

## **The Greenspan Effect: A Retrospective Analysis of Alan Greenspan's Speeches**

**Duane B. Graddy**

**Charles F. Beauchamp**

Middle Tennessee State University  
USA

### **Abstract**

*Sicilia and Cruikshank (2000) contend that Alan Greenspan's speeches, particularly his Congressional testimonies, had a unique impact on financial market participants and the general public. In addition, according to Sicilia and Cruikshank (2000), Greenspan's speeches filled a void created by a lack of presidential leadership during financial crises. Moreover, Sicilia and Cruikshank seem to agree that the rhetorical structure of his speeches and testimonies was important in triggering the Greenspan Effect, so certain words may have had an atypical effect on public perceptions. The purpose of this paper is to develop a rhetorical profile of the speeches and testimonies presented by Chairman Greenspan over the period 1987-2002. In a rhetorical context, the best evidence for the Greenspan effect occurred in his crisis speeches. These speeches exuded economic leadership and the strength of the Federal Reserve System to overcome adversity. On the other hand, his non-crisis speeches and testimonies followed the rhetorical structure of general financial commentaries with little of the furor and centrality of the crisis speeches.*

### **I. Introduction**

In their book entitled "The Greenspan Effect: Words That Move the World's Markets", Sicilia and Cruikshank (2000) described the speeches of Alan Greenspan as having extraordinary reach. Greenspan's labyrinthine discussions of monetary affairs burst speculative bubbles, calm frightened investors, and stabilize world currency markets.

Dean Foust (1998), an editorial writer for *Business Week*, likened Greenspan's "opaque utterances" to a form of *virtual* monetary policy. The *China Post* (2002) declared, "... cautionary words from Greenspan sent jitters through U.S. and Taiwan markets." In an interview on PBS's *News Hour* in 2000, Justin Martin, a Greenspan biographer, reflected, "Greenspan's words – it's a fascinating almost sociological phenomenon you see – that they are parsed by the markets, parsed by the pundits, and it results in, as you said yesterday (referring to the moderator Ray Suarez), a jump in the NASDAQ, the largest jump in NASDAQ's history ...". Sicilia and Cruikshank (2000) went so far as to say that particularly in times of crisis, Greenspan's speeches provided a substitute for presidential economic leadership, which they contended had been lacking for years.

To critics, however, Greenspan's speeches were vague, elusive, dull, imprecise, and designed to conceal the true nature of policy directives and the state of the economy. For example, in an article entitled "Greenspan speech sends mortgage rates tumbling," Holden Lewis (2002) declared, "Alan Greenspan is a dull speaker. He doesn't have leading-man looks. You cringe at the thought of him delivering a punch line. Nevertheless "... investors, economists and financial pundits hang onto every polysyllabic utterance ... . Were Greenspan's speeches any different from those of other policy-makers or financial experts? Or, did the purported Greenspan effect just emanate from Greenspan's position as Chairman of the Federal Reserve Board.

In developing Greenspan's linguistic profile, several aspects of his expressions are important. For example, how did the Chairman convey his message to the public? Did the rhetorical traits of the Chairman's speeches and testimonies reveal subtle patterns that could have accounted for the changes in market perceptions – *Greenspan effect* – described by journalists and financial writers at the time? Were the stylistic features of the Chairman's speeches and testimonies distinguishable from those of other economic policy makers and financial commentators; features that might have led market participants to actually change their expectations? Surely, only certain speeches or testimonies actually provided the market with unanticipated information or revised estimates of the probabilities of future outcomes. Was Greenspan's voice somehow special, even more so at certain times than the President, as intimated by Sicilia and Cruikshank?

How did the Chairman's speeches compare to the economic policy statements of past Presidents of the United States? Did Chairman Greenspan's rhetorical scaffolding change with different circumstances or events? Or, was his style just endemic to the office of Chairman? Did the rhetorical structure of the Chairman Greenspan's speeches change with his maturity in office?

This paper assumes that the Chairman's speeches were highly considered documents; that Greenspan chose his words carefully and said what he meant. He did not make off-the-cuff remarks in public. His speeches presumed that the public's view of him was as a purveyor of Federal Reserve policy. In most cases, this was the public's only view of him. Thus, in some sense, speaking was policy in the public's mind. For example, the public's conception of the Chairman's emotional resiliency, clarity, and conviction during financial crises sprang from his verbal conveyances. Thus, his psychological presence was through verbal communications and this presence may account for his perceived influence on market behavior.

## **II. Methodology**

Most of the analyses of Greenspan's speeches occurred at the manifest-level.<sup>1</sup> Reporters, pundits, and Fed "watchers" dissected and regurgitated Greenspan's arguments, policy-bites, data, and predictions in an attempt to reveal the current stance of monetary policy. In contrast, my assumption is that Greenspan's sustained influence was based not only on what he actually said; which was the basic focus of the pundits at the time, but also on how he spoke; his tone and presence as reflected in his words.

The approach to Greenspan's speeches and testimonies taken in this paper is based on the following fundamental assumptions (Hart, 1984).

- (1) The most important public role of the Chairman was to articulate his policy goals to the financial community, the political establishment, and the general public; i.e., the Chairman's words radiated to several constituencies.
- (2) What the Chairman said was important, therefore, his words were chosen carefully.
- (3) Pundits and the public parsed the Chairman's speeches to glean the direction of the economy and monetary policy.
- (4) The gravity of financial market events (e.g., crash of 1987 or Asian currency crisis) wasn't fully realized by the public until the Chairman spoke.
- (5) The public's assessment of the Chairman was rhetorically based.

This paper views Greenspan's speeches as written in the context of this rhetorical framework.

Diction 5.0 (Hart, 2000) was used to analyze the rhetorical traits of Chairman Greenspan's speeches. This rhetorically based program searches his speeches and testimonies for five semantic features and thirty-three sub-features. Each semantic feature was scored using the thirty-three sub-features (dictionaries) according to a series of formulas incorporated into the software. The speeches are compared with the thirty-three standard dictionaries and word lists in segments of 500 words. For discussions exceeding 500 words, the scores are the average of the individual 500 word segments.

The primary semantic features (master variables) included in Diction 5.0 are activity, certainty, commonality, optimism, and realism. Activity identifies language-featuring movement, change, implementation of ideas, and applying strategies. The component features of the activity score are aggression, accomplishment, communications, motion, cognitive terms, passivity, and embellishment. Language suggesting inflexibility, resoluteness, and determination are features of the certainty score. The determinants of the certainty score include tenacity, leveling, collectives, insistence, numerical terms, ambivalence, self-reference, and variety. Commonality describes language stressing shared values, group perception, and a rejection of egocentric modes of engagement. The components of this measure are centrality, cooperation, rapport, diversity, exclusion, and liberation. Optimism is language describing another individual, concept, activity, or event in a positive light. The component scores of praise, satisfaction, inspiration, blame, hardship, and denial combine to determine the optimism measure.

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<sup>1</sup> The work of Sicilia and Cruikshank (2000) is representative of this type of pragmatic analysis.

Language highlighting everyday events, practical issues (colloquialness, pedestrian), and temporal references (day, now, time) is captured in the realism score. The elements of this score include familiarity, spatial awareness, temporal awareness, present concern, human interest, concreteness, past concern, and complexity.<sup>2</sup>

Converting the raw dictionary totals into Z-scores and then adding and subtracting them according to the particular variable's definition are the basis for calculating the master variables. For example, the commonality score is the sum of the certainty, cooperation, and rapport sub-scores less the sum of diversity, exclusion, and liberation. According to Hart (2000, p.45), each master variable is constructed from a thorough examination of existing lexical research. Whether a score is in or out of *range* is determined by comparing its magnitude to a normalized score from a community of discourse.

Diction 5.0 compares each textual unit to a database of previously analyzed texts. By comparing the extant text with a community of discourse (normative value), the analysis is made more precise. Rather than comparing a passage with a heterogeneous group of rhetorical materials or merely counting words, Diction 5.0 allows placement of a passage in a specific community of discourse. Diction 5.0 has thirty-six normative categories divided into seven individual classes and one general class. The *all cases community* (general class) is composed of 22,000 English language documents both current and historical. Most of the data for the normative values come from a broad sampling of texts produced primarily in the United States between 1945 and 1998. Chairman Greenspan's speeches are compared to three group norms. The first community of discourse includes 615 public policy speeches by sitting presidents from Harry Truman through Bill Clinton. The topics encompass speeches on national economic policy, social issues, such as open housing, job discrimination, and crises like the oil embargo, state and local fiscal issues, and disruptions in the stock market. The second group norm is financial news. This group encompasses 122 news stories relating to financial issues such as tax returns, market predictions, trends in stocks and bonds, tax law, and monetary events published in *Forbes*, *The San Francisco Chronicle*, *Investors Daily*, and *The Wall Street Journal*. The final group is TV news. This group includes 1219 transcripts from the nightly news programs run on NBC, CBS, ABC, and PBS. The coverage is mainly political topics, financial commentary, and social issues.<sup>3</sup>

### III. Sample

The sample for this study includes all of the speeches and Congressional testimonies of Chairman Greenspan available in the Board of Governors' database over the period 1988-2002. The present study analyzes a total of 337 speeches and Congressional testimonies made by Chairman Greenspan. Table 1 lists the number speeches and Congressional testimonies of Chairman Greenspan included in our sample.

The speeches fall into four categories. The first classification is Congressional testimonies. This category includes the Chairman's Humphrey-Hawkins appearances and the testimonies before the Joint Economic Committee, Committee on Budget, Committee on Financial Services, Committee on Banking, Housing and Urban Affairs, Senate Finance, and other Congressional appearances. Speeches to such groups as the American Bankers Association, Conference on Bank Structure and Competition, Financial Markets Conference, Independent Community Bankers of America, Economic Policy Conference, and Bond Market Association are included in the second category. Category 3 consists of appearances dealing with international subjects. Speeches given at meetings like the Council on Foreign Relations, Banco de Mexico's Second International Conference, World Finance and Risk Management Conference (London), Center for Financial Studies (Frankfurt) and Center for Strategic and International Studies. Public appearances are speeches presented to a variety of audiences. Included among the groups are the American Enterprise Institute, Syracuse University, University of Connecticut, Cato Institute, U.S. Chamber of Commerce board of directors, National Council on Economic Education, Economic Club of Chicago, and many, many others.

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<sup>2</sup> Hart notes that the correlation among the master variables is very low so that each of these conversational dimensions sheds a different light on the discussion being analyzed. (West, 2001, p.45)

<sup>3</sup> The Chairman had a symbiotic relationship with the electronic media. The TV news group was included to analyze how Greenspan *plays* the media. The assumption here is that his speeches must have been written with the media response in mind and how that response was parsed to the public.

#### IV. Greenspan's Constituencies and the Greenspan Effect

Greenspan's speeches were linguistically complex documents because each one addressed either explicitly or implicitly an array of constituencies. Figure 1 illustrates the

**Table 1: All Speeches and Congressional Testimonies of Chairman Greenspan Classified by Audience**

Year	Congressional Testimonies	Speeches		
		Financial Community	International Conferences	Public Appearances
1988	11	4	0	3
1989	12	2	1	1
1990	13	2	1	0
1991	12	1	0	1
1992	8	1	1	1
1993	9	4	0	2
1994	12	6	1	4
1995	19	5	1	5
1996	2	2	2	4
1997	14	6	2	11
1998	17	9	3	5
1999	11	14	0	8
2000	8	9	2	15
2001	9	10	2	8
2002	7	4	6	4
Total (N)	164	79	22	72

*Notes:* This table includes the sample of Chairman Greenspan's speeches and Congressional testimonies over the period 1988-2002. The speeches are classified into four audiences: financial community (bankers association meetings, Federal Reserve conferences), international conferences (foreign central banks, international economic associations), public appearances (commencement addresses, domestic economic conferences), and general public (university commencements, economics clubs, educational conferences)

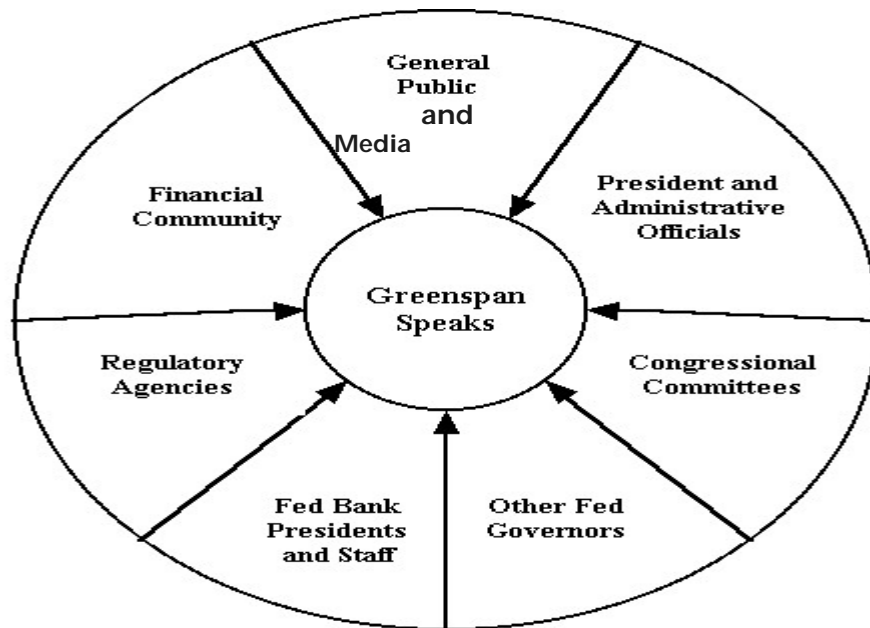
Chairman's circle of constituents. His speeches focused on core economic issues, but the Chairman had to be cognizant of the views and perceptions of others, including the reactions of the general public.

As Kane (1988) pointed out, the Chairman cannot be politically isolated. For example, he must be concerned about the reactions of several constituencies; including the other Board members and FRB presidents who serve on the Federal Open Market Committee. Keeping the Administration's aims in mind was also imperative if the Chairman wanted to participate in formulating economic policies, influencing the selection of new Board members, and being reappointed for a new term. Perspective Congressional reactions were another consideration in formulating the text of his testimonies. Harsh criticism by Congressional leaders could have changed his public persona, making future policy statements less potent.<sup>4</sup> Concerns about how the print and electronic media would parse his speeches to the general public could have influenced their rhetorical structures as well.<sup>5</sup>

<sup>4</sup> Consider the difficulties of Chairman G. William Miller in the 1970s.

<sup>5</sup> Woodward's (2000) book describes in vivid detail the behind the scenes political maneuvering during Greenspan's tenure at the Fed.

Figure 1: Greenspan's Constituencies



Notes: Shown in this figure are the constituencies for Greenspan's speeches and testimonies. Some of the constituencies (e.g., financial community, general public and regulatory agencies) encompass both domestic and foreign audiences.

Sicilia and Cruikshank's notion of the Greenspan effect involved the way these constituencies responded to the Chairman's speeches. In my interpretation, not every utterance, not even every crisis speech, of the Chairman *necessarily* represented the Greenspan effect, but if the effect actually existed, it represented language with a unique linguistic saliency. In moving from Greenspan's words to the Greenspan effect, certain expressions and linguistic characteristics should stand out as different, not necessarily dramatically but distinctly, from other speeches. While these speeches may appear typical, subtle differences in their underlying rhetorical structures may have led the public and the media to parse them in unique ways. On the other hand, the Greenspan effect may have been an outcome of the timing of a speech during critical moments, producing the hypothesized results. Or, the media may have used the speeches *ex post facto* to rationalize the outcome of market events. If this is the case, however, the linguistic structure of the speeches should have remained fundamentally the same.

The ripple effects (perhaps by design) of certain speeches among the Greenspan constituencies can appear quite dramatic.<sup>6</sup> Take for example Greenspan's 1996 "irrational exuberance" comments. These two words were parsed out of a 31-word sentence in an 18-page (4360 words) prosaic discussion of the history of central banking in the United State. The sentence was a rhetorical "what if" question about the role of inflated asset values in the prolonged economic contraction in Japan. The audience consisted of scholars, financial analysts, bankers, politicians, and the media attending the annual Francis Boyer Lecture at the American Enterprise Institute. The speech was presented on December 5, 1996 and on December 6th the PBS News Hour began with a long segment introduced with the following statement

*Irrational exuberance and unduly escalating stock prices." These seven simple words describing the stock market in a speech by the Chairman of the Federal Reserve, Alan Greenspan, sent markets around the world into a sharp downward spiral. Jim Lehrer takes a look at how this happened and the power that Greenspan wields. (The Market Shaker, Transcript)*

On October 19, 1987, the Dow-Jones Average fell by 508 points portending a market dislocation of historic proportions. Greenspan had been Chairman of the Federal Reserve Board for approximately two months. He rushed by military jet from Dallas, where he was preparing to speak to a bankers' convention, to Washington to *calm* the situation.

<sup>6</sup> Sicilia and Cruikshank (2000) refer to the rippling of his words among the constituencies as the *Greenspan effect*.

Howard Baker, President Reagan's chief of staff, implored Greenspan to allay public fears by making a statement. Greenspan's rhetorical approach appeared to be one of certainty, directness, and confidence. His one sentence statement (30 words) used no symbolism or references to past experiences.

*The Federal Reserve, consistent with its responsibilities as the nation's central bank, affirms today its readiness to serve as a source of liquidity to support the economic and financial system.* (Woodward, 2000, p.58)

Later Howard Baker would say that Greenspan's one-line statement averted a market panic. Treasury Secretary Jim Baker called the one-sentence statement brilliant. (Woodward, p.68) FRB presidents, Board staffers, and the financial community also praised his statement. Can any generalization about the influence of this simple statement on the various constituencies be made sans personality and position? Is there a specific linguistic structure that makes this short statement so forceful?

By 1999, economic problems in Russia, Brazil, and East Asia raised the specter of financial contagion throughout the global community. Nevertheless, Sicilia and Cruikshank contend that public awareness of the gravity of this issue, particularly in the United States, did not truly surface until Chairman Greenspan confirmed it. That is, according to them, the Greenspan effect had not been triggered. However, his Senate testimony on the subject in February 1999 used adjectives such as weak, vulnerable, and traumatic and verbs like depressing and deepening.

*We remain vulnerable to rapidly changing conditions overseas, which, as we saw last summer, can be transmitted to U. S. markets quickly and traumatically...*

*The continuing downside risk posed by possible economic and financial instability around the world was highlighted earlier this year by events in Brazil. Although financial contagion elsewhere has been limited to date, more significant knock-on effects in financial markets in the economies of Brazil's important trading partners, including the United States, are still possible. Moreover, the economies of several of our key industrial trading partners have shown evidence of weakness, which, if it deepens, could further depress our exports.* (Committee on Banking, Housing, and Urban Affairs, February 23, 1999)

He had spoken on this subject before.<sup>7</sup> However, Sicilia and Cruikshank (2000) contend that these speeches did not influence the constituencies in the same way. In describing why the February 1999 testimony triggered the Greenspan effect, Sicilia and Cruikshank state

*Investor, reacting to Greenspan's long-anticipated announcement almost in real time, displayed an uncanny ability to pick and choose among Greenspan's words (our italics) in their hunt for omens ...*(Sicilia and Cruikshank, p.78)

At the height of the tech boom, Greenspan spoke about the "new economy" at the Haas School of Business at the University of California, Berkeley. In his remarks, Greenspan addressed the sensitive subject of a technological zenith where prolonged business cycle movements were outdated, a notion popularized by the business media. The following quotes illustrate the frenzied environment in which Greenspan was speaking.

*In 1995, references (all print business press) to the new economy began to rise dramatically. But only by 1998, when the nation's economy had kept growing rapidly to the surprise of all economists, and when stock prices rose to extraordinary heights, did references to the new economy truly take-off. They reached more than 1000 that year. By 1999, the feeding frenzy was underway. References tripled to more than 3,000, and in 2000 they rose by seven times to well more than 22,000. It is fair to say that all of America and much of Europe was now aboard.* (Madrick, 2001, p. 4)

*I believe the Internet has huge economic implications, on a par with the arrival of gasoline or the printing press.* (Jeffrey Brody, Brentwood Venture Capital, quoted in the Wall Street Journal, January 4, 1999)

*... in almost every part of the world, technology has made the human race faster, better, cheaper. Like railroads in the late 1800s, cars in the early 1900s, radio in the '20s and television in the '50s, technology is changing the economy in a way that analysts, investors, politicians, and policymakers are just beginning to understand.* (Goldman, 1999)

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<sup>7</sup> See "The Structure of the International Financial System," address to the Annual Meeting of the Securities Industry Association, Boca Raton, Florida, November 5, 1998 and "The Implications of Recent Asian Developments for Community Banking," speech to the Annual Convention of the Independent Bankers Association of America, Honolulu Hawaii, March 3, 1998.

People began to believe that the business cycle was dying because the Federal Reserve could prevent recessions; that stocks would, except for brief "dips," always rise; that new technologies meant exploding profits and income ... *It was sensible to buy stocks at exorbitant prices (because the market would always rise), invest wildly in fiber optics and computers (because the potential was unlimited) and borrow heavily (because repayment would be easy without recessions).* (Anirvan Banerji, Economic Cycle Research Institute quoted by Robert J. Samuelson in The Washington Post, October 23, 2002)

Greenspan's words were cautionary and grounded in investor psychology. He emphasized that no economy is immune to the immutable forces of human nature.

*To be sure, the degree of risk aversion differs from person to person, but judging the way prices behave in today's markets one is hard-pressed to find significant differences.* (Greenspan, September 4, 1998)

Greenspan conceded that technology and globalization had increased productivity and reduced pressure on prices. However, these benefits were purchased at a cost of increased vulnerability to international dislocations. It is here that he uses the figurative (pithy phrases) language of "oasis of prosperity".

*It is not credible that the United States can remain an **oasis of prosperity** unaffected by a world that is experiencing greatly increased stress. Developments overseas have contributed to holding down prices and aggregate demand in the United States in the face of strong domestic spending. As dislocations abroad mount, feeding back on our financial markets, restraint is likely to intensify.* (Greenspan, September 4, 1998)

Greenspan effect or not? Sicilia and Cruikshank (2000) seem to place the Haas speech into this category. However, was this speech any different from Greenspan's usual style? On the other hand, was the market just poised to move regardless of what Chairman Greenspan said? More generally, are there rhetorical clues that will allow us to discern the Greenspan effect.

## V. Results

This study examined three aspects of Chairman Greenspan's public addresses and testimonies. First, in terms of style, did the Chairman have any persuasive rhetorical traits not found among the other speakers that could account for the so-called Greenspan effect? The Chairman's position was one of trying to sway the opinions of other Governors as well as Federal Reserve Bank presidents, the financial community, and the public. In this respect, did the Chairman exhibit a unique rhetorical style? Second, did the Chairman deal with certain topics in distinctive ways? Did certain situations, such as sharp sell-offs in the stock market or international crises, lead to predictable rhetorical responses? Third, what is the diachronic nature of Chairman Greenspan's speeches and testimonies? Did the Chairman change his rhetoric over time, perhaps in response to developing a more mature relationship with the media and Congressional leaders?

The rhetorical analysis covers all of Chairman Greenspan's speeches during the period 1988–2002. The analysis focuses on changes in both the master and component traits of his orations. Greenspan's non-crisis speeches and Congressional testimonies were scored in terms of the three communities of discourse. Then the Chairman's crisis speeches and testimonies<sup>8</sup> were scored on a similar basis. The crisis periods included the crash of 1987, irrational exuberance episode, Asian currency debacle, new economy mania, and the 9/11-tragedy. Sicilia and Cruikshank (2000) focused on crisis speeches as particularly good illustration of the Greenspan effect.

### Time Profile of Greenspan Non-Crisis Speeches and Congressional Testimonies

Shown in Table 2 are the significant master variables for the Chairman's non-crisis speeches and Congressional testimonies. The information in Table 2 summarizes the results for the period 1988–2002. The column headings show the three communities of discourses. Certainty and realism stand out as the two dominant rhetorical traits in the Chairman's speeches and testimonies. Results for the other master variables did not differ from the group norms.<sup>9</sup>

<sup>8</sup> These speeches and testimonies could imply a potential turning point in the economy.

<sup>9</sup> However, certain component traits are out of range. These traits are discussed in a subsequent section.

**Table 2: Profile of Greenspan’s Non-Crisis Speeches and Congressional Testimonies, 1988 – 2002**

Normative Range	U.S. Presidents		Financial News		TV News	
	Certainty	Realism	Certainty	Realism	Certainty	Realism
Low	47.68	48.42	39.08	42.37	47.25	46.88
High	52.59	53.47	48.08	52.94	51.33	52.23
Speeches Average (N = 157)	45.00	43.14	50.11	47.96	50.36	46.24
Testimonies Average (N = 164)	46.10	43.46	49.24	46.13	46.47	42.34

Notes: This table includes a comparison of Chairman Greenspan’s non-crisis speeches and Congressional testimonies to three communities of discourse: U.S. presidents, financial news, and TV news. The sample excludes the Greenspan’s crisis speeches, which are analyzed separately in Table 4. High and low signify the value of the raw scores on the Greenspan speeches and testimonies relative to the ranges for the communities of discourse. The time period covered is from 1988-2002.

Certainty connotes language expressing resoluteness, inflexibility, completeness, and decisiveness. Words denoting practicality, concreteness, familiarity, and avoidance of abstraction are included in the realism score. Greenspan’s utterances exhibit *far* (1 to 3 standard deviations) less certainty and realism than the public policy speeches of U.S. presidents. The certainty measure was out of range on the low side in every year, 1988 – 2002. In general, it appears from the certainty score that Greenspan spoke less to the general public and less from the authority of his office about a particular policy objective in these speeches than U.S. presidents in their public policy speeches. More is said about this conclusion in the subsequent analysis.

The realism measure was below the presidential community norm in all 15 years. In public policy speeches, sitting presidents tend to speak with caution language the public can understand. (Hart, 1984) They avoid abstractions and philosophizing, presenting their case in a direct and pragmatic manner. Their optimism scores (words highlighting positive characterizations; best, conscientious, correct, fair, profitable, reasonable, successful) are usually high and their speeches take on the character of a rallying cry to achieve the expressed policy goal. Unlike presidential speeches, Greenspan did not personify the issues; he seems to have spoken more as an analyst than a policy-maker.

**Table 3: Components of the Certainty and Realism Scores**

	U.S. Presidents		Financial News		TV News	
	Speeches	Testimonies	Speeches	Testimonies	Speeches	Testimonies
<b>Certainty</b>						
Tenacity	Low	Low	ND	ND	Low	Low
Collectives	Low	Low	ND	ND	ND	ND
Insistence	Low	Low	ND	ND	ND	ND
Numerical	ND	Low	Low	ND	ND	Low
Variety	High	High	ND	ND	ND	ND
<b>Realism</b>						
Familiarity	Low	Low	ND	ND	Low	Low
Temporal	Low	Low	ND	ND	ND	ND
Human	Low	Low	ND	ND	Low	Low
Complexity	High	High	ND	ND	High	High

Note: This table details the components of the certainty and realism scores for three communities of discourse. High and low signify the out-of-range values of the raw scores on the Greenspan speeches and testimonies relative to the communities of discourse. ND denotes no different than the group norm.



In contrast to presidential speeches, Greenspan's rhetoric is tentative, qualifying, and substantially more cautious. Five components of the certainty score were out of range when compared to the presidential public policy speeches. The tenacity scores (verbs connoting confidence, assurance, and totality) are at least one standard deviation below the presidential mean scores in every year throughout the period. Low tenacity scores imply a lack of a clear-cut direction; a low usage of verbs such as is, shall, will, must, compelled, and required. Furthermore, the low collective's scores mean that in general, Greenspan was less likely than the presidents were to invoke categorical modes of thought. That is, to use singular nouns (humanity, administration, staff, congress, team, system) connoting plurality of purpose or effect. *Overall*, his language provides little evidence of broad commitments to specific outcomes or modus operandi. In general, Greenspan spoke in terms of alternatives and probabilities of events rather than presenting a rallying cry for any particular policy.

*Because forecasts that far out are highly uncertain, we rarely think in terms of a single outlook. Rather, we endeavor to assess the likely consequences of our decisions in terms of a reasonable range of possible outcomes. Part of our evaluation is to judge not only the benefits that are likely to result from appropriate policy, but also the costs should we be wrong. In any action--including leaving policy unchanged--we seek to assure ourselves that the expected benefits are large enough to risk the cost of a mistake.* (Testimony of Chairman Alan Greenspan Performance of the U.S. economy Joint Economic Committee, United States Congress, March 20, 1997)

The low insistence scores signify a shifting focus throughout the speeches. Low insistence is associated with a broadly defined agenda in contrast to the more narrowly constructed presidential discourse. In the context of Greenspan's speeches, low insistence was a reflection of the Chairman's tendency to present alternative scenarios with no clear outcome (note the quote above). Greenspan's testimonies yielded lower numerical frequency scores (measure of hyperspecificity or lack of universality) than presidential speeches. Once more, this result appears to be an attempt by Chairman Greenspan to avoid categorical statements and conclusions with specific outcomes or results that might be seized on by legislator or the public as an inevitable policy objective.

*As a practical matter, monetary policy cannot and should not be directed at a single forecast. We do not have the capability, nor does anyone else, to be able to know with certainty precisely where the economy is going to be.* (Committee on Banking, Housing and Urban Affairs, United States Senate, February 21, 1996)

Variety is a subtractive trait in the computation of the certainty. High variety indicates diversity of language and universality of expression. The cornucopia of words used in Greenspan's speeches garnered a great deal of humor in the media at the time. Here are a few examples.

*You wouldn't want Alan Greenspan to write the instructions for assembling a beach chair.* (Robert Orben, *Manchester Guardian Weekly*, December 27, 1996)

*While Greenspan's speaking style is usually clear, he does have a roundabout way of talking. For example: "I don't want to suggest we're about to do anything at this stage, but I would confirm we are obviously going to do a great deal of thinking about the whole process."* Somewhere else, he jokes: *"I've been able to string more words into fewer ideas than anybody I know, and I'm continuing to do that."* (Kahaner, 2000)

As Greenspan once told Congress: *"I know you believe you understand what you think I said, but I am not sure you realize that what you heard is not what I meant."* (Martin, p. 207).

In combination with a low familiarity score, high variety reflects vagueness and verbosity. When comparing variety scores among U.S. presidents, Hart (1984) notes "Eisenhower was a wordy, fuzzy, somewhat arcane speaker who inspired people despite his best efforts not to do so." Greenspan's general speeches and testimonies seem to be in the Eisenhower tradition.

Sicilia and Cruikshank (2000) contend that the Chairman was *intentionally* ambiguous particularly when discussing future events. He avoided categorical statements and hedged discussions of future outcomes. Sicilia and Cruikshank's intentionality argument is an interesting underpinning of the Greenspan effect, and has been reiterated by others<sup>10</sup>, but does it hold up under scrutiny.

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<sup>10</sup> For example, Woodward (2000) refers to the intentionality argument as *constructive ambiguity*. He buttresses his contention with the contradictory headlines that appear after Greenspan speaks. On June 7, 1995, Greenspan spoke to an international banking conference in Seattle. Headlines after the meeting read "Greenspan Sees Chance of Recession" (Bradsher, *New York Times*, June 8, 1995) and "Recession is Unlikely, Greenspan Concludes" (Berry, *Washington Post*,

Does the equivocal nature of Greenspan's speeches really differ from financial writing in general? Sicilia and Cruikshank further contend that the intentionality thesis is more pronounced in Greenspan's Congressional testimonies than his public speeches. Can we glean this aspect of the Greenspan effect from rhetorical structure of his Congressional testimonies?

Greenspan's average certainty score was actually one standard deviation higher than the financial press norm for both speeches and testimonies. The only component trait differing Greenspan's testimonies from financial news was the subtractive, *numerical terms*. Greenspan's verbalizations used fewer numerical references than financial news stories. For TV news-reporting certainty was in-range for speeches but low when compared to testimonies.

While Greenspan's variety scores are higher than those of presidential speeches, they are in range for both the financial news and TV news norms. In general, pragmatic economic and financial writings and speeches use more qualifying words (about, although, likely, could, might, almost, somewhat) and expressions of probable outcomes (unwillingness to commit to the verbalization being made) than the communications of, for example, politicians, social reformers, and religious orators. In this context, Greenspan's speeches and testimonies appear no more ambiguous than financial news commentaries.

In comparison to presidential speeches and TV news, Greenspan's realism scores on the non-crisis speeches and testimonies were low. He did not use pedestrian language (low familiarity scores) or cater to human emotion (low human-interest scores). His homilies provided little humor and were less concrete (low concreteness scores) than the typical presidential speech or TV news script. The complexity scores (average number of characters per word) for Greenspan's speeches were significantly higher than the presidential and TV news norms in all of the years. Complexity measures the use of convoluted phrasing, polysyllable words, abstractions, and intricacies. In general, these speeches and particularly his Congressional testimonies were directed at technical audiences and thus differed from presidential speeches and TV scripts.

In contrast, the realism scores for Greenspan's speeches and testimonies are no different from those of financial news. Evaluated in the context of the financial news norm, little support exists for the Sicilia and Cruikshank intentionality thesis. The results reported in Table 3 show that Greenspan's vocalizations were no more ambiguous than the typical speeches of financial experts. Furthermore, the degree of ambiguity does not vary between his speeches and congressional testimonies or over time.

### **Crisis Speeches and the Greenspan Effect**

Table 4 summarizes the significant master variables for Greenspan's crisis speeches. These speeches are the ones noted by Sicilia and Cruikshank (2000) and Woodward (2000) as having potentially the greatest impact on market behavior; i.e., the highest probability of triggering the Greenspan effect.<sup>11</sup> The structures of these speeches are

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June8, 1995). Again in the same month, "Doubts Voiced by Greenspan on a Rate Cut" (Bradsher, New York Times, June 21, 1995) and "Greenspan Hints Fed May Cut Interest Rates" (Berry, *Washington Post*, June 21, 1995).

<sup>11</sup> Presumably, these statements revealed unanticipated information that changed market expectations or encouraged market participants to revise their probabilities of future outcomes.

**Table 4: Master Variables for Greenspan's Crisis Speeches and Testimonies**

Communities of Discourse	Certainty	Realism	Commonality	Optimism
<i>U.S. Presidents</i>				
Crash of 1987	ND	Low	High	High
Irrational Exuberance	ND	Low	High	ND
Asian Crisis	Low	Low	ND	ND
New Economy	ND	Low	Low	ND
911 Disaster	Low	Low	ND	Low
<i>Financial News</i>				
Crash of 1987	High	ND	High	High
Irrational Exuberance	High	ND	High	ND
Asian Crisis	ND	ND	ND	ND
New Economy	High	ND	Low	ND
911 Disaster	High	ND	ND	Low
<i>TV News</i>				
Crash of 1987	ND	Low	High	High
Irrational Exuberance	High	Low	High	ND
Asian Crisis	Low	Low	ND	ND
New Economy	High	ND	ND	ND
911 Disaster	Low	Low	High	Low

Note: This table includes the master variables for the Greenspan's crisis speeches (N = 16). High and low signify the out-of-range values of the raw scores on the Greenspan speeches relative to the communities of discourse ND denotes no different than the group norm.

retorically different from Chairman Greenspan's other public statements. First, commonality (words reflecting agreed on common values, institutional regularities, universality) and optimism (words highlighting positive states, affirmation, virtues) appear as relevant rhetorical traits. Second, the speeches are less evasive (higher certainty scores) than his other comments. With the exception of the Asian crisis speeches, the certainty scores for the financial news norm exceed those of his general dialogues and testimonies.

In most of his crisis speeches, Greenspan's voice was ex cathedra. The usual equivocality and evasiveness was reduced. The tone was more authoritative and direct. The following quotes illustrate these rhetorical traits.

In the short 1987 statement,

*The Federal Reserve, consistent with its responsibilities as the nation's central bank, affirms today its readiness to serve ...*

In his teleconference to the American Bankers Association in the aftermath of 911, he did not mince words about the endurance of the U.S. financial system.

*But the fact that the conference is going forward in cyberspace is a testimony to American perseverance, to our technology, and to our flexibility. It is a metaphor for the ability of our economy to circumvent difficulties and innovate around obstacles and most of all for our decentralized and diversified economic structure.*

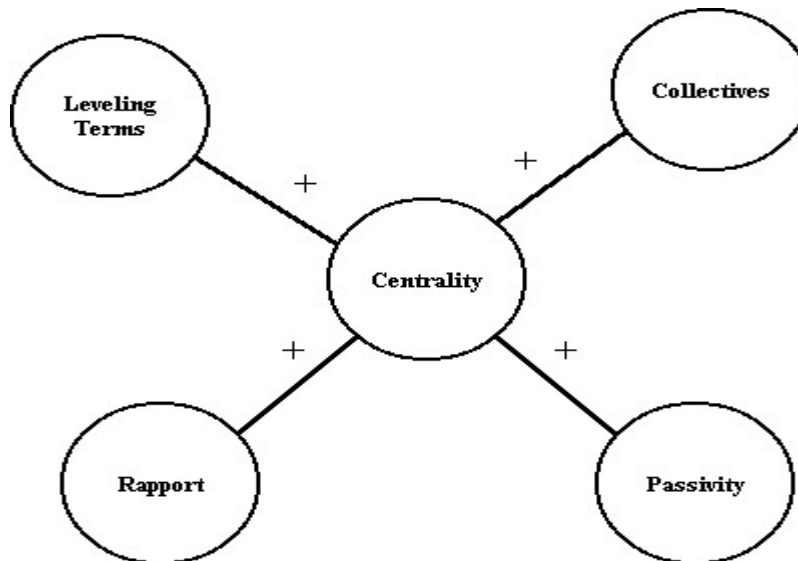
The "irrational exuberance" speech was inundated with collectives, singular nouns connoting plurality, and verb forms like will (would), shall (should), and must. The tone is authoritative and matter-of-fact.

*... We should not underestimate or become complacent about the complexity of the interactions of asset markets and the economy. Thus, evaluating shifts in balance sheets generally, and in asset prices particularly, must be an integral part of the development of monetary policy.*

### Style of Greenspan's Crisis Speeches

The component trait that stands out in Greenspan's crisis speeches (except for the Haas speech) is centrality. Centrality is an additive component in the commonality measure. Centrality includes expressions of institutional regularities and agreement on core values. This dictionary is comprised of words designating legitimacy (constitutional, orthodox), systematicity (regularity, matter-of-fact), and terms of congruence (mandate, unanimous) and predictability (expected, reliable). Figure 2 provides a schematic of Greenspan's crisis speech style. The style is one of authority, conventionality, and institutional regularity.

**Figure 2: Schematic of Greenspan's Crisis Speech and Testimonies Style**



Notes: Plus signs indicate significant positive Pearson correlations

In crisis speeches, Chairman Greenspan wrapped himself in the institution (centrality and collectives) of the Federal Reserve System. The institution has the mandate (passivity, compliance), power, and willingness (rapport) to overcome the obstacles confronting the economy (leveling, totality). In contrast, the centrality measure is not a focal trait in Greenspan's general speeches and testimonies.

*For many years, the Federal Reserve has maintained what we trust is a highly sophisticated day-by-day, near real-time, evaluation of the American economy and, where relevant, of foreign economies as well. We are able, partly through our twelve Reserve Banks, to monitor continuously developments in the real world. The information supplied about local conditions by the directors of the Reserve Banks has been frequently useful in identifying emerging national trends and in evaluating their underlying regional implications.* (Francis Boyer Lecture of The American Enterprise Institute for Public Policy Research, December 5, 1996)

Centrality provides a much different basis for the Greenspan effect than the contentions of Sicilia and Cruikshank (2000). As mentioned before they associate the Greenspan effect with the intentionality thesis and the fact that the statements are part of his Humphrey-Hawkins testimonies. However, the rhetorical structures of the Humphrey-Hawkins testimonies are no different from his other non-crisis statements. Crisis speeches are better candidates as purveyors of the Greenspan effect. In these speeches he speaks with added clarity, conviction, and emotion. He becomes less of an abstraction and more as a symbol of economic stability. He projects his psychological presence through the institution of the Federal Reserve System. In times of crisis, Greenspan's speeches had more of the traits of presidential addresses than his non-crisis statements.<sup>12</sup> Perhaps this is what Sicilia and Cruikshank meant when they claimed that Greenspan's speeches were a substitute for economic leadership in times of financial crises.

<sup>12</sup> However, Greenspan spoke as the institution; in contrast to presidents who tend to personify public policy issues. (Hart, 1984, p.33)

## VI. Conclusions

In retrospect, that mysterious verbal elixir known as the Greenspan effect was viewed by some as a miracle drug for the economy. Others saw it as a bad tasting toxin that poisoned the economic environment. Nevertheless, whatever their pharmacological assessment, both camps agreed that Greenspan's words were important because they could trigger the so-called Greenspan effect. This paper asks whether there is a rhetorical basis for this phenomenon. Sicilica and Cruikshank (2000) contend that Greenspan's intentional ambiguity in combination with pithy phrases was the heart of the Greenspan effect. In addition, they found that the effect was more often triggered by the Chairman's Humphrey-Hawkins testimonies than by his public speeches and was amplified in volatile markets. Woodward (2000) focused on the Chairman's *constructive ambiguity* and the Randian skepticism inherent in his discourse.

Chairman Greenspan's non-crisis speeches and testimonies use more irresolute language than presidential policy statements and TV news scripts. However, the certainty scores for Greenspan's speeches and testimonies are actually higher than the scores for the financial news norm. While the realism scores for his speeches are low relative to the presidential and TV news norms, they are no different from the financial press. His language is sophisticated (high variety and complexity scores and low familiarity scores), but no more so than financial writing in general. No differences existed between the style of his Humphrey-Hawkins testimonies and his other non-crisis public speeches.

The tone of Greenspan's crisis speeches was different from the tone of his other public statements. His crisis style reflected more emotion (optimism scores) and institutional solidarity (commonality scores). In crisis speeches, collectives, leveling terms, rapport, and passivity accompany centrality. These component traits are from three master groupings: commonality, activity, and certainty. Language of institutional coordination is combined with words of assurance and compliance with core values. Perhaps the purposive tone exhibited in crisis speeches is what Sicilian and Cruikshank observe as the Greenspan effect.

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