to identify biographies published describing each of the selected leaders. It is important to note that these references were discrete from the biographical sources used in leader assignment to the style and orientation categories. Although in a few cases (less than 10% of the total sample) only one biography was available, in most cases a number (3 or more) biographies were available describing the careers of the selected leaders. When multiple biographies were available, a web and library search were conducted to obtain reviews of the available biographies. Any biography that received unfavorable scholarly reviews, particularly with respect to the comprehensiveness and accuracy of the material presented, was eliminated.

The reviews available for the remaining biographies were then examined to identify the two or three biographies that appeared to provide the best available descriptions of the leader's early life and career. These more promising biographies were obtained and reviewed by three psychologists with respect to the following five criteria: 1) did the biography stress accurate and detailed reporting of the leader's behavior and key events he or she encountered over the course of his or her career? 2) did the biography expressly focus on behaviors of concern with respect to development? 3) did the biography provide a reasonably detailed account of the leader's early life? 4) did the biography provide a clear and reasonably objective summary of the leader's accomplishments? and, 5) was there evidence of adequate scholarly work as indicated by citations provided and sources examined? Of the available biographies, the three judges agreed upon the biography that best satisfied these five criteria for use in the study.

2.4. Coding

The material examining leaders' lives during late childhood, adolescence, and young adulthood, the timeframe when life narratives are being constructed, appears in the "childhood" and "early career" chapters in biographies (prior to "rise to power" chapters). Accordingly, a psychologist reviewed these chapters and identified sections that described the relevant periods in leaders' lives. Chapters examining general family background and infancy were not considered. Generally, three to six relevant chapters were identified describing the leaders' late childhood, adolescence, and young adulthood, and each total on average 40 to 50 pages in length.

2.4.1. Identifying events

Four undergraduates unfamiliar with the intent of the study were asked to review the selected material to identify, 1) originating events, 2) anchoring events, 3) analogous events, 4) turning point events, 5) redemptive events, and 6) contaminating events (McAdams, 2001; Pillemer, 2001). To prepare for the event identification, these undergraduates participated in a 16-hour training program where they were familiarized with benchmark examples of these events and given practice and feedback sessions as to how to identify and categorize the events. The kappa agreement coefficients in identifying and classifying these events ranged from .64 to .98, evidencing the reliability accrued from the training effort. An average of 11.7 events was identified across categories for a given leader, and each of the events was a half to a full page in length. Across the 120 leaders in the sample, approximately 1400 events were identified and classified. [Table 2](#) illustrates examples of each of the event types identified.

2.4.2. Coding event content

Once the events were identified, a content analysis intended to examine the themes across these events was conducted. A similar set of procedures was applied in rater training. Initially, six judges were recruited who were a mix of undergraduates and graduate students pursuing degrees in social science. Prior to the start of the content analysis study, the judges participating in this effort were required to complete a two-week training program involving 12 h of instruction each week. In this training, the judges were familiarized with the nature of the stimulus material—the developmental events abstracted from the biographies that would be used in coding and the dimension definition on which this material would be evaluated.

These thematic dimensions were identified through an initial literature review of the available literature on charismatic (e.g., Conger & Kanungo, 1998), ideological (e.g., Strange & Mumford, 2002), and pragmatic leadership (e.g., Mumford & Van Doorn, 2001). Sixty-three candidate dimensions were identified and later reviewed for redundancy, clarity, and criticality. Using these

criteria, twenty-eight were retained for this study. These dimensions, along with supporting citations, definitions, and associated benchmark behaviors can be found in [Table 3](#).

Once the judges had been familiarized with the dimensions, they were presented with a set of modified Q-sort procedures to assign relevant dimensions to events ([Brown, 1980](#)). The Q-sort applied was unstructured, in that there was no attempt to ensure uniform assignment of each construct to events ([McKeon & Thomas, 1988](#)). Instead, judges were instructed to read each event and then assign *any number* of relevant dimensions that best reflected underlying thematic content (see [McAdams, 1982](#); [McAdams et al., 1996](#); [Woike, 1995](#) for other examples of identifying themes manifested in life stories).

Judges were asked to evaluate only the event standing alone when making assignments of constructs in the Q-sort. Specifically, each rater was required to make a judgment of “reflects content” versus “does not reflect content” for all 28 dimensions for each event they observed. The interrater agreement coefficients from these procedures range from .56 and .63 using a kappa statistic. Given that there were a large number of dependent variables analyzed in this Q-sort procedure, this level of agreement is considered acceptable ([Block, 1978](#); [Funder, Furr, & Colvin, 2002](#)). Scores were derived by determining the dimensions to which a majority of the judges assigned an event. Leader dimension scores were obtained by determining the number of events identified for a leader assigned to a given dimension and then dividing by the total number of events identified for the leader under consideration.

2.4.3. Controls

Due to the reliance on archival data ([Simonton, 2003](#)), supplemental material was obtained to provide requisite controls with respect to the inferences being drawn. A set of general controls was obtained in order to monitor threats to internal validity endemic to archival research. The first set of covariate control measures was intended to take into account temporal, cultural, and historic effects. Thus, the following control measures were obtained through judgmental evaluations: 1) was the leader a pre- or post- World War II leader? 2) was the leader from a western or non-western country? 3) was the leader's country industrialized or non-industrialized? and 4) was the leader's biography translated into English? The second set of control measures examined attributes of the leader and their role: 1) type of leadership role (e.g., for profit, political, non-profit organization, military), 2) political conflict in the leader's organization, 3) years in power, and 4) elected or appointed versus leadership positions seized by force.

In addition to these general controls, another set of control measures was obtained in reference to specific threats to the quality of studies examining early developmental events and included: 1) presence of theoretical assumptions about the nature of developmental influences (Freudian, educational, et cetera), 2) amount of information available or detail about developmental events, 3) number of developmental events abstracted, 4) length of developmental events, 5) number of pages devoted to developmental period, 6) age at rise to power, 7) amount of external documentation provided for developmental events, 8) source of external information about developmental events (teachers, siblings, friends, et cetera), and 9) number of leader recollections used as a basis for describing developmental events.

The rating scales and counts applied in evaluating the biographies with respect to these control variables necessarily varied as a function of the question under consideration. Some ratings and counts reflected overall evaluations drawn from the summary chapters. Other ratings and counts, however, were obtained as part of the content coding of relevant descriptive material (e.g., event length). Because these covariate control measures, regardless of the measurement scales applied, tended to focus on relatively objective events, it was not surprising that they proved to be reasonably reliable. The average interrater reliability coefficient, obtained using the procedures suggested by [Shrout & Fleiss \(1979\)](#), was .94.

2.4.4. Criteria

Prior studies have indicated that marked differences in performance are commonly observed in studies of outstanding leadership ([O'Connor et al., 1995](#)). To examine cross-type differences in performance, a set of criterion, or outcome, measures were drawn from the summary chapters presented in the various biographies under consideration.

Based on the earlier findings of [Strange & Mumford \(2002\)](#), twelve general criterion measures intended to provide an overall appraisal of performance with respect to social impact were drawn from these summary chapters. The first five criterion measures, all based on the biographers' observations, were counts examining: 1) the number of positive contributions made by the leader, 2) the number of negative contributions made by the leader, 3) the number of different types of positive contributions made by the leader, 4) the number of different types of negative contributions made by the leader, and 5) the number of institutions established by the leader. In addition to these counts of points mentioned, a psychologist was asked to rate seven additional criteria based on the material presented in the summary chapters. These ratings, made on a 5-point scale, examined: 6) how much did the leader contribute to society? 7) how long did these contributions last? 8) how many people did the leader affect? 9) did the leader initiate mass movements? 10) was the leader's agenda maintained when they left power? 11) were institutions established by the leader still in existence? and 12) what was the biographer's evaluation of the leader?

The reliability of these outcome assessments was established in a small-scale study. In this study, three judges, all doctoral candidates in industrial and organizational psychology, were asked to evaluate the performance of 18 leaders using the aforementioned scales and the information presented in the relevant summary chapters. Using the procedures suggested by [Shrout & Fleiss \(1979\)](#), an average interrater agreement coefficient of .83 was obtained across the 12 rating scales under consideration. In a second study, intended to provide some evidence for the validity, or meaningfulness, of these evaluations, a second, high quality biography was obtained for 5 leaders. The outcome evaluations derived from the summary chapter presented in this second biography were contrasted with the outcome evaluations derived from the summary chapters presented in the first

Table 3
Thematic constructs used in event content coding

Construct	Behavioral examples	Justification for inclusion
Future focus	<ul style="list-style-type: none"> • Speaking about concern for future goals or conditions • Prioritizing future goals over present needs or past standards 	Charismatic leaders communicate visions that are loosely tied to a set of future goals (House, 1977; House & Howell, 1992; Shamir, House, & Arthur, 1993)
Inspirational communication	<ul style="list-style-type: none"> • Persuading others using emotional or affective communication • Practice in speaking techniques such as debate or drama club 	Charismatic leaders use affective speech as primary means of influence (Conger, 1989; House and Podsakoff, 1994)
Image management	<ul style="list-style-type: none"> • Role modeling desired behaviors • Concern with appearance to others 	Charismatic leaders tend to exert direct influence on followers by role modeling desired behaviors (House, 1977)
Risk taking	<ul style="list-style-type: none"> • Engaging in risky endeavors • Risk taking behavior is rewarded 	Charismatic leaders engage in public risk taking to convey heroic image for followers (Conger & Kanungo, 1998; House, 1977)
Personal achievement	<ul style="list-style-type: none"> • Making obvious contributions to performance or letting others know about achievements • Direct influence tactics such as taking credit for accomplishments 	Charismatic leaders tend to take credit for contributions and engage in highly visible leadership activities (House & Howell, 1992)
Performance expectations	<ul style="list-style-type: none"> • Witnessing rewards for high expectations • Viewing accomplishments in terms of overall goal attainment versus incremental progress 	Charismatic leaders convey high expectations to followers through their visions and other direct communications (House & Podsakoff, 1994)
Change efforts	<ul style="list-style-type: none"> • Witnessing dramatic change efforts to status quo • Large-scale change efforts are rewarded 	Visions of charismatic leaders portray a model for the future that is markedly different from the status quo (Shamir, House, & Arthur, 1993; Weber, 1947)
Exposure to crises	<ul style="list-style-type: none"> • Experiencing some type of crisis or emergency • Witnessing control through a crisis (having a role model of how to effectively deal with crises) 	Charismatic leaders often emerge in times of crisis or events marked with instability and change (Hunt, Boal, & Dodge, 1999; House & Howell, 1992)
Past focus	<ul style="list-style-type: none"> • Preferring past conditions, traditions, or way of life • Focusing on history or historical events and/or people 	Ideological often point to past group status or traditions in communicating their visions (Strange & Mumford, 2002)
Belief commitment	<ul style="list-style-type: none"> • Discounting alternative views that are not congruent with belief system • Denying normal allowances (e.g., types of food, material possessions) due to belief system • Witnessing rewards for commitment to beliefs 	Ideological leaders use their belief systems to make decisions, influence and select followers, and motivate others (Strange & Mumford, 2002; Robinson, 1996)
Spirituality	<ul style="list-style-type: none"> • Viewing faith, morals, and/or religion as primary directive in life • Using symbols and/or rituals to reflect religion or spirituality 	Ideological leaders view spirituality as most important aspect of daily life and display this belief through use of symbols and rituals (Post, Ruby, & Shaw, 2002)
Environmental conflict	<ul style="list-style-type: none"> • Experiencing societal events that change the way that individuals live and/or interact • Witnessing war, leader assassination, and/or change in resources 	Ideological leaders tend to arise from conditions of marked societal turbulence (Post, Ruby, & Shaw, 2002)
Injustice	<ul style="list-style-type: none"> • Witnessing inequitable distribution of resources or income disparity between groups • Seeing group as indebted by society for past wrongs 	Ideological leaders' visions are based on restoring past glory or rightful place in society to group members and may be based on a sensitivity to injustice or victimization (Bond, Kwan, & Li, 2003; Hogan & Dickstein, 1972)
Present focus	<ul style="list-style-type: none"> • Surveying current conditions • Gathering information about people and problems in current situation 	Pragmatic leaders place an emphasis on day-to-day current problems (Mumford & Van Doorn, 2001; Qin & Simon, 1990)
Analysis	<ul style="list-style-type: none"> • Applying a logical or step-by-step process of problem solving • Witnessing flexible or malleable decision-making 	Pragmatic leaders amend their problem solving strategies based on logical analysis of incoming feedback (Bartone, Snook, & Tremble, 2002; Mumford & Van Doorn, 2001)
Evidential preference	<ul style="list-style-type: none"> • Exposure to factual data (e.g., numbers, statistical analyses) use in decision-making • Disconfirming beliefs and values in face of conflicting facts or data 	Pragmatic leaders prefer to use concrete evidence to a) make decisions, and b) influence followers (Mumford & Van Doorn, 2001)
Incremental progress	<ul style="list-style-type: none"> • Viewing need for gradual achievements towards a goal • Delaying gratification for end state/outcome in order to break problem down into more manageable steps 	Pragmatic leaders rely on iterative problem solving activities to define and solve complex organizational problems (Reiter-Palmon & Illies, 2004)
Exposure to diversity	<ul style="list-style-type: none"> • Experiencing diverse people, places, and ideas • Searching for similar and non-similar properties of diverse people and ideas 	Pragmatic problem solving relies on an integration of discrepant concepts to form unique solutions to everyday problems (Gardner, 1993; Feldman, 1999)
Positive view of others	<ul style="list-style-type: none"> • Appraising others positively or kindly • Expressing concern for the safety, needs, and happiness of others 	Socialized leaders base their problem solving efforts on the good of others (House & Howell, 1992)
Positive view of self	<ul style="list-style-type: none"> • Experiencing praise or assurance from others about personal abilities • Expressing confidence in one's own ability 	Socialized leaders are able to trust others based on prior experiences of reliance and confidence (McClelland, 1975)
Commitment to others	<ul style="list-style-type: none"> • Expressing sense of responsibility to welfare of others • Making personal sacrifices for good of the group 	Socialized leaders prioritize group needs above personal motives (O'Connor et al., 1995)
Exposure to suffering	<ul style="list-style-type: none"> • Witnessing others suffer pain or life strife • Empathizing with others' suffering 	Socialized leaders demonstrate a marked concern for the well-being of others; such empathy may be developed through experiences with others' pain (Nidich, Nidich, & Alexander, 2000)

Table 3 (continued)

Construct	Behavioral examples	Justification for inclusion
Uncertainty/ powerlessness	<ul style="list-style-type: none"> • Experiencing powerless due to rapidly changing situation • Experiencing insecurity due to lack of control over one's own situation 	Personalized leaders evidence a strong need to protect themselves over the good of the group (Goodstadt & Hjelle, 1973; Martin, Scully, & Levitt, 1990)
Negative view of others	<ul style="list-style-type: none"> • Expressing distrust of others, possibly due from abandonment and rejection from others in past • Viewing others as objects or means to an end with little regard for their safety or needs 	Personalized leaders are willing to use others as tools or objects for personal gain (Eisenberg & Miller, 1987; House & Howell, 1992)
Negative view of self	<ul style="list-style-type: none"> • Viewing others as superior to self, either internally or hearing such appraisals from others • Experiencing doubt in personal abilities 	Narcissism, or a motivated defense of a weak-self system based on early experiences (Emmons, 1981; Fromm, 1973), is associated with personalized leadership (O'Connor et al., 1995)
Power motives	<ul style="list-style-type: none"> • Subduing or over-powering others in pursuit of personal goals • Converting others to serve personal goals with use of threat, promise of reward, and/or persuasion 	Personalized leaders have a high need for power and justify harm to others in pursuit of such personal needs (McClelland, 1975; O'Connor et al., 1995)
Negative life themes	<ul style="list-style-type: none"> • Expressing a destructive image of the world and one's place in it • Viewing world as evil, sinister, and cruel 	Personalized leaders' lack of concern for social system may be due to their negative perceptions or world view (O'Connor et al., 1995)
Focus on self (over others)	<ul style="list-style-type: none"> • Prioritizing protection of oneself over welfare of others • Exaggerating one's own abilities and skills in presence of a group 	Self-protection and self-aggrandizement are positively associated with personalized leadership (House & Howell, 1992)

biography. The agreement coefficient obtained in this comparative analysis was 84%. Thus, some evidence is available for the convergent validity of these evaluations across biographical sources. A complete overview of the above-mentioned steps in this method can be found in Appendix B.

2.5. Analyses

In order to contrast leaders on types of life defining developmental events they have experienced, chi-square frequency analyses were applied. In addition, several correlation analyses were conducted to examine the association between thematic dimensions identified in the biographies. Taking into account potential covariate controls, an examination of the contrasting content of these events between groups of outstanding leaders, a multiple analysis of covariance (MANCOVA) was conducted.

According to variance identified in the MANCOVA, a set of discriminant function analyses was also conducted on important classification variables and the thematic dimensions. Significant functions were then correlated with and regressed upon the 12 criteria to examine the relationships between the recurring themes found in life events and indices of performance important to outstanding leadership.

3. Results

3.1. Types of events

Table 4 illustrates the relationships obtained in the correlational analysis between the types of events found in the biographies of outstanding leaders. There were no significantly correlated relationships between the six event types, demonstrating the associational independence among originating events, turning point events, anchoring events, analogous events, redemption events, and contaminating events. In other words, these six event types seem to capture remarkably distinct categories of life experiences, providing some validity evidence for the inferences drawn from such models of adult development (McAdams, 2001; Pillemer, 1998, 2001).

Further analyses of association revealed that, in support of Propositions 1 and 2, the events in this taxonomy were differentially associated with leader orientation and type. Before contrasting leaders in this regard, it is useful to talk about the frequency in which these event types were identified. Originating and anchoring events, were identified most frequently in the biographies ($n=304$, 431, respectively). As expected, turning point, redemption, and contaminating events appeared less frequently than

Table 4

Means, standard deviations, and correlations for event types

Events	<i>N</i>	\bar{X}	<i>SD</i>	1	2	3	4	5	6
1 Originating events	304	2.57	1.75	1.0	.07	.12	-.04	.05	-.16
2 Turning point events	174	1.47	1.40		1.0	.12	-.02	.17	-.01
3 Anchoring events	431	3.51	2.54			1.0	-.07	.08	.00
4 Analogous events	19	.15	.44				1.0	.10	.07
5 Redemption events	206	1.72	1.56					1.0	.06
6 Contaminating events	264	2.15	1.77						1.0

Note: No correlations were significant at $p < .10$ level.

Table 5
Frequency of event types by orientation

	Originating	Anchoring	Analogous	Turning point	Redemption	Contaminating
Socialized						
Frequency	150	236	14	93	127	117
Percent ^a	49.3	54.8	73.7	53.4	61.7	44.3
Personalized						
Frequency	154	195	5	81	79	147
Percent	50.7	45.2	26.3	46.6	38.3	55.7

^a Percent within type of event.

anchoring and originating events, although they did appear with some frequency in the early portions of leader biographies ($n = 174, 206, 264$, respectively). Analogous events appeared less frequently, however ($n = 19$). This low number of identifications could be due to the fact that the present study is focused on the early development of life narratives—a time period when relatively few complex analogues are likely to be experienced by leaders. Because so few of these types of narrative events were identified in this study, the remaining portion of the results will focus on the differences among leaders with respect to originating, anchoring, turning point, redemption, and contaminating events.

Table 5, resulting from the first chi-square analysis, presents the contrast of socialized and personalized leaders with respect to the frequency different types of life events ($\chi^2_{(5)} = 19.56, p \leq .01$). As expected, contaminating events were observed more frequently in the biographies of personalized leaders ($n = 147$ versus $n = 117$), while redemption events were observed more frequently in the biographies of socialized leaders ($n = 127$ versus $n = 79$). It seems likely that disappointment and humiliation result in the construction of negative life narratives while earned success, often success attributed to the help of others, results in a more positive, prosocial world view (Gessner, O'Connor, Clifton, Connelly, & Mumford, 1993).

Socialized and personalized leaders also differed with respect to the amount of anchoring events they had. Specifically, socialized leaders experienced more anchoring events, or experiences that shaped their belief systems, than personalized leaders

Table 6
Frequency of event types by leader type

	Originating	Anchoring	Analogous	Turning point	Redemption	Contaminating
Charismatic						
Frequency	102	116	7	71	71	93
Percent ^a	33.6	26.9	36.8	40.8	34.5	35.2
Ideological						
Frequency	88	206	4	47	58	83
Percent	28.9	47.8	21.1	27.0	28.2	31.4
Pragmatic						
Frequency	114	109	8	56	77	88
Percent	37.5	25.3	42.1	32.2	37.4	33.3

^a Percent within type of event.

Table 7
Frequency of event types by leader orientation and leader type

	Originating	Anchoring	Analogous	Turning point	Redemption	Contaminating
Socialized charismatic						
Frequency	52	54	6	29	45	48
Percent ^a	17.1	12.5	31.6	16.7	21.8	18.2
Personalized charismatic						
Frequency	50	62	1	42	26	45
Percent	16.4	14.4	5.3	24.1	12.6	17.0
Socialized ideological						
Frequency	41	114	3	29	37	41
Percent	13.5	26.5	15.8	16.7	18.0	15.5
Personalized ideological						
Frequency	47	92	1	18	21	42
Percent	15.5	21.3	5.3	10.3	10.2	15.9
Socialized pragmatic						
Frequency	57	68	5	35	45	28
Percent	18.8	15.8	26.3	20.1	21.8	10.6
Personalized pragmatic						
Frequency	57	41	3	21	32	60
Percent	18.8	9.5	15.8	12.1	15.5	22.7

^a Percent within type of event.

Table 8
Means, standard deviations, and correlations for thematic dimensions

Dimensions	N	\bar{X}	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1 Future focus	74	5.07	8.37	1.0	.24	.24	.11	.29	.11	.05	.06	.01	-.05	-.10	-.20	-.03	-.13	.076	.06	.06	-.18	.09	.19	-.03	-.03	.07	.04	.17	.06	.05	.21
2 Inspirational communication	118	8.31	10.58		1.0	.31	.07	.17	.21	.03	.13	.04	.00	.01	.05	.15	-.23	-.12	-.14	-.12	-.18	.17	.01	.09	.16	-.14	-.26	-.09	-.17	-.17	-.10
3 Image management	129	8.82	13.12			1.0	.11	.56	.18	.06	.02	-.08	-.19	-.02	.04	-.05	-.25	-.24	-.24	-.15	-.17	.00	-.03	-.02	-.03	-.11	-.10	-.12	.04	-.20	.02
4 Risk taking	71	5.59	8.50				1.0	.14	.34	.14	.13	-.03	-.12	.02	.10	.05	.27	.32	.33	.06	.17	.32	.11	.36	.24	.07	.00	.06	.08	.04	.17
5 Personal achievement	77	5.42	8.56					1.0	.29	.24	.10	-.04	-.13	-.15	-.15	-.14	-.23	-.12	-.16	-.10	-.15	.07	.14	-.08	-.02	-.02	.00	-.02	.04	-.10	.06
6 Performance expectations	83	6.26	9.56						1.0	-.08	-.11	-.12	-.13	-.07	-.17	-.20	.04	.12	.05	.02	.03	.25	.17	.02	-.01	-.06	.00	.12	.01	.10	.10
7 Dramatic change efforts	67	5.39	8.68							1.0	.15	.05	.22	.01	.18	.09	-.14	-.06	-.05	.28	-.14	-.04	-.11	.00	.05	.05	-.05	-.11	.01	-.04	-.02
8 Exposure to crises	104	7.55	10.94								1.0	.26	-.09	-.06	.25	.17	-.03	.05	.02	-.08	-.14	-.05	-.18	.07	.32	.20	-.06	.04	-.10	-.07	-.07
9 Past focus	87	6.54	12.25									1.0	.26	.38	.33	.24	-.17	-.19	-.20	-.19	-.08	.03	-.02	.07	.06	.11	.10	-.05	-.10	-.06	-.06
10 Belief commitment	174	13.56	17.70										1.0	.40	.11	.26	-.04	-.15	-.07	-.20	.03	.24	.23	.19	.06	-.02	-.15	-.13	.27	-.09	-.21
11 Spirituality	87	7.05	14.37											1.0	.19	.17	-.08	-.15	-.16	-.14	.14	.08	-.09	.09	.05	.03	-.02	-.15	-.16	-.10	-.20
12 Conflict	182	13.96	18.50												1.0	.55	-.03	-.06	-.06	-.13	-.07	.02	-.12	.28	.44	.17	.02	-.05	.03	.02	-.05
13 Injustice	173	13.16	16.70													1.0	-.14	-.21	-.16	.09	-.14	.05	.04	.29	.48	.23	.08	.04	-.14	.11	-.08
14 Present focus	78	5.69	11.08														1.0	.63	.72	.35	.49	.15	.09	.13	-.05	.05	-.18	.02	.04	.09	.07
15 Analysis	165	12.68	17.34															1.0	.83	.35	.45	.17	.06	.21	.06	.05	-.02	.11	.06	.06	.15
16 Evidential preference	133	9.96	16.55																1.0	.30	.49	.22	.09	.19	.06	.08	-.06	.07	.08	.05	.12
17 Incremental progress	85	6.16	11.65																	1.0	.13	-.02	.12	.04	-.05	.01	-.11	-.08	-.05	-.01	.10
18 Exposure to diversity	129	9.67	13.20																		1.0	.33	.06	.25	-.11	.00	-.10	-.13	-.04	.05	.05
19 Positive view of others	115	8.59	13.10																			1.0	.47	.53	.27	-.16	.14	-.11	-.18	-.10	-.10
20 Positive view of self	126	8.99	14.26																				1.0	.09	-.04	-.14	-.15	.07	-.17	-.12	.02
21 Commitment to others	144	10.68	15.05																					1.0	.47	-.04	-.19	-.08	-.24	-.11	-.25
22 Exposure to suffering	100	7.36	13.07																						1.0	.16	.00	.05	-.17	-.02	-.14
23 Uncertainty/powerlessness	127	10.03	13.96																							1.0	.43	.48	.29	.59	.38
24 Negative view of others	202	15.02	17.37																								1.0	.38	.55	.60	.58
25 Negative view of self	85	6.20	10.03																									1.0	.35	.51	.53
26 Power motives	148	10.91	18.53																										1.0	.53	.74
27 Negative life themes	84	6.36	11.56																											1.0	.60
28 Focus on self	119	8.52	14.73																												1.0

Note. $r \geq .24$ significant at .01 level.

Note. $r \geq .18$ significant at .05 level.

biographies of charismatic, ideological, and pragmatic leaders. A chi-square analysis revealed significant contrasts among these leader types with respect to the events they experienced ($\chi^2_{(10)}=51.58, p \leq .001$). During the period where charismatic, ideological, and pragmatic leaders are forming life narratives, available biographies report differing amounts of redemption events, anchoring events, turning point events, and originating events.

Ideological leaders, consistent with their influence of beliefs and values in decision-making, were more likely to encounter anchoring events during the period of life narrative formation than charismatic and pragmatic leaders ($n=206$ versus $n=113$). Following from an early steadfast commitment to beliefs, ideological leaders were less likely to be influenced by turning point events, or life redirecting events, than the more malleable charismatic leaders ($n=47$ versus $n=71$). Ideological leaders also experienced less redemptive events than charismatic and pragmatic leaders ($n=56$ versus $n=74$). This pattern of findings suggests that ideological leaders, in contrast to charismatic and pragmatic leaders, remain on a fixed path—a path anchored by belief shaping events.

Charismatic leaders were more likely than ideological and pragmatic leaders to be exposed to turning point events ($n=71$ versus $n=52$). These types of experiences may play a role in shaping the mental models of charismatic leaders in that they provide concrete evidence for the value of initiating change events, a common strategy employed by charismatic leaders (Shamir et al., 1993).

Pragmatic leaders differed from charismatic and ideological leaders ($n=114$ versus $n=95$) in that they were more likely to evidence exposure to originating events. These types of events come to be tied to long-term plans and goals, which are critical to the activities characteristic of pragmatic leaders solving complex problems in social domains (Mumford & Van Doorn, 2001).

This pattern of results should be interpreted in light of the significant ($\chi^2_{(25)}=93.02, p \leq .001$) chi-square obtained when examining the frequency of event experienced across the orientation and type variables. Specifically, Table 7 illustrates that this interaction can be summarized by three main conclusions. First, following from the foregoing observations, socialized ideologues were most likely to evidence exposure to anchoring events ($n=114$ versus $n=63.4$). Personalized pragmatic leaders were conversely least likely to be exposed to anchoring events ($n=41$ versus $n=78$), suggesting that opportunism resulting from the lack of internal value anchors may often account for the calculated destructiveness on the part of personalized pragmatic leaders.

Second, personalized ideologues were less likely than other leaders to evidence exposure to redemptive events ($n=19$ versus $n=37$) during the period of narrative formation. This lack of exposure to redemptive events may make it difficult for ideological leaders, who tend to be steadfast in their beliefs, to be capable of envisioning a better future. Moreover, it could facilitate in the adoption of a rigid, aggressive ideological stance to return their group's conditions to the past state of greatness by any means.

Third, following from this observation, personalized ideologues were less likely than other leaders to evidence exposure to turning point events ($n=18$ versus $n=31$). More importantly, personalized charismatics were more likely to evidence exposure to more turning point events than those to which other leaders were exposed ($n=42$ versus $n=26.2$). It seems that there is a threshold of change events that leaders can take; very high levels of life instability lead charismatics to adopt a personalized orientation.

3.2. Event content

3.2.1. Correlations

Table 8 presents the means, standard deviations, and correlations among the 28 thematic dimensions used to code these events. As expected in a sample of outstanding leaders, formative life events were likely to evidence themes of power ($\bar{X}=10.91, SD=18.53$). Themes of turbulence also appeared often in these leaders' life shaping events, similar to Simonton's findings (1994). For example, themes related to conflict ($\bar{X}=13.96, SD=18.50$), uncertainty ($\bar{X}=10.01, SD=13.96$), and injustice ($\bar{X}=13.16, SD=16.70$) suggest that outstanding leaders develop in an unstable, conflict-rich environment where they begin to form ideas about the way the world works ($\bar{X}=13.56, SD=17.70$). The prevalence of these themes is not surprising given that leaders tend to emerge from turbulent conditions (Erikson, 1968; Simonton, 1994).

Of greater use for understanding differential styles of leadership is the pattern of relationships resulting from the correlations among the thematic dimensions. The first important finding is the magnitude of these relationships was not large enough to warrant further aggregation. Thematic dimensions linked to a specific leadership orientation (i.e., socialized or personalized

Table 9
Multivariate analysis of covariance results contrasting leaders with respect to developmental dimensions

	<i>F</i>	<i>df</i>	<i>p</i>	η
Covariates				
None ^a	–	–	–	–
Main effects				
Orientation (socialized versus personalized)	3.43	28, 114	.001	.52
Type (charismatic, ideological, pragmatic)	2.52	28, 114	.001	.44
Interactions				
Orientation \times Type	1.16	28, 114	.289	.27

Note. *F*=*F* ratio, *df*=degrees of freedom, *p*=significance level (determined by using Roy's largest root), η =effect size.

^aNo significant covariates were identified in this analysis.

leadership), however, did display expected positive correlations. For example, negative view of others, negative view of self, power motives, negative life themes, and self focus, constructs historically associated with personalized leaders (O'Connor et al., 1995; House & Howell, 1992), evidenced strong positive relationships with each other in the present study ($\bar{r} = .48$). Along similar lines, socialized orientation events themes of positive view of others, positive view of self, commitment to others, and exposure to suffering were positively correlated with each other as well ($\bar{r} = .42$).

In keeping with this line of results, event themes theoretically linked to a given leadership type, for example the themes derived from examination of literature on charismatic leaders, also showed a unique pattern of relationships. Themes linked to charismatic leadership, such as focus on future conditions, inspirational communication, and image management, evidenced positive correlations ($\bar{r} = .22$). Thematic dimensions related to ideological leadership, for example themes of spirituality, environmental conflict, belief commitment, and injustice, resulted in strong positive correlations ($\bar{r} = .28$). It is also important to note that these ideological themes evidenced virtually no relationship with themes related to charismatic leadership ($\bar{r} = .00$). Events laden with analysis, a preference for concrete evidence, incremental progress, and exposure to diverse people and ideas, all dimensions associated with pragmatic leaders, displayed the expected positive relationships ($\bar{r} = .46$). Again, however, these themes were not strongly related to themes linked to charismatic or ideological leadership. In addition, the thematic dimensions associated with charismatic, ideological, and pragmatic leadership were not associated with the themes linked to socialized or personalized orientations ($\bar{r} = .02$). This pattern of findings provides some evidence for the convergent and divergent validity of the scores reflecting the thematic content of the life events extracted from leader biographies.

3.2.2. Comparison of leadership styles

The presence of these coherent, meaningful thematic dimensional relationships points to the importance of another question—how do the various leader styles differ on these dimensions? Table 9 presents the results from the MANCOVA examining differences across leader orientation (personalized and socialized) and leader type (charismatic, ideological, and pragmatic) with respect to the occurrence of the various thematic dimension in important life events. None of the various covariate controls yielded significant ($p \geq .05$) impact on the outcomes, which could suggest that conclusions drawn about orientation and type were not influenced by potential confounds such as cross-biography differences in sources and detail.

The MANCOVA revealed that the orientation variable provided a significant main effect ($F_{(28, 114)} = 3.43, p \leq .001$). Examination of the univariate effects indicated that socialized leaders were exposed to life events that would build an ethical dedication to others. Specifically, socialized leaders evidenced more themes of commitment to others ($F_{(1, 114)} = 15.40, p \leq .001, \bar{X} = 15.80, SE = 1.84$ versus $\bar{X} = 5.55, SE = 1.84$), positive view of others ($F_{(1, 114)} = 6.64, p \leq .01, \bar{X} = 11.58, SE = 1.64$ versus $\bar{X} = 5.59, SE = 1.64$), and inspirational communication ($F_{(1, 114)} = 4.65, p \leq .05, \bar{X} = 10.39, SE = 1.36$ versus $\bar{X} = 6.23, SE = 1.36$) than themes evidenced by personalized leaders. It seems that socialized leaders encounter events stressing the importance of prosocial behavior at early points in their lives.

The development of such a socialized orientation is more complex than the foregoing pattern of findings may lead one to discern, however. Socialized leaders, as opposed to personalized leaders, are more likely to have experienced events characterized by an exposure to injustice ($F_{(1, 114)} = 7.72, p \leq .01, \bar{X} = 17.31, SE = 2.11$ versus $\bar{X} = 9.00, SE = 2.11$) and exposure to others' suffering ($F_{(1, 114)} = 14.34, p \leq .001, \bar{X} = 11.68, SE = 1.61$ versus $\bar{X} = 3.02, SE = 1.61$). Evidentially, socialized leadership emerges not only from commitment

Table 10
Significant discriminant functions

Significant function by leader orientation	
Function one: interpersonal concern ($R = .71, p < .001$)	Loading scores
27) Negative view of others	-.50
26) Power motives	-.42
21) Commitment to others	.35
22) Exposure to suffering	.34
24) Negative life themes	-.33
Socialized leaders	1.01
Personalized leaders	-1.01
Significant function by leader type	
Function one: pragmatism ($R = .66, p < .01$)	Loading scores
15) Analysis	.48
28) Focus on self	.44
16) Evidential preference	.39
17) Incremental progress	.35
10) Belief commitment	-.34
14) Present focus	.31
26) Power motives	.31
11) Spirituality	-.29
7) Dramatic change efforts	-.26
Charismatic leaders	.00
Ideological leaders	-1.03
Pragmatic leaders	1.11

Table 11
Correlations of performance criteria with discriminant functions

Criteria	Interpersonal concern	Pragmatism
1) How much did the leader contribute to society?	.24	-.24
2) How long did these contributions last?	.29	.06
3) How many people did this leader effect?	.11	-.15
4) How favorably did the author view the leader?	.45	-.08
5) How many positive contributions did the leader make?	.34	-.04
6) How many negative contributions did the leader make?	-.28	-.15
7) How many different types of positive contributions did the leader make?	.36	-.02
8) How many different types of negative contributions did the leader make?	-.26	-.26
9) To what degree do the institutions established still exist?	.33	.22
10) How many institutions were established by the leader?	.09	.09
11) Did the leader have a vision that was maintained after they were out of power?	.25	.22
12) Did the leader effect mass movements?	.43	-.39

Note: $r = .18$ significant at .05 level.

to others, but also from an empathetic understanding of the human condition. Socialized leaders, because of their acute exposure to pain experienced by others arising from unfair conditions, may develop a sensitivity or compulsion to make right with their own relationships later in life.

While these findings offer new insight into the nature of socialized leadership, a set of historically supported themes emerged in the background of personalized leaders. For example, the events evidenced in the lives of personalized, as opposed to socialized, leaders were indicative of themes of self focus ($F_{(1, 114)} = 9.79, p \leq .01, \bar{X} = 12.31, SE = 1.71$ versus $\bar{X} = 4.71, SE = 1.71$), negative view of others ($F_{(1, 114)} = 31.08, p \leq .001, \bar{X} = 22.86, SE = 1.99$ versus $\bar{X} = 7.16, SE = 1.99$), negative life themes ($F_{(1, 114)} = 14.82, p \leq .001, \bar{X} = 10.08, SE = 1.36$ versus $\bar{X} = 2.63, SE = 1.36$), power motives ($F_{(1, 114)} = 24.46, p \leq .001, \bar{X} = 18.28, SE = 2.10$ versus $\bar{X} = 3.55, SE = 2.10$), and uncertainty ($F_{(1, 114)} = 2.79, p \leq .10, \bar{X} = 12.12, SE = 1.77$ versus $\bar{X} = 7.92, SE = 1.77$).

In addition, personalized leaders were less likely than socialized leaders to be privy to the importance of careful analysis of problems ($F_{(1, 114)} = 5.60, p \leq .05, \bar{X} = 9.33, SE = 2.00$ versus $\bar{X} = 16.03, SE = 2.00$) and fact-finding ($F_{(1, 114)} = 7.29, p \leq .01, \bar{X} = 6.25, SE = 1.94$ versus $\bar{X} = 13.67, SE = 1.94$) when learning other life lessons. This could demonstrate why personalized leadership has been historically associated with poor performance (O'Connor et al., 1995). These results closely align with findings that personalized leaders tend to evidence a narcissistic self importance coupled with cavalier disregard for the others' well-being (O'Connor, et al., 1995). Following from that, these delusions of grandeur and drive to subvert others may have been originally activated by uncertainty about one's place in the world.

The discriminant function comparing socialized and personalized leaders on these thematic dimensions was significant ($p \leq .001$), and it resulted in a canonical correlation of .71. The upper portion of Table 10 illustrates that socialized and personalized leaders can be discriminated based on the themes they encounter throughout their early life experiences. This finding is important because it lends support to the possibility that life narratives play an important role in shaping a leader's orientation towards others. The thematic dimensions resulting in the highest loadings on this function were negative view of others ($r = -.50$), power motives ($r = -.42$), commitment to others ($r = .35$), exposure to others' suffering ($r = .34$), and negative life themes ($r = .33$). This pattern of loadings, emphasizing thoughts about and reactions to others, was labeled *Interpersonal Concern*. As might be expected based on earlier observations, socialized leaders ($r = 1.01$) scored higher on this function than personalized leaders ($\bar{X} = -1.01$) scored.

A significant main effect ($F_{(28, 114)} = 2.52, p \leq .001$) was also found for the leader type variable in the MANCOVA analysis contrasting charismatic, ideological, and pragmatic leaders on these thematic dimensions. Following from the supposition that ideological leadership is based on the adherence to a set of standards and beliefs, events experienced by ideological leaders were more likely than charismatic or pragmatic leaders to evidence themes of belief commitment ($F_{(2, 114)} = 5.74, p \leq .01, \bar{X} = 20.68, SE = 2.70$ versus $\bar{X} = 9.99, SE = 2.70$) and spirituality ($F_{(2, 114)} = 4.19, p \leq .01, \bar{X} = 11.55, SE = 2.17$ versus $\bar{X} = 4.79, SE = 2.17$). Ideological leaders also seemed to differ from pragmatic and charismatic leaders in terms of themes of power ($F_{(2, 114)} = 5.87, p \leq .01, \bar{X} = 4.05, SE = 2.58$ versus $\bar{X} = 14.35, SE = 2.58$). Ideological leaders seem to frame their leadership style around an overarching mission, as opposed to the need to control.

Significantly contrasting the leader types in terms of change efforts ($F_{(2, 114)} = 5.86, p \leq .01$), pragmatic leaders ($\bar{X} = 10.48, SE = 1.77$) were more likely to be exposed to events stressing the value of incremental progress than charismatic or ideological leaders ($\bar{X} = 3.94, SE = 1.77$). Consistent with their focus on solving immediate practical problems, pragmatic leaders experienced more events with themes of focus on the present ($F_{(2, 114)} = 5.69, p \leq .01, \bar{X} = 10.28, SE = 1.66$ versus $\bar{X} = 3.39, SE = 1.66$), the value of problem-based analysis ($F_{(2, 114)} = 13.74, p \leq .001, \bar{X} = 23.19, SE = 2.45$ versus $\bar{X} = 7.42, SE = 2.45$), and a focus on practical information ($F_{(2, 114)} = 9.60, p \leq .001, \bar{X} = 18.47, SE = 2.38$ versus $\bar{X} = 5.70, SE = 2.38$).

This focus on the practical aspects of one's current situation may be related to skepticism about people and their intentions. Pragmatic leaders, in contrast to charismatic and ideological leaders, were more likely to evidence exposure to events indicative of a negative view of self ($F_{(2, 114)} = 2.05, p \leq .05, \bar{X} = 9.23, SE = 1.54$ versus $\bar{X} = 4.67, SE = 1.54$) and negative life themes ($F_{(2, 114)} = 5.87, p \leq .01, \bar{X} = 10.78, SE = 1.67$ versus $\bar{X} = 3.84, SE = 1.67$). Another characteristic of the event themes evidenced by pragmatic, as opposed to charismatic or ideological, leaders is their self focus, often at the expense of others ($F_{(2, 114)} = 9.60, p \leq .001, \bar{X} = 18.47,$

SE=2.38 versus \bar{X} =5.70, SE=2.38). One interpretation of this finding is that due to their emphasis on analytical problem solving, pragmatic leaders may appear aloof and inwardly focused, a characteristic of the intensive labor required by problem solving activities (Feist & Gorman, 1998).

In contrasting these three types of leaders in the discriminant analysis, only one function provided a sizable ($r=.66$, $p\leq.01$) canonical correlation. The lower portion of Table 10 illustrates that several thematic dimensions distinguished the groups. This *Pragmatism* function was characterized by analytical problem solving ($r=.48$), focus on self ($r=.44$), preference for evidence ($r=.39$), incremental progress ($r=.35$), belief commitment ($r=-.34$), focus on the present ($r=.31$), power motives ($r=.31$), spirituality ($r=-.29$), and dramatic change efforts ($r=-.26$). As might be expected, ideological leaders scored lowest on this function ($\bar{X}=-1.03$) and pragmatic leaders scored highest ($\bar{X}=1.11$). Charismatic leaders scored ($\bar{X}=.00$) between these two extremes.

3.2.3. Performance relationships

Table 11 presents the correlations of the discriminant function scores with the 12 performance criteria applied in this study. Interpersonal Concern was positively related to various indices of exceptional leader performance ($\bar{r}=.28$). Leaders evidencing interpersonal concern were least likely to make negative contributions to society as a whole as well ($\bar{r}=-.27$). It seems that successful leaders, ones that effect mass movements ($r=.43$), make positive societal contributions ($\bar{r}=.35$), and are viewed favorably by others after the expiration of their leadership term ($r=.45$), apply mental models to crises that are laden with consideration for the well-being of others.

Although *Interpersonal Concern* shaped leader orientation towards others and resulted in large scale societal impact, *Pragmatism* exerted weaker, albeit complex, effects on performance. Leaders evidencing pragmatic themes in life events were less likely to initiate mass movements ($r=-.39$) and were subsequently less likely to make large impacts on society ($r=-.24$). However, *Pragmatism* was related to establishing long-lasting institutions ($r=.22$) and agendas ($r=.22$). This pattern of findings demonstrates an important characteristic of pragmatic leadership. Because they are less likely to engage with haste in large scale change initiatives, they are unlikely to be attributed with either impacting positive contributions ($r=-.02$) or negative contributions ($r=-.26$) on a societal level. This behind the scenes leadership, influenced by mental models built around incremental change, careful analysis, and preference for facts, may be limited in interpersonal impact, but it shows promise for steady, ongoing performance in the long run.

Table 12 presents the results obtained when the significant functions were used to predict performance after taking relevant controls into account. After statistically controlling for significant ($p\leq.05$) confounds such as organizational size, organizational

Table 12
Summary of regression results

Criteria	R	R ²	p	Significant covariates (p=.05)	Beta weight	Significant functions (p=.05)	Beta weight	High group	Low group
1) How much did the leader contribute to society?	.50	.25	.001	Type of organization	-.39	Interpersonal concern	.28	Socialized	Personalized
2) How long did these contributions last?	.29	.08	.001	None	-	Interpersonal concern	.29	Socialized	Personalized
3) How many people did this leader effect?	.43	.19	.001	Organizational size	.33	None	-	-	-
4) How favorably did the author view the leader?	.56	.32	.001	Type of organization Rise to power age	-.21 -.22	Interpersonal concern	.49	Socialized	Personalized
5) How many positive contributions did the leader make?	.40	.16	.001	Detail of developmental sections None	.28 -	Interpersonal concern	.36	Socialized	Personalized
6) How many negative contributions did the leader make?	.31	.09	.001	None	-	Interpersonal concern	-.27	Socialized	Personalized
7) How many different types of positive contributions did the leader make?	.45	.21	.001	Type of organization	-.29	Interpersonal concern	.38	Socialized	Personalized
8) How many different types of negative contributions did the leader make?	.49	.24	.001	Type of organization	-.35	Interpersonal concern	-.23	Socialized	Personalized
9) To what degree do the institutions established still exist?	.47	.22	.001	Rise to power age Was leader in power pre or post WWII	.17 .28	Interpersonal concern	.29	Socialized	Personalized
10) How many institutions were established by the leader?	.34	.12	.01	Number of Pages in Biography	.33	None	-	-	-
11) Did the leader have a vision that was maintained after they were out of power?	.31	.10	.01	Rise to power age	-.19	Interpersonal concern	.27	Socialized	Personalized
12) Did the leader effect mass movements?	.53	.28	.001	Type of organization Rise to power age	-.34 -.13	Pragmatism	-.24	Pragmatic	Ideological

Note: R= multiple correlation; R²=percent of variance accounted for; p=significance level; beta=standardized regression weight.

type, amount of pages devoted to developmental material, and age at rise to power, 10 of the 12 outcomes were significantly ($p \leq .01$) predicted by *Interpersonal Concern* or *Pragmatism*. As expected based on the previous discussion, *Interpersonal Concern* yielded the largest influence on a host of performance indices ($\beta = .38$). It seems that successful leaders evidence exposure to events indicative of a commitment to and empathetic understanding of others. Leaders scoring highest on *Pragmatism* were least likely to effect mass movements ($\beta = -.24, p \leq .001$), a result easily understood based on their iterative approach. Conversely, ideological leaders, scoring lowest on *Pragmatism*, were most apt to initiate mass movements—a finding that reflects their commitment to a higher calling and their skill at convincing others to join this commitment.

4. Discussion

Before turning to the conclusions arising from these results, it is important to note that the present study has several methodological and conceptual limitations that should be considered. The most salient concern is the use of biographies to draw conclusions about the content of life narratives. Most studies of life narratives have examined the developmental impact of events in stories from the individual (e.g., Habermas & Bluck, 2000). In the present study, however, narrative insights were drawn from third source reports—specifically, from biographers describing critical life events. Although the use of biographical descriptions of key life events offers some advantages with regard to the availability of historic verification, it is also true that the leaders' subjective interpretation of these events was not, and could not, be examined. Such insights from the leaders may yield a different type of source information—one that would allow for inferences about the relative importance each of these events had on subsequent leadership tendencies and career choice.

It should also be noted that the life events used in the present study were drawn from an a priori taxonomy developed by Pillemer (1998, 2001) and McAdams (2001). While applying an a priori taxonomic structure to such a heterogeneous compilation of data is desirable for multiple reasons, it is possible that other events relevant to the definition of life narratives exist and are not covered by this taxonomy. For example, the event of mentoring may yield particularly important results with regard to leadership style development (Mumford et al., 2005; Stead, 2005).

Third, it is important to mention that the present study examined life events experienced in the early years of a leader's life. Specifically, the momentous events under examination were obtained from adolescent and early career experiences of these leaders. It is quite possible that other important events were incorporated into the mental models of these leaders at later points, and the present study fails to capture such instantiations. For example, analogous events are likely to play important roles in the combination and reorganization processes used by leaders when solving problems (Scott, Loneragan, & Mumford, 2005). Because analogous events are incorporated after the leader has acquired more life experiences, however, they probably do not impact leadership orientation or type until the latter stages of direction. Future studies should identify such events in the "in power" portions of a leader's lifespan.

Finally, the classification system utilized in this research may have impacted the results of the study. Because leaders were assigned to a priori categories (e.g., charismatic versus ideological), mixed leadership styles were not included for examination, which limits the generalizability of our findings to such individuals. In addition, the leaders were assigned to "types" as opposed to varying degrees of leadership styles (e.g., Reagan and Ghandi were both classified as socialized ideological leaders). Treating the leadership variables as categorical rather than continuous, then, may have limited the nature and magnitude of relationships observed. Finally, because leaders were assigned to style categories based on agreement among SMEs, some leaders may have been misclassified. However, such classification errors would likely decrease the magnitude of the effect sizes found in this study, which

Socialized:

"The sensitive teenager [F. H. La Guardia] also noticed the exploitation of low-paid immigrant workers as he caught sight of railroad gangs working on the spur to connect Ashfork, Phoenix, and Prescott—men and draft animals side by side accorded the same rough treatment...labor and capital clashed violently over the conditions and rights of workers, but the laborers Fiorella saw, in the main impoverished Italian and Mexican immigrants, were unable to band together to demand higher pay and rights on their own. When the 1893 depression threw many out of work, thousands of these displaced men lined the roads or joined pools of migrant workers. Fiorella witnessed their suffering firsthand..."
--From Kessner (1989, p. 13)

Personalized:

"The monitoring of the boiler's temperature and pressure struck terror in Andy [Carnegie], however. Nightmares denied him sleep and peace of mind, 'It was too much for me. I found myself night after night sitting up in bed trying the steam gauges, fearing at one time that the steam was too low and that the workers above would complain they did not have enough power, and the steam then got too high and the boiler might burst.' Although himself ready to explode in fear, Andy never told his parents..."
--From Krass (2002, p. 29)

Fig. 1. Illustration of the influence of developmental events on socialized and personalized leaders.

suggests that the true relationships may be somewhat stronger. The classification system employed in this study does allow us to generalize our findings to outstanding leaders who evidence some degree of ideological, belief-based vision and problem solving strategy, as well as to those who are more prototypical exemplars of each style.

4.1. Conclusions

Although these limitations should be considered upon interpreting the results, four broad conclusions have emerged from the present study. First, it lends support to the proposition that outstanding leaders rely on past experiences in sensemaking activities (Mumford & Strange, 2005). Specifically, vivid, consequential life events and the narratives that link them may shape the nature of the mental models applied by different types of outstanding leaders when confronted with complex, ill-defined crises. It also expounds upon prior work from Mumford and his colleagues by specifying certain types of life events, and the themes that reoccur in these events, may be tied to the pathways individuals follow to outstanding leadership. The results of the present study illustrate that differences are observed among charismatic, ideological, and pragmatic leaders, as well as the personalized and socialized variants, regarding the kind and structure of events appearing in leader biographies during the primary periods of narrative formation.

Second, upon examination of the types and content of these important life events, the most discernable patterns emerged to discriminate socialized and personalized leaders. Fig. 1 illustrates these differences. Socialized leaders experienced more events that solidified or anchored their internal values. This early definition of personal beliefs about how the world works may buffer leaders against downstream conditions of uncertainty and turbulence—conditions of instability that drastically affect other type of leaders with weaker internal standards. Socialized leaders also had negative experiences that later took on a positive or beneficial interpretation. This early exposure to instances of redemption may also direct the interpretation of negative conditions they later encounter as potential venues for positive outcomes.

Thematic dimensions underlying the events of socialized leaders also follow this line of conclusions. Socialized leaders encountered more early experiences treating others with kindness and concern. This model for ethical interpersonal behavior may have arisen in reaction to the exposure to the suffering of others many of them had during the periods critical to narrative formation.

There may be a threshold of exposure to suffering and conditions of strife, however. It seems that a life riddled with instability and uncertainty may give rise to the opposite orientation toward others—personalized leadership. Moreover, experiences indicative of powerlessness and uncertainty are tied to later gratuitous uses of violence toward others. This personalized orientation may arise from early experiences of humiliation, events that contaminate the way such leaders later view the world and their places in it.

Given that there are differences in the patterns of life events between socialized and personalized leaders, a third important conclusion to be drawn from the present study comes from the development of the different types of outstanding leadership. Ideological leaders were subject to multiple anchoring events during their formative years. Because of this early commitment to their beliefs and spirituality, ideological leaders tend to make decisions about organizational problems based on their beliefs and values, rather than engage in fact-finding or analysis. Fig. 2 illustrates the importance of beliefs and values on ideological leaders.

Contrasting the types of events ideological leaders encounter, pragmatic leaders experience more originating events, or events that define long-term goals and plans for action. The exposure to these career orienting events combines with themes of problem

Michael Collins:

“While at school in Edinburgh, she [Mary Collins] developed a sympathy with the Boers and on her return for the holidays to Woodfield would tell Michael [Collins] of her fights at school with ‘pro-jingoists’. It was from Mary that Michael heard ‘how gallant Boer farmers used to leave their work, take part in an ambush and return perhaps to milk the cows the next morning...’ In its own unsophisticated way, the ballad [sung by Mary to Michael] left a lasting impression on Michael’s mind. It summed up the Santry and Lyons arguments and policy he advocated throughout his short, turbulent life: The condition of Ireland could only be improved by the use of force.”

--From Coogan (1990, p. 13)

Fidel Castro:

“Castro was fascinated by the Bible: the story of Moses, the crossing of the Red Sea, the Promised Land, and ‘all the wars and battles.’ He remembers, ‘I was in sacred history class when I first learned about war...I began to acquire a certain interest in martial arts...it all interested me fabulously, from the destruction of the walls of Jericho by Joshua to Samson and his Herculean strength capable of tearing down a temple with his own bare hands...then came the New Testament, where the whole process of death and crucifixion produced an impact...’”

--From Szulc (1986, p. 124)

Fig. 2. Illustration of the influence of beliefs and values on two ideological leaders.

solving, preference for facts, and focus on the present to portray a formula for the resultant practical, behind-the-scenes leader these individuals later become. Skepticism about themselves and others may be an artifact of such intense drive to solve problems and lack of concern for interpersonal impressions.

While ideological and pragmatic leaders were clearly contrasted in terms of the thematic dimensions found in their developmental events, it was difficult to differentiate charismatics in these terms. Instead, charismatic leaders were distinguished from the other leaders in terms of the types of events they most often experienced. Specifically, charismatics were exposed to more turning point, or life redirecting events. This repetitive experience with personal change may explain the versatile and non-committal tendencies charismatic leaders evidence while in power.

The final set of conclusions involves these varying leader experiences and eventual performance outcomes. It seems that experiencing events that emphasize positive views of others as well as empathetic understanding of their strife is strongly related to outstanding performance. In addition, a foundation in problem solving and iterative progress results in kind—leaders experiencing such analytic themes are able to maintain viable agendas and institutions even when they are no longer in direct leadership roles.

4.2. *Theoretical implications*

This study provides a new approach to understanding leadership development (Mumford & Manley, 2003). It shows that we should be paying attention to the influence of developmental experiences and in what way they are construed in the context of leaders' lives. While prior studies have indicated that leader sensemaking occurs through the reflection and manipulation of past experiences (Mumford & Strange, 2005), the present study yields some insight into the type and content of such experiences underlying the mental models leaders apply to problems. Future studies could examine this interplay more specifically; another line of study to consider is how differences in life narratives, or the packages of life experiences coupled with contextual characteristics, influence specific actions in decision-making during crises (Bluck, 2003). One conclusion in the present study indicates that leaders who experience more unsettling turbulence through more humiliating events may be prone to making tough-minded or unsympathetic appraisals of the causes of a crisis. Other characteristics of sensemaking may be linked to reflection of the goals and causes of thematic content of past experiences as well.

Performance relationships with thematic content of events support that leaders may be as influenced by their past as they are influenced by examining the objective characteristics of a current problem. For example, leaders who experienced numerous past instances of consideration—exposure to suffering, positive view of others—were likely to make long-term contributions to society at large regardless of operating constraints such as organizational size or type, geographic region, or time period. Further leadership studies should delineate the particular steps or actions that intervene between characteristics of the extant situational constraints and characteristics of past goals and causes. It is possible that an individual difference (e.g., intelligence, situational awareness, or wisdom) may mediate this relationship, and it may differentiate leaders from non-leaders in the population at large.

Another implication of the present study is that experiences encountered in early adulthood do seem to shape the pathway a leader pursues towards outstanding leadership. The present study shows that certain types of events have been experienced more often by certain types of leaders. For example, pragmatic leaders had more experiences with originating, or career defining, events while ideological leaders had more experiences with analogous events. In addition, the thematic content differed among the developmental events experienced by the different leader styles. These marked contrasts may indicate that the integration of a pattern of certain types of events by an individual may result in a predilection toward one of the leadership styles and orientations.

4.3. *Practical implications*

The most significant implication of the present study permeates most organizational initiatives involving leadership—the importance of the life narrative. Reflection on key goals and causes of past experiences should influence how a leader communicates with others, engages in political behavior, and forms a vision for the future. Any initiative to improve or change the behaviors associated with such leadership activities should incorporate a sound examination of the life narrative on which they were based. Following from that, efforts to make a given leader aware of the impact of his/her past experiences on day-to-day problem solving should also yield more promising results than simply describing observable present behavior (Mumford & Manley, 2003).

In addition to using a life narrative approach, this study yields an important implication for profiling and anticipating outcomes of leaders without the luxury of first-hand observation. By obtaining second-hand data about the concrete, objectively verifiable events that occurred in a given leader's life, one may be able to predict his/her leadership style and some subsequent decision-making strategies.

The most important result of this study is simply that we have learned more about the development of the different styles of outstanding leaders. Prior to the present effort, there was limited literature on the development of leaders in a naturalistic setting, and far less work on the development of specific styles of outstanding leadership. Though design issues did not allow us to address *how* leadership as a general phenomenon develops, the present study did reveal several theoretical and practical implications for the differential development of orientation and type of leadership, and it provides a foundation for future work in this domain.

Appendix A. Biography list

- Alexander, R. J. (1979). *Juan Domingo Peron: A history*. Boulder, CO: Westview Press.
- Anderson, J. & May, R. W. (1952). *McCarthy: The man, the senator, and the "ism."* Boston, MA: the Beacon Press.
- Anthony, K. (1954). *Susan B. Anthony: Her personal history and era*. New York: Doubleday & Company, Inc.
- Baker, L. (1969). *Felix Frankfurter*. New York: Coward-McCann, Inc.
- Bar-Zohar, M. (1966). *The armed prophet: A biography of Ben Gurion*. London: Arthur Barker Limited.
- Bennett, L. (1976). *A biography of Martin Luther King, Jr.* Chicago, IL: Johnson Publishing Company.
- Bosanquet, M. (1968). *The life and death of Dietrich Bonhoeffer*. New York: Harper and Row Publishers.
- Bosch, A. (1988). *Reagan: An American story*. New York: TV Books.
- Bosworth, R. J. B. (2002). *Mussolini*. London: Arnold.
- Brands, H. W. (1997). *T. R.: The last romantic*. New York: Basicbooks.
- Broderick, F. L. (1959). *W. E. B. Dubois: Negro leader in a time of crisis*. Stanford, CA: Stanford University Press.
- Brunk, S. (1995). *Emiliano Zapata: Revolution and betrayal in Mexico*. Albuquerque, NM: University of New Mexico Press.
- Byrne, J. A. (1999). *Chainsaw: The notorious career of Al Dunlap in the era of profit-at-any-price*. New York: Harper Business.
- Byron, C. (2002). *Martha, Inc.: The incredible story of Martha Stewart Living Omnimedia*. New York: John Wiley and Sons.
- Calic, E. (1982). *Reinhard Heydrich: The chilling story of the man who masterminded the Nazi death camps*. New York: Military Heritage Press.
- Caro, R. A. (1974). *The power broker: Robert Moses and the fall of New York*. New York: Harper and Row.
- Chadha, Y. (1997). *Ghandi: A life*. New York: John Wiley & Sons, Inc.
- Chandler, D. P. (1999). *Brother number one: A political biography of Pol Pot*. Boulder, CO: Westview Press.
- Clark, C. M. (200). *Kaiser Wilhelm II*. London: Longman.
- Cohen, A., & Taylor, E. (2000). *American pharaoh: Mayor Richard J. Daley: His battle for Chicago and the nation*. Boston, MA: Little, Brown, and Company.
- Coogan, T. P. (1990). *Michael Collins: A biography*. London: Hutchinson.
- Cook, B. W. (1992). *Eleanor Roosevelt: Volume One 1884–1933*. New York: Viking Press.
- Cook, B. W. (1999). *Eleanor Roosevelt: Volume Two 1933–1938*. New York: Viking Press.
- Crassweller, R. D. (1966). *Trujillo: The life and times of a Caribbean dictator*. New York: The MacMillan Company.
- Crozier, B. (1973). *De Gaulle*. New York: Charles Scribner's Sons.
- Davis, J. H. (1993). *Mafia dynasty: The rise and fall of the Gambino crime family*. New York: Harper Paperbacks.
- Diederich, B., & Burt, A. (1991). *Papa Doc: Haiti and its dictator*. Maplewood, NJ: Waterfront Press.
- Dinges, J. (1990). *Our man in Panama: How General Noriega used the United States—and made millions in drugs and arms*. New York: Random House.
- Dubofsky, M. & Van Tine, W. (1986). *John L. Lewis: A biography*. Urbana, IL: University of Illinois Press.
- Duiker, W. J. (2000). *Ho Chi Minh*. New York: Hyperion.
- Dykhuizen, G. (1973). *The life and mind of John Dewey*. Carbondale, IL: Southern Illinois University Press.
- Falk, C. S. (1984). *Love, anarchy, and Emma Goldman*. New Brunswick, NJ: Rutgers University Press.
- Feiling, K. (1946). *The life of Neville Chamberlain*. London: Macmillan & Company.
- Felsenthal, C. (1993). *Power, privilege, and the Post: The Katherine Graham story*. New York: G. P. Putnam's Sons.
- Ferrell, R. H. (1994). *Harry S. Truman: A life*. Columbia, MO: University of Missouri.
- Fischer, L. (1964). *The life of Lenin*. New York: Harper and Row.
- Fosdick, R. B. (1956). *John D. Rockefeller, Jr.: A portrait*. New York: Harper and Brothers, Inc.
- Frank, K. (2002). *Indira: The life of Indira Nehru Gandhi*. Boston, MA: Houghton Mifflin Company.
- Franz, U. (1988). *Deng Xiaoping*. Boston, MA: Harcourt Brace Janovich, Publishers.
- Fraser, D. (1993). *Knight's cross: A life of Field Marshall Erwin Rommel*. New York: Harper Collins Publishers.
- Fraser, N., & Navarro, M. (1980). *Eva Peron*. New York: W. W. Norton & Company.
- Garner, P. (2001). *Porfirio Diaz*. London: Longman.
- Gelderman, C. (1981). *Henry Ford: The wayward capitalist*. New York: The Dial Press.
- Gilbert, M. (1991). *Churchill: A life*. New York: Henry Holt and Company.
- Groszold del Castillo, R. & Garcia, R. A. (1995). *Caesar Chavez: A triumph of spirit*. Norman, OK: University of Oklahoma Press.
- Harlan, L. R. (1872). *Booker T. Washington: The making of a black leader, 1856–1901*. New York: Oxford University Press.
- Hart, B. H. L. (1932). *Foch: The man of Orleans*. Boston, MA: Little, Brown, and Company.
- Heckscher, A. (1991). *Woodrow Wilson*. New York: Charles Scribner's Sons.
- Hennessee, J. (1999). *Betty Friedan: Her life*. New York: Random House.
- Higham, C. (1993). *Merchant of dreams: Louis B. Mayer, MGM, and the secret Hollywood*. New York: Donald I. Fine.
- Hirshon, S. P. (2002). *General Patton: A soldier's life*. New York: Harper Collins Press.
- Hirst, D., & Beeson, I. (1981). *Sadat*. London: Faber and Faber.
- Hyde, H. M. (1971). *Stalin: The history of a dictator*. New York: Farrar, Straus, and Giroux.
- Irving, D. (1989). *Goring: A biography*. New York: William Morrow and Company.
- James, D. C. (1970). *The years of MacArthur*. Boston, MA: Houghton Mifflin Company.
- Kaufman, M. T. (2002). *Soros: The life and times of a messianic billionaire*. New York: Doubleday & Company.

- Kaye, T. (1989). *Lech Walesa*. New York: Chelsea House Publishers.
- Kessner, T. (1989). *Fiorello H. La Guardia and the making of modern New York*. New York: McGraw-Hill Publishing Company.
- Knight, A. (1993). *Beria: Stalin's first lieutenant*. Princeton, NJ: Princeton University Press.
- Kobler, J. (1992). *Capone: The life and world of Al Capone*. Greenwich, CT: Fawcett Publications.
- Krass, P. (2002). *Carnegie*. Mahwah, NJ: John Wiley and Sons.
- Laccouture, J. (1973). *Nasser*. New York: Harper and Row.
- Lasky, V. (1981). *Never complain, never explain: The story of Henry Ford II*. New York: Richard Marek Publishers.
- Lenin, H. (1983). *Grand delusions: The cosmic career of John De Lorean*. New York: The Viking Press.
- Linn, J. W. (1935). *Jane Adams: A biography*. New York: D. Appleton-Century Company.
- Lowenstein, R. (1995). *Buffet: The making of an American capitalist*. New York: Random House.
- Lyon, P. (1974). *Eisenhower: Portrait of the hero*. Boston, MA: Little, Brown, & Company.
- Lyons, E. (1964). *Herbert Hoover: A biography*. Garden City, NJ: Doubleday and Company, Inc.
- Lyons, E. (1966). *David Sarnoff*. New York: Harper and Row.
- Macleane, F. (1980). *Josip Broz Tito: A pictorial biography*. New York: McGraw-Hill Book Company.
- Manchester, W. (1968). *The arms of Krupp: 1587–1968*. Boston, MA: Little, Brown, and Company.
- Mandel, B. (1963). *Samuel Gompers: A biography*. Yellow Springs, NY: The Antioch Press.
- Maney, K. (2003). *The maverick and his machine: Thomas Watson, Sr. and the making of IBM*. Hoboken, NJ: John Wiley and Sons, Inc.
- Mango, A. (2000). *Attaturk*. New York: The Overlook Press.
- McCauley, M. (1998). *Gorbachev*. London: Longman.
- McDougal, D. (198). *The last mogul: Lew Wasserman, MCA, and the hidden history of Hollywood*. New York: Crown Publishers.
- McDougal, D. (2001). *Privileged son: Otis Chandler and the rise and fall of the L. A. Times dynasty*. New York: Perseus Publishing.
- Morgan, T. (1985). *FDR: A biography*. New York: Simon and Schuster.
- Moseley, L. (1982). *Marshall: Hero for our times*. New York: Hearst Books.
- Mosely, L. (1985). *Disney's World*. New York: Stein and Day.
- Moss, M. (1988). *Palace coup: The inside story of Harry and Leona Helmsley*. New York: Doubleday.
- Murray, R. K. (1969). *The Harding era: Warren G. Harding and his administration*. Minneapolis, MN: University of Minnesota Press.
- Murray-Brown, J. (1973). *Kenyaatta*. New York: E. P. Dutton & Company.
- Neff, J. (1989). *Mobbed up: Jackie Presser's high-wire life in the Teamsters, the Mafia, and the FBI*. New York: The Atlantic Monthly Press.
- Norris, R. S. (2002). *Racing for the bomb: General Leslie R. Groves, the Manhattan Project's indispensable man*. Vermont: Steerforth Press.
- Padfield, P. (1990). *Himmler: Reichsfuhrer-SS*. London: Macmillan.
- Payne, R. (1973). *The life and death of Adolph Hitler*. New York: Praeger Publishers.
- Perret, G. (2001). *Jack: A life like no other*. New York: Random House.
- Perry, B. (1991). *Malcom: The life of a man who changed black America*. Barrytown, NY: Station Hill Press.
- Polmar, N., & Allen, T. B. (1982). *Rickover*. New York: Simon and Schuster.
- Posner, G. (2002). *Motown: Music, money, sex, and power*. New York: Random House.
- Powers, R. G. (1987). *Secrecy and power: The life of J. Edgar Hoover*. New York: Free Press.
- Preston, P. (1994). *Franco: A biography*. London: Basicbooks.
- Pruessen, R. W. (1982). *John Foster Dulles: The road to power*. New York: Free Press.
- Rooney, D. (1998). *Kwame Nkrumah: The political kingdom of the Third World*. New York: Saint Martin's Press.
- Salvatore, N. (1982). *Eugene V. Debs: Citizen and Socialist*. Urbana, IL: University of Illinois Press.
- Schwarzwallner, W. (1988). *Rudolf Hess: The last Nazi*. Bethesda, MD: National Press Inc.
- Seal, P. (1988). *Asad of Syria: The struggle for the Middle East*. Berkeley, CA: University of California Press.
- Segal, R. (1979). *Leon Trotsky: A biography*. New York: Pantheon Books.
- Shawcross, W. (1992). *Murdoch: The making of a media empire*. New York: Touchstone Press.
- Short, P. (1999). *Mao: A life*. New York: Henry Holt and Company.
- Sloane, A. A. (1991). *Hoffa*. Cambridge, MA: The MIT Press.
- Smith, G. (1980). *Ghosts of Kampala*. New York: St. Martin's Press.
- Spence, H. (1969). *Marcos of the Philippines*. New York: The World Publishing Company.
- Sperber, A. M. (1986). *Murrow: His life and times*. New York: Freundlich Books.
- Stein, J. (1986). *The world of Marcus Garvey: Race and class in modern society*. Baton Rouge, LA: Louisiana State University Press.
- Steinberg, A. (1975). *Sam Rayburn: A biography*. New York: Hawthorn Books, Inc.
- Strouse, J. (1999). *Morgan: American financier*. New York: Random House.
- Summers, A. & Swan, R. (2000). *The arrogance of power: The secret world of Richard Nixon*. New York: Viking Press.
- Szulc, R. (1986). *Fidel: A critical portrait*. New York: William Morrow and Company.
- Tilton, E. M. (1947). *Amiable autocrat: The biography of Dr. Oliver Wendell Holmes*. New York: Henry Schuman.
- Trimble, V. H. (1990). *Walton: The inside story of America's richest man*. New York: Dutton.
- Ulam, A. B. (1989). *Stalin: The man and his era*. New York: The Viking Press.

- Unger, I., & Unger, D. (1999). *LBJ: A life*. New York: John Wiley & Sons.
- Urquhart, B. (1971). *Hammarskjöld*. New York: Doubleday.
- Wall, J. F. (1990). *Alfred du Pont: The man and his family*. New York: Oxford University Press.
- Warner, P. (1986). *Kitchener: the man behind the legend*. New York: Atheneum.
- Watson, D. R. (1974). *George Clemenceau: A political biography*. New York: David McKay Company, Inc.
- Williams, T. H. (1969). *Huey Long*. New York: Vintage Press.
- Wyden, P. (1987). *The unknown Iacocca*. New York: William Morrow and Company.
- Young, H. (1989). *One of us: A biography of Margaret Thatcher*. London: Macmillan.
- Zaffiri, S. (1994). *Westmoreland: A biography of General William C. Westmoreland*. New York: William Morrow and Company, Inc.

Appendix B. Overview of method

Activity ^a	Steps and participants ^b			
Activity A: Sample identification and selection	Step 1: Leader identification participants: A & C	Step 2: Leader classification participants: A, B, & C		
Activity B: Material selection	Step 1: Biography selection participants: A, B, & C	Step 2: Developmental content selection participant: A		
Activity C: Coding	Step 1: Identifying events participants: C, H, I, & J	Step 2: Coding event content participants: B, C, D, E, F, & G	Step 3: Coding controls participants: A, B, & C	Step 4: Coding criteria participant: A

^aActivities and steps are listed in chronological order.

^bParticipant A (doctoral student in IO Psychology); Participant B (doctoral student in IO Psychology), Participant C (doctoral student in IO Psychology/author of study), Participant D (doctoral student in IO Psychology), Participant E (undergraduate psychology major), Participant F (undergraduate psychology major), Participant G (3rd year law student), Participant H (undergraduate psychology major), Participant I (undergraduate psychology major), Participant J (undergraduate psychology major).

References

- Alea, N., & Bluck, S. (2003). Why are you telling us that? A conceptual model of the social function of autobiographical memory. *Memory*, *11*, 165–178.
- Anderson, S. J., & Conway, M. S. (1993). Investigating the structure of autobiographical memories. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, *19*(5), 1178–1196.
- Barclay, C. R. (1995). Autobiographical remembering: Narrative constraints on objectified selves. In D. C. Rubin (Ed.), *Remembering our past* (pp. 94–125). Cambridge, England: Cambridge University Press.
- Bartone, P. T., Snook, S. A., & Tremble, T. R. (2002). Cognitive and personality predictors of performance in West Point Cadets. *Journal of Military Psychology*, *14*(4), 321–338.
- Bass, B. M. (1985). *Leadership beyond expectations*. New York: The Free Press.
- Baumeister, R. F., & Newman, L. S. (1994). How stories make sense of personal experiences: Motives that shape autobiographical narratives. *Personality and Social Psychology Bulletin*, *20*, 676–690.
- Block, J. (1978). *The Q-sort methodology in personality assessment and psychiatric research*. Palo Alto, CA: Consulting Psychologists Press.
- Bluck, S. (2003). Autobiographical memory: Exploring its functions in everyday life. *Memory*, *11*, 113–123.
- Bluck, S., & Habermas, T. (2000). The life story schema. *Motivation and Emotion*, *24*(2), 121–147.
- Bluck, S., & Habermas, T. (2001). Extending the study of autobiographical memory: Thinking back about life across the life span. *Review of General Psychology*, *5*, 135–147.
- Bluck, S., & Staudinger, V. M. (2000). Looking back and looking ahead: The role of the past and the future in present life evaluations. Unpublished manuscript.
- Bond, M. H., Kwan, V. S., & Li, C. (2003). Decomposing a sense of superiority: The differential social impact of self-regard and regard for others. *Journal of Research in Personality*, *34*, 537–553.
- Brewer, U. F. (1986). What is autobiographical memory? In D. C. Rubin (Ed.), *Autobiographical Memory* (pp. 25–49). New York: Cambridge University Press.
- Brown, S. R. (1980). *Political subjectivity: Applications of Q-methodology in political science*. New Haven, CT: Yale University Press.
- Conger, J. A. (1989). *The charismatic leader: Behind the mystic of exceptional leadership*. San Francisco: Jossey-Bass.
- Conger, J. A. (1999). Charismatic and transformational leadership in organizations: An insider's perspective on these developing streams of research. *Leadership Quarterly*, *10*, 145–179.
- Conger, J. A., & Kanungo (1998). *Charismatic leadership in organizations*. Thousand Oaks: Sage.
- Conway, M. A., & Pleydell-Pearce, C. W. (2000). The constructions of autobiographical memories in the self-memory system. *Psychological Review*, *107*, 261–288.
- Cox, C. (1926). *Genetic studies of genius: Volume 2. The early mental traits of three hundred geniuses*. Stanford, CA: Stanford University Press.
- Drazin, R., Glynn, M. A., & Kazanjain, R. K. (1999). Multi-level theorizing about creativity in organizations: A sensemaking perspective. *Academy of Management Review*, *24*, 286–329.
- Eisenberg, N., & Miller, P. A. (1987). The relations of empathy to prosocial and related behaviors. *Psychological Bulletin*, *101*(1), 91–119.
- Emmons, R. A. (1981). Relationship between narcissism and sensation-seeking. *Psychological Reports*, *48*, 247–250.
- Erikson, E. H. (1969). *Gandhi's truth*. New York: W. W. Norton.
- Erikson, E. H. (1968). *Identity, youth, and crisis*. New York: Norton.
- Feist, G. J., & Gorman, M. E. (1998). The psychology of science: Review and integration of a nascent discipline. *Review of General Psychology*, *2*, 3–47.
- Feldman, D. H. (1999). The development of creativity. In R. J. Sternberg (Ed.), *Handbook of creativity* (pp. 169–186). New York: Cambridge University Press.
- Fitzgerald, J. M. (1995). Intensive meanings of reminiscence in adult development and aging. In D. C. Rubin (Ed.), *Remembering our past* (pp. 360–393). Cambridge, England: Cambridge University Press.
- Freud, S. (1922). *Moses and monotheism*. New York: A. A. Knopf.
- Fromm, E. (1973). *The anatomy of human destructiveness*. New York: Holt, Rinehart, & Winston.
- Funder, D. C., Furr, R. M., & Colvin, C. R. (2002). The Riverside Behavioral Q-Sort: A tool for the description of social behavior. *Journal of Personality*, *68*(3), 451–489.
- Gardner, H. (1993). *Multiple intelligences: The theory in practice*. New York: Basic Books, Inc.
- Gessner, T. E., O'Connor, J. A., Clifton, T. C., Connelly, M. S., & Mumford, M. D. (1993). The development of moral beliefs: A retrospective study. *Current Psychology*, *12*, 236–254.
- Gioia, D. A., & Chittipeddi, K. (1991). Sensemaking and sensegiving in strategic change initiation. *Strategic Management Journal*, *12*, 433–448.

- Gioia, D. A., & Poole, P. P. (1984). Scripts in organizational behavior. *Academy of Management Review*, 9, 449–459.
- Goodstadt, B. E., & Hjelle, L. A. (1973). Power to the powerless: Locus of control and the use of power. *Journal of Personality and Social Psychology*, 27, 190–196.
- Habermas, T., & Bluck, S. (2000). Getting a life: The emergence of the life story in adolescence. *Psychological Bulletin*, 126, 748–769.
- Habermas, T., & Paha, C. (2001). The development of coherence in adolescent's life narratives. *Narrative Inquiry*, 11, 35–54.
- Hargrove, E. C. (1990). David Lilienthal and the Tennessee Valley Authority. In J. W. Doig & E. C. Hargrove (Eds.), *Leadership and innovation: Entrepreneurs in government* (pp. 25–60). Baltimore, MD: Johns Hopkins University Press.
- Havinghurst, R. (1953). *Human development and education*. New York: Longmans.
- Hogan, R., & Dickstein, E. (1972). A measure of moral values. *Journal of Consulting and Clinical Psychology*, 39, 210–214.
- Hogarth, R. (1980). *Judgment and choice*. New York: Wiley.
- Holyoak, K. J., & Thagard, P. (1997). The analogical mind. *American Psychologist*, 52, 35–44.
- House, R. J. (1977). A 1976 theory of charismatic leadership. In J. G. Hunt & L. L. Larson (Eds.), *Leadership: The cutting edge* (pp. 189–207). Carbondale, IL: Southern Illinois University Press.
- House, R. J., & Howell, J. M. (1992). Personality and charismatic leadership. *Leadership Quarterly*, 3, 81–108.
- House, R. J., & Podsakoff, P. M. (1994). Leadership effectiveness: Past perspectives and future research. In J. Greenberg (Ed.), *Organizational behavior: The state of the science* (pp. 45–82). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Hunt, J. G., Boal, K. B., & Dodge, G. E. (1999). The effects of visionary and crisis responsive charisma on followers: An experimental examination of two kinds of charismatic leadership. *Leadership Quarterly*, 10, 423–448.
- Ibrahim, A. (1977). Containment and exclusiveness: Their measurement and correlates. *International Journal of Psychology*, 12, 219–229.
- Johnson-Laird, P. (1983). *Mental models*. Cambridge, MA: Harvard University Press.
- Keller, J. (2003). Parental images as a guide to leadership sense making: An attachment perspective on implicit leadership theories. *The Leadership Quarterly*, 14, 141–160.
- Korte, J. (1995). *White gloves: How we create ourselves through memory*. New York: Free Press.
- Largan-Fox, J., & Code, S. (2000). Team mental models: Techniques, methods, and analytical approaches. *Human Factors*, 42, 242–271.
- Lord, R. G., & Maher, K. J. (1991). *Leadership and information processing: Linking perceptions and performance*. Boston, MA: Unwin Hyman.
- Martin, J., Scully, M., & Levitt, B. (1990). Injustice and the legitimization of revolution: Damning the past, excusing the present, and neglecting the future. *Journal of Personality and Social Psychology*, 59, 281–290.
- McAdams, D. P. (1982). Experiences of intimacy and power: Relationships among social motives and autobiographical memory. *Journal of Personality and Social Psychology*, 42, 292–302.
- McAdams, D. P. (2001). The psychology of life stories. *Review of General Psychology*, 5, 100–123.
- McAdams, D. P., Diamond, A., Aubin, E. D., & Mansfield, E. (1997). Stories of commitment: The psychosocial construction of generative lives. *Journal of Personality and Social Psychology*, 72, 678–694.
- McAdams, D. P., Hoffman, B. J., Mansfield, E. D., & Day, R. (1996). Themes of agency and communion in significant autobiographical scenes. *Journal of Personality*, 64, 339–378.
- McClelland, D. C. (1975). *Power: The inner experience*. New York: Irvington.
- McKeon, B., & Thomas, D. (1988). *Q-Methodology*. Beverly Hills, CA: Sage.
- Mobley, M. I., Doares, L. R., & Mumford, M. D. (1992). Process analytic models of creative capacities: Evidence for the combination and reorganization process. *Creativity Research Journal*, 5, 125–156.
- Morgan, T. (1985). *FDR: A biography*. New York: Simon and Schuster.
- Mumford, M. D., Connelly, M. S., Scott, G., Espejo, J., Sohl, L. M., Hunter, S. T., et al. (2005). Career experiences and scientific performance: A study of social, physical, life, and health sciences. *Creativity Research Journal*, 17(2–3), 105–129.
- Mumford, M. D., & Manley, G. G. (2003). Putting the development in leadership development: Implications for theory and practice. In S. Murphy & R. R. Riggio (Eds.), *The future of leadership development* (pp. 237–262). Mahwah, NJ: Erlbaum.
- Mumford, M. D., & Strange, J. M. (2005). The origins of vision: Effects of reflection, models, and analysis. *Leadership Quarterly*, 16, 121–148.
- Mumford, M. D., & Van Doorn, J. R. (2001). The leadership in pragmatism: Reconsidering Franklin in the age of charisma. *Leadership Quarterly*, 12, 279–309.
- Neimeyer, G. J., & Metzler, R. E. (1994). Personal identity and autobiographical memory. In V. Neisser & R. Fivush (Eds.), *The remembered self: Accuracy in the self narrative* (pp. 105–135). New York: Cambridge University Press.
- Nidich, S. I., Nidich, R. J., & Alexander, C. N. (2000). Moral development and higher states of consciousness. *Journal of Adult Development*, 7(4), 217–225.
- O'Connor, J. A., Mumford, M. D., Clifton, T. C., Gessner, T. E., & Connelly, M. S. (1995). Charismatic leadership and destructiveness: A historiometric study. *Leadership Quarterly*, 6, 529–555.
- Pillemer, D. B. (1998). *Momentous events, vivid memories*. Cambridge, MA: Harvard University Press.
- Pillemer, D. B. (2001). Momentous events and the life story. *Review of General Psychology*, 5(2), 123–134.
- Pillemer, D. B. (2003). Directive functions of autobiographical memory: The guiding power of the specific episode. *Memory*, 11, 193–202.
- Post, J. M., Ruby, K. G., & Shaw, E. D. (2002). The radical group in context: I. An integrated framework for the analysis of group risk for terrorism. *Studies in Conflict and Terrorism*, 25, 73–100.
- Qin, Y., & Simon, H. A. (1990). Laboratory replication of scientific discovery processes. *Cognitive Science*, 14, 281–312.
- Reiser, B. J., Black, J. B., & Abelson, R. P. (1985). Knowledge structures in the organization and retrieval of autobiographical memories. *Cognitive Psychology*, 17, 89–137.
- Reiter-Palmon, R., & Illies, J. J. (2004). Leadership and creativity: Understanding leadership from a creative problem-solving perspective. *Leadership Quarterly*, 15, 55–77.
- Rivera, J. B. (1994). Visionary versus crisis-induced charismatic leadership: An experimental test. Unpublished doctoral dissertation, Texas Tech University, Lubbock, Texas.
- Robinson, S. L. (1996). Trust and breach of the psychological contract. *Administrative Science Quarterly*, 41, 574–599.
- Sarbin, T. E. (1986). *Narrative psychology: The storied nature of human conduct*. New York: Peger.
- Schank, R. C. (1990). *Tell me a story: A new look at real and artificial memory*. New York: Scribners.
- Scott, G., Lonergan, D. C., & Mumford, M. D. (2005). Conceptual combination. *Creativity Research Journal*, 17, 79–98.
- Sein, M. K., & Bostrom, R. P. (1989). Individual differences and conceptual models in training novice users. *Human-computer Interaction*, 4, 197–229.
- Shamir, B., House, R. J., & Arthur, M. B. (1993). The motivational effects of charismatic leadership: A self-concept based theory. *Organizational Science*, 4, 577–594.
- Shrout, P. E., & Fleiss, J. L. (1979). Interclass correlations: Uses in assessing rater reliability. *Psychological Bulletin*, 86, 420–428.
- Simonton, D. K. (1981). Presidential greatness and performance: Can we predict leadership in the White House? *Journal of Personality*, 49, 206–323.
- Simonton, D. K. (1994). *Greatness: Who makes history and why*. New York: Guilford Press.
- Simonton, D. K. (2003). Qualitative and quantitative analyses of historical data. *Annual Review of Psychology*, 54, 617–640.
- Singer, J. A., & Salovey, P. (1993). *The remembered self: Emotion and memory in personality*. New York: Free Press.
- Stead, V. (2005). Mentoring: A model for leadership development? *International Journal of Training and Development*, 9(3), 170–184.
- Strange, J. M., & Mumford, M. D. (2002). The origins of vision: Charismatic versus ideological leadership. *Leadership Quarterly*, 13, 343–377.
- Weber, M. (1947). *The theory of social and economic organization*. New York: Free Press (T. Parsons, translated).
- Woike, B. A. (1995). Most memorable experiences: Evidence for a link between implicit and explicit motives and social cognitive processes in everyday life. *Journal of Personality and Social Psychology*, 68, 1081–1091.
- Worthington, W. T. (Ed.). (2003). *Great Military leaders: A bibliography with vignettes*. New York: Nova Science Press.