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Evaluating Leaders' Strategic Thinking and Entrepreneurial Characteristics Using Semantic Analysis

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Abstract: The purpose of this paper is to identify whether a person's entrepreneurial characteristics can be sought in written texts, and it deals with aspects such as understanding hidden feelings by looking only at a person's written texts. The transcripts of their speeches, interviews, and press conferences were analyzed in terms of semantic categories of words that were included with the use of General Inquirer software, which was developed in Harvard in order to support content analysis. Representatives clearly articulate and work together to establish the organization's values, ascertain its objectives, create and carry out a strategic plan, and cultivate and interact with the organization's perspective. A leader needs to be appointed, but they also need to have the ability to demonstrate their aspirations, excite their audience, and visualize their followers. In addition to this, they need to have the determination to take risks. This paper could be helpful for assessors of modern businesses as well as investigators of political and social sciences who are seeking to determine the perspective that is encountered in the literary documents of a particular person. A large variety of written documents from numerous people that have lived in a variety of historical eras and countries, regardless of gender and educational or professional background were examined. The common characteristic is that they were leading personalities in any of the following categories: their country, social movements, sports, art, business and social life.

Keywords: heuristic measures; strategy; leadership; communication; semantics; entrepreneurship



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1. Introduction

Over the course of the last few decades, a significant amount of effort has been put toward characterizing the ways in which a leader outlines his audience [1–3]. In addition, a discussion has taken place on the topic of determining the attitudes of successful leaders as well as those of flamboyant leaders. Researchers have investigated the possibility of establishing a connection between a person's written texts and the aspects of that person's personality and qualities that are reflected in those written texts [4–8].

Although strategic thinking has been acknowledged as one of the primary functions of leaders who achieve high levels of performance [9–11], relatively little research has been conducted on the variables that are congruent with strategic thinking [12]. It has also been looked at how management and strategic thinking are related [13,14], and it has been acknowledged that it takes time for great concepts and sentiments to materialize into great achievements in the future and accomplish one's predetermined goals [11,15,16]. The prior studies that are pertinent to character traits that can be assessed in written texts have focused on the attributes of leaders [7,8] and the entrepreneurship qualities that can be found in written texts [5,6].

In conclusion, the capacity to adopt a holistic standpoint of the institution as well as the surroundings in which it operates is an essential component of strategic thinking. It is incumbent upon organizations to actively seek out potential and conceive of ways in which they can perform existing tasks more effectively [9,14]. When we were trying to distinguish

the main components of a master strategist that should be examined in the person's written texts, we found a lot of debate about the components of strategic thinkers [10,17,18]—which have not been explored in sufficient depth yet [15]—as well as the propensity of strategic thinkers to ascertain possibilities [11], and their fundamentals [19]. Our goal was to determine which of these attributes should be investigated.

The most successful companies have discovered that maintaining a workforce that is both skilled and competent is one of the most crucial factors for long-term success. In today's world, one of the most effective methods to expand a corporation is to work on developing its executives. It is necessary for the executives of the company to regularly analyze their strategic stance and match the aspirational objectives of the organization with the broader purpose, career goals, and the organization's objectives in order for the organization to maintain its existence. Additionally, since organizational settings are subjected to a great deal of transformation, volatility and ambiguity predominate within organizations. Therefore, the role of leadership development is quite crucial, particularly in order to deal with complicated situations [1]. According to Leskiw and Singh (2007) [2], the idea of leadership growth is one that is becoming increasingly crucial and essential for all organizations—particularly in the context of the corporate world.

Even though there have been a significant number of studies conducted on the topic of leadership development, investigators are still having trouble making sense of the leadership development phenomenon. When it comes to preparing executives who are capable of guiding an organization through an unpredictable climate, businesses of all sizes face a number of obstacles. If businesses and other organizations want to be successful, they need to invest money in developing leadership abilities at all levels of the organization [2].

The encounters that organizations have had since the turn of the millennium have evolved. Therefore, there needs to be a shift in leadership styles because the traditional methods of leading might not be effective any longer [3]. Although executives are becoming more vocal about the necessity of focusing on programs such as professional development, in reality, only a minority of directors believe the advancement of leaders is an integral component of their corporate strategy. This came about as a result of studies coming to the conclusion that, while the majority of organizations highlighted the need to grow leaders, less than fifty percent of those organizations actually had methodological approaches to leadership development [1]. As a result, many companies are not well prepared to deal with the rapidly shifting contexts in which their firms operate.

Thus, the purpose of this paper is to identify whether a person's entrepreneurial characteristics can be sought in written texts, and it deals with aspects such as understanding hidden feelings by only looking at a person's written texts. The attributes focus on three different directions: first, attribution characteristics, such as identity, security, emotional state, commonality, certainty, positive impression, negative impression, and overall impression; second, entrepreneurial characteristics, such as determination, socioeconomic orientation, and the political thought of the writer; and third, initiatives are proffered in order to explore and assess the degree to which a person possesses strategic thinking, with the primary emphasis being placed on leaders. These assessments include the indicator of risk taking (which is actually a score) as well as the measure of futuristic demeanor.

Regarding the possible statistical similarity between the texts, it was seen that although the categories of words and concepts tend to be statistically dissimilar, the texts both at the leader level and as a whole show a statistical similarity in their structure. In other words, the examined leaders seem to have differentiated the used categories of words and concepts according to the occasion. However, at the level of feeling left by the texts, a statistical similarity is observed.

The most important implication of this study is allocated to academia. The study results could improve future empirical leadership development research by testing relevant attributes of leaders in different organizations or expanding them by considering more leadership skills from other leadership styles.

In terms of the study's implications, a significant body of research has suggested that leadership development is an essential and effective tactic for businesses to employ in order to remain competitive in an ever-evolving environment. These studies have also endeavored to provide examples of significant facets of leadership development. The development of leadership skills has been demonstrated in a variety of ways throughout the ages. Thus, the results of this paper demonstrate the characteristics that leaders should have.

The remainder of the paper has been structured as follows: The Section 2 describes the relationship among leadership, entrepreneurship and strategy, the aspects of strategic thinking competencies, and the necessity of searching for the meaning of words. The Section 3 presents the relevant software packages developed in order to conduct the semantic analysis of texts and the construction of the measures, as well as the selection of the logarithmic measure based on Shannon's theory. This section also presents the manner in which the texts to be examined have been selected. The Section 4 presents the measures developed for each of the abovementioned category of characteristics, and the Section 5 presents the most significant findings of this survey—providing avenues for further research.

2. Theoretical Background

2.1. Leadership, Entrepreneurship, and Strategy

Leadership is answering the question “who helps the company go forward, and which are the characteristics of good leaders?” Entrepreneurship answers the “what” questions, and the strategic management answers the “how” questions about the right choices and existing opportunities [5].

A person's potential to become an entrepreneur (even a successful one) gives no information at all about whether this person is charismatic or not. Furthermore, being a dreamer does not give any information about the person's ability to lead a business successfully. Leaders have to use their intelligence in order to build their IQ, EQ, and SQ [20]. Georgakalou and Kitsios (2011) [6] state that in order to foster spiritually intelligent leadership, the potential entrepreneur should be expected to know what the things he deeply believes in and values are and what deeply motivates him to be able to live in and to be responsive to the moment; act and live with principles and deep beliefs; be able to see the whole image and recognize larger patterns, relationships, and connections; have a sense of belonging; be characterized by both “feeling-with” and deep empathy; be able to value other people for their differences; be able to stand against the crowd and keep his own ideas; have the sense of being part of the world; need to understand things and get to the bottom of them; stand back from a situation or problem and see the bigger picture in order to see problems in a wider context; be able to learn and grow from mistakes and any kind of obstacles; and feel he has to serve and return things to society [21]. Leadership is a matter of how to be not how to do it [22], while Peter Drucker (1985) [23] reminds leaders that their job is to release energy.

2.2. Strategic Thinking Competencies

One of the components of strategic thinking is being able to imagine what the future will be like and balancing immediate goals with those of the longer term. When an organization applies strategic thinking, the goals of the organization become more precise, and the corporation focuses on achieving those goals. The very last component of strategic thinking is the recognition that it is a hypothesis-driven process. Intellectuals with a strategic mindset consider questions like “what would happen if . . . ?” Regarding these assumptions, strategic thinking enables theorists to reveal possibilities [11]. Therefore, one of the most important principles of strategic thinking is having a comprehension of the organization's history as well as its present and future [19].

According to Liedtka (1998) [18], strategic thinking typically demonstrates the following five main characteristics: a scheme point of view, intent-focused thinking, pondering in time, assumption-driven thinking, and astute opportunism. The exclusion of strategic

thinking has been identified as an important factor in organizational effectiveness, despite the fact that strategic thinking is recognized as one of the primary capabilities of high-performing leaders. Several studies concluded that strategic thinking was one of the most important fields and that the absence of strategic thinking was the most important challenge facing businesses. Investigations on the factors that coincide with strategy development have been conducted to a limited capacity [9–11].

In addition, there are not many studies that have been conducted that examine the significance of organizational factors and how leaders may react to these factors when it comes to strategic thinking throughout the organization [9,10]. Since leadership is required in both for-profit and non-profit institutions, this fact alone is sufficient to justify the necessity for strategic thinking [14]. There has not yet been an investigation into the recognition of strategic thinking competencies and the techniques to measure them [15].

According to Ebersole (2017) [17], in order to be considered a strategic thinker, an individual is required to have the following capabilities: the capability to use both the left (logical) and right (creative) sides of their brain; the capacity to establish a strictly delineated and centered business vision as well as an individual vision; the potential to accurately describe their goals and establish a strategic intervention plan among each objective broken down into projects and each assignment possessing a list of required supplies and a timeframe; and the capacity to accurately describe their personal vision.

It takes time for marvelous ideas and thoughts to establish themselves as major accomplishments in the future and reach your defined vision [10,11,16]. One of the most basic aspects in strategic thinking is the enhancement of organizational culture in order to support the vision of strategic thinkers [9–12,19,24].

Bonn (2001) [25] focuses on six characteristics of strategic think skills. The strategic thinker should integrate these same ideas to create powerful connections, imagine what might be happening that is not readily apparent, refine information to build a broad knowledge base with robust insights, work to make sure the right things are on the list in the first place, have a holistic looking for the next biggest result to deliver, and embrace possibilities [10].

Finally, Zabriskie and Huellmantel (1991) [14] discuss eight characteristics of a strategic thinker compared to non-strategic thinkers. First, the strategic thinker is future-based vs. the non-strategic thinker who is reactive. Second, the strategic thinker is curious vs. the non-strategic thinker who is isolated. Third, the strategic thinker is good steward of resources vs. the non-strategic thinker who focuses on costs. Fourth, the strategic thinker is a risk taker vs. the non-strategic thinker who is cautious. Fifth, the strategic thinker is urgent and important vs. the non-strategic thinker who is unable to prioritize. Sixth, the strategic thinker is nimble vs. the non-strategic thinker who is inflexible. Seventh, the strategic thinker is life-long learner vs. the non-strategic thinker who is satisfied. Finally, the strategic thinker is creative vs. to the non-strategic thinker who is predictable.

In conclusion, the capacity to adopt a holistic perspective of the organization as well as the environment in which it operates is an essential component of strategic thinking. It is incumbent upon organizations to actively seek out opportunities and conceive of ways in which they can perform existing tasks more effectively [9,25].

2.3. Searching for the Meaning of Words

Since a word either possess an attribute or not (Stone et al. 1966) [26] (regardless of any potential degree of that attribute, which is not measured, for the time being) we can talk about the emotional strength of the word.

A system that is capable of sentiment classification and the generation of sentiment timelines [27] monitors online conversations about movies and displays a plot of the multitude of constructive and derogatory sentiment messages as they accumulate over time.

The utterances that are used more commonly carry a greater amount of the crucial information that is necessary to differentiate between different general social contexts.

Midrange words, which include the classifications of nouns, verbs, adjectives, and adverbs that enable characterization and assessment throughout configurations as well as the pronouns, adverbs, and adjectives that define and frame the circumstance, carry the majority of the intriguing contextual information since they are usually recognized and utilized, arise in various social contexts, and their comparative use varies greatly from one social context to another.

Subjectivity clues [28,29] utilized entrepreneurial procedures in order to obtain patterns for subjective expressions. The field of artificial intelligence has given birth to the concept of word pattern analysis. Word pattern strategies mathematically detect “bottom-up” how words covariate across large samples of text, as opposed to investigating text “top-down” within the frame of reference of previously established psychological content dimensions or phrase categorizations [30,31].

Word count strategies are at the center of a general methodology that is widely used in quantitative text analysis [32]. There have been techniques formulated for analyzing both the substance of what is being said (content analysis) and the manner in which it is being said (style). Word count strategies are predicated on the supposition that the idiomatic phrases that people use impart psychological information that is in addition to their literal meaning and is independent of the semantic context in which those words are used.

Methodologies have been developed for the analysis of emotional context, which is defined as the concentration of emotion words within a specific text and can capture all three dimensions of pleasure, approval, and attachment. About five percent of the total words in a passage contain those words [33]. Mergenthaler [33] has also investigated abstraction, also known as the number of abstract nouns present in a specific text. Abstract nouns can be recognized by the addition of suffixes such as -ity, -ness, -ment, -ing, or -ion to the end of the noun. Weintraub’s most recent research [34] has centered on fifteen different linguistic aspects, such as the three pronoun categories (I, we, and me), negatives (such as not, no, and never), qualifiers (such as kind of and what you might call), expressions of feelings (such as “I love,” “we were disgusted,” and “what you might call”), and adverbial intensifiers.

For example, passive voice has a tendency to proportionally co-occur with nominalizations [35]. This can be helpful in determining the role that words play in the process of creating the tone or character of a specific type of text. According to Biber [35] there are six overarching factors that, as he demonstrated, can differentiate between the various types of linguistic writing genres. These particular elements are as follows: informational production as opposed to involved production, narrative considerations as opposed to no narrative implications, unequivocal reference as opposed to set of circumstances reference, observable expression of persuasion, nebulous information as opposed to no abstract information, and on-line informational elaboration, all of which are examples of contrasts.

As people’s ages increased, they used more words expressing positive emotions, fewer words expressing negative emotions, fewer first-person singular self-references, more verbs in the future tense, and fewer verbs in the past tense. There was also a positive correlation between age and an increase in cognitive complexity (e.g., causation words, insight words, long words). According to the findings of a number of studies [32], women’s and men’s languages are distinct in a variety of aspects. Analyzing particles, which are referential words that have immense social and psychological meaning, emotional responses, and traditional curriculum dimensions, is one of the general topics that is typically researched. Other general topics that are typically probed include emotions and traditional content aspects.

3. Materials and Methods

3.1. Software Supporting the Semantic Analysis of Texts

The General Inquirer (GI) [36]. The GI software has been developed by Harvard University. It is mainly a tool that maps provided documents, into 182 word and senses categories. It is an open system, and it is broadly used for content analysis purposes. The

GI software distinguishes some intensifiers, which are the words classified in the categories “Negations”, “overstatements” and “understatements” [37]. By using those words, the speaker or writer can switch the sentiment of positive or negative terms in a sentence. One of the ways proposed for the measurement of negative sentiment terms is the following: the words are given a value of -2 by default and -1 and -3 if preceded by understatements and overstatements respectively. Additionally, this method can measure the high or low strength of a word.

An interesting pair of categories in GI is strong and weak. Although strong tends to be correlated with positive and weak with negative, there are many examples in GI of words that are negative and strong (e.g., abominable, aggressive, antagonism, attack, austere, avenge) or positive and weak (e.g., delicate, gentle, modest, polite, subtle). The strong/weak pair may be useful in applications such as analysis of political text, propaganda, advertising, news, and opinions. The semantic orientation of many words depends on the context. For example, in the GI lexicon, mind#9 (“lose one’s mind”) is Negativ and mind#10 (“right mind”) is Positiv. We believe that the problem is context sensitivity.

We have based our research on the GI mainly because it is a software package developed in Harvard University. Being an academic tool, its development and evolution is an ongoing procedure. Our work uses the GI 182 categories in which it classifies the words in a written text and several elements from the rest of the software packages.

3.2. *The Use of the Algorithmic Measures Based on Shannon’s Law*

Although Shannon [38] himself notes that the semantic aspects of communication are irrelevant to the engineering problem and that the significant aspect is that the actual message is one selected from a set of possible messages, we used Shannon’s entropy in order to measure certain semantic attributes of the texts. The reasons that led us to develop algorithmic measures of the semantic attributes of texts based on Shannon’s theory [38] are briefly listed below: First, having observed that the instances of categories in a text tended to vary linearly with the logarithm of the number of possibilities, the algorithmic measure seemed to be more useful. Second, intuitively, we found it is closer to our feeling as to the proper measure. Third, the base 2 made it mathematically more suitable. Additionally, the logarithm greatly simplified many of the limiting operations.

3.3. *The Selection of the Texts*

The texts were selected in a manner that would cover the largest period of time, as many different countries as possible, and as many different areas of activation as possible—regardless of the gender of the person under consideration [6–8]. The main idea was to check the similarities and the differences among them, as far as the attributes under consideration were concerned. The fact that the real author of the texts might have been different than the person who finally delivered them was considered inconsequential. It is well known that Plato wrote Socrates’ apology, still though the particular text has been delivered in history as *The apology of Socrates*. Similarly, the speeches of the political leaders might have been written by many different speechwriters, but the political leaders normally put a final touch according to their personality. Finally, the texts have been recorded in history as the speech X of the leader Y.

A total of 172 texts (presented in Table 1) were selected and measured for their attributes relevant to: (1) General attitude attributes, (2) Entrepreneurial attributes, (3) Attributes of strategic thinking. The texts were initially selected in 2006 [6]. They were then tested for the attribution characteristics [7,8]. For the following activities [4,5,39], we decided to use the same texts in order to (a) have a more global impression of the specific characters and (b) to be able to compare them with regard to their general attitude attributes, their entrepreneurial attitudes, and their attributes of strategic thinking.

Table 1. The selected texts to be examined for their attributes [6].

Category	Name	Country	Historical Era	Texts
P O L I T I C A L	Pericles	Ancient Athens	5th Century B.C.	Epitaphios
	Abraham Lincoln	USA	19th Century A.D.	Lin1-Lin6
	Mahatma Gandhi	India	1st half of the 20th century A.D.	Gan1-Gan7
	Martin Luther King	USA	2nd half of the 20th century A.D.	M.L.K.1-M.L.K.4
	Margaret Thatcher	UK	2nd half of the 20th century A.D.	Th1-Th7
	James Earl Carter, Jr	USA	20th century	Car1-Car4
	Ronald Wilson Reagan	USA	20th century	Re1-Re8
	George Herbert Walker Bush (Sr)	USA	20th century	Bu1-Bu4
	William Jefferson Clinton	USA	20th century	Cl1-Cl8
	Tony Charles Lynton Blair	UK	20th century	Bl1-Bl8
	Andreas Papandreu	Greece	20th century	Pap1-Pap2
	Fidel Castro	Cuba	20th century	Cas1-Cas8
	Winston Churchill	UK	20th century	Ch1-Ch13
	Michael Gorbachev	USSR	20th century	Gorbachev
	Vladimir Nicolai Ilich Lenin	USSR	20th century	Le1-Le2
L E A D E R S	Nelson Mandela	South Africa	20th century	Ma1-Ma11
	Richard Nixon	USA	20th century	Nixon
	Joseph Vissarionovich Stalin	USSR	20th century	Sta1-Sta6
	Leon Trotsky	USSR	20th century	Tr1-Tr2
	Socrates			Socrates
Ancient	Alexander the Great		Alexander	
Religious	St. Paul		St.P.1-St.P.8	
Celebrities	Princess Diana		Di1-Di2	
	Angelina Jolie		Jo1-Jo3	
Business men	Giorgio Armani		Armani	
	Bill Gates		Gat1-Gat3	
Rock Stars	Bono		Bo1-Bo2	
	Mick Jagger		Ja1-Ja2	
	Sting		Sti1-Sti2	
Winners	Winners (Martina Navratilova, Lena Daniilidou, Anna Kournikova, Amelie Mauresmo, Maria Sharapova)		Wi1-Wi10	
History			Hi1-H13	
Raped Women			RW1-RW12	
Science			Sci1-Sc8	

The 172 texts are classified into nine categories: (i) Political leaders, (ii) Ancient, (iii) Religious, (iv) Celebrities, (v) Business men, (vi) Rock Stars, (vii) Winners, (viii) History, (ix) Raped Women, and (x) Science. The last three categories are meant to serve as testing categories in order to make sure that the proposed measures are consistent. The 172 texts are just indicative and obviously not exhaustive of the relevant categories.

3.4. Measures

The measures proposed were relevant to the measures of general attributes [6–8], entrepreneurial qualities [4,5] and strategic thinking [39]. To calculate the scales, we investigated whether the measures followed a normal distribution. The Kolmogorov-Smirnov statistic measure was used to test the normality of the variables. If the value is less than 0.05 then it means that the specific variable violates normality. In this case we transformed the distribution to follow the normal distribution. We then calculated the mean and standard deviation of the results that follow a normal distribution. Finally, we defined for each variable a three- or four-point scale that would fit each measure. The scale in the case of the selection of the three points was as follows: (1) $p(i) > \mu + \sigma$, (2) $\mu + \sigma \geq p(i) > \mu - \sigma$, and (3) $p(i) \leq \mu - \sigma$. The scale in the case of the selection of the four points was as follows: (1) $p(i) > \mu + \sigma$, (2) $\mu + \sigma \geq p(i) > \mu - \sigma$, (3) $\mu \geq p(i) > \mu - \sigma$, and (4) $p(i) \leq \mu - \sigma$.

As already mentioned, leaders are of great importance for the success of a network. What has been sought for [6–8] is what leading personalities in a large variety of domains had been saying. Were they trying to be as positive as possible, even when the situation under consideration was not pleasant? Were they trying to motivate and encourage people? Since we examine only the written documents (i.e., the transcripts of their speeches and their press-conferences where available), we do not consider at all their motions, their gestures and their tone of voice. We know nothing about their potential body-language. We are looking for the hidden messages in the used words.

Most of the people that are examined are very well-known people from nearly all domains of social life, e.g., politics, arts, sports and business. The people examined have lived in different historical eras (ranging from ancient years to the 21st century), in completely different countries, and have had completely different backgrounds as far as their education/profession, their traditions, and their gender are concerned.

The word categories used and their explanation can be found in the GI categories (<http://www.wjh.harvard.edu/~inquirer/homecat.htm> (accessed on 15 December 2022)). More specifically, regarding the general attribute of a text, the proposed measures were the following: The attribute “Identity” measures the degree of honesty and personal view the speaker (or writer) has on the matters he deals with and talks about. Women are supposed to have more “I-words” since they are supposed to be less dominant than men. The categories of GI used to define the measure of identity were pronouns, where all categories except first-plural pronouns, which may be ambiguous, contribute positively to the calculation of the measure.

$$p(\text{identity}) = \frac{\text{abs}\{[f(\text{PRON}) + f(\text{Self}) + f(\text{Other}) - f(\text{Our})]^*\}}{\log_2[f(\text{PRON}) + f(\text{Self}) + f(\text{Other}) - f(\text{Our})]} \quad (1)$$

Proposed thresholds were very honest/using a personal manner when $p(i) > \mu + \sigma$, rather honest/using a personal manner when $\mu + \sigma \geq p(i) > \mu - \sigma$, and not honest/using a personal manner when $p(i) \leq \mu - \sigma$.

The attribute “Security–Insecurity” is a measure of the “I-words” vs. the “We-words”. The use of the royal “we” at disproportionately high rates is supposed to be a characteristic of insecure speakers (among which are included the politicians). This measure is a subset of the text identity measure.

$$p(\text{security}) = \frac{\text{abs}\{[f(\text{PRON}) + f(\text{Self}) - f(\text{Our})]^*\}}{\log_2[f(\text{PRON}) + f(\text{Self}) - f(\text{Our})]} \quad (2)$$

Proposed thresholds were very secure when $p(\text{sec}) > \mu + \sigma$, rather secure when $\mu + \sigma \geq p(\text{sec}) > \mu - \sigma$, and insecure when $p(\text{sec}) \leq \mu - \sigma$.

The attribute “Emotional state” measures the optimism of a speaker. More specifically, it measures the positive emotion words (i.e., the words indicating joy and pleasure)

and compares them with the negative emotion words (i.e., the words indicating anger and hostility).

$$p(\text{emot}) = \frac{\text{abs}\{[f(\text{Virtue}) + f(\text{Pleasur}) + f(\text{Intj}) + f(\text{Arousal}) - f(\text{Hostile}) - f(\text{Vice}) - f(\text{Pain})]^*\}}{\log_2\{[f(\text{Virtue}) + f(\text{Pleasur}) + f(\text{Intj}) + f(\text{Arousal}) - f(\text{Hostile}) - f(\text{Vice}) - f(\text{Pain})]\}} \quad (3)$$

Proposed thresholds were very optimistic when $p(\text{emot}) > \mu + \sigma$, quite optimistic when $\mu + \sigma \geq p(\text{emot}) > \mu - \sigma$, and pessimistic: (when $p(\text{emot}) \leq \mu - \sigma$).

The attribute “Certainty” refers to language indicating resoluteness, inflexibility, and completeness and a tendency to speak ex cathedra. We used all the verbs, which are descriptive of an action, nouns reflecting a dependence on categorical modes of thought. Included are social groupings (crowd, choir, team, humanity), task groups (army, congress, legislature, staff) and geographical entities (county, world, kingdom, republic). We additionally used any sum, date, or product specifying the facts in a given case, words expressing hesitation or uncertainty. Finally, we used words indicating understatement and overstatement.

$$p(\text{cert}) = \frac{\text{abs}\{[f(\text{Incr}) + f(\text{Decr}) + f(\text{Persist}) + f(\text{Begin}) + f(\text{Finish}) + f(\text{Time}^*) + f(\text{Space}) + f(\text{Quan}) + f(\text{Qual}) + f(\text{FREQ}) - f(\text{NUMB}) + f(\text{Natpro}) + f(\text{Undrst}) + f(\text{DAV})]^*\}}{\log_2\{[f(\text{Incr}) + f(\text{Decr}) + f(\text{Persist}) + f(\text{Begin}) + f(\text{Finish}) + f(\text{Time}^*) + f(\text{Space}) + f(\text{Quan}) + f(\text{Qual}) + f(\text{FREQ}) - f(\text{NUMB}) + f(\text{Natpro}) + f(\text{Undrst}) + f(\text{DAV})]\}} \quad (4)$$

Proposed thresholds were very certain when $p(\text{cert}) > \mu + \sigma$, quite certain when $\mu + \sigma \geq p(\text{cert}) > \mu - \sigma$, and uncertain when $p(\text{cert}) \leq \mu - \sigma$.

The attribute “Commonality” refers to language highlighting the agreed-upon values of a group and rejecting idiosyncratic modes of engagement.

$$p(\text{commonality}) = \frac{\text{abs}\{[f(\text{HU}) + f(\text{Role}) + f(\text{Kin}^*) + f(\text{Race}) + f(\text{MALE}) + f(\text{Nonadlt}) + f(\text{Econ}^*) + f(\text{Legal}) + f(\text{Milit}) + f(\text{Polit}^*) + f(\text{COLL}) + f(\text{Relig}) + f(\text{Exprs}) + f(\text{SV})]^*\}}{\log_2\{[f(\text{HU}) + f(\text{Role}) + f(\text{Kin}^*) + f(\text{Race}) + f(\text{MALE}) + f(\text{Nonadlt}) + f(\text{Econ}^*) + f(\text{Legal}) + f(\text{Milit}) + f(\text{Polit}^*) + f(\text{COLL}) + f(\text{Relig}) + f(\text{Exprs}) + f(\text{SV})]\}} \quad (5)$$

Proposed thresholds were high commonality when $p(\text{com}) > \mu + \sigma$, considerable commonality when $\mu + \sigma \geq p(\text{com}) > \mu$, medium commonality when $\mu \geq p(\text{com}) > \mu - \sigma$, and little commonality when $p(\text{com}) \leq \mu - \sigma$.

This measure measures the positive feeling that a text can cause in the reader. We calculated the positive impression obtained from a text using the following formula:

$$p(\text{positive}) = \frac{\text{abs}\{[f(\text{Pos}) + f(\text{Virtue}) + f(\text{Pleasur}) + f(\text{Affil})]^*\}}{\log_2\{[f(\text{Pos}) + f(\text{Virtue}) + f(\text{Pleasur}) + f(\text{Affil})]\}} \quad (6)$$

Proposed thresholds were high positivity: when $p(\text{pos}) > \mu + \sigma$, considerable positivity when $\mu + \sigma \geq p(\text{pos}) > \mu$, medium positivity when $\mu \geq p(\text{pos}) > \mu - \sigma$ and little positivity: when $p(\text{pos}) \leq \mu - \sigma$.

This measure measures the negative feeling that a text can cause in the reader. We calculated the negative impression obtained from a text using the following formula:

$$p(\text{negative}) = \frac{\text{abs}\{[f(\text{Neg}) + f(\text{Negate}) + f(\text{Hostile}) + f(\text{Vice}) + f(\text{Pain})]^*\}}{\log_2\{[f(\text{Neg}) + f(\text{Negate}) + f(\text{Hostile}) + f(\text{Vice}) + f(\text{Pain})]\}} \quad (7)$$

Proposed thresholds were high negativity when $p(\text{neg}) > \mu + \sigma$, considerable negativity when $\mu + \sigma \geq p(\text{neg}) > \mu$, medium negativity when $\mu \geq p(\text{neg}) > \mu - \sigma$, and little negativity: when $p(\text{neg}) \leq \mu - \sigma$.

This measure measures the overall impression that a text can cause in the reader. We calculated the overall impression of a text using the following formula:

$$p(\text{overall}) = p(\text{pos}) - p(\text{neg}) \tag{8}$$

Proposed thresholds were high positivity when $p(\text{overall}) > \mu + \sigma$, considerable positivity when $\mu + \sigma \geq p(\text{overall}) > \mu$, medium positivity when $\mu \geq p(\text{overall}) > \mu + \sigma$, and negative when $p(\text{overall}) \leq \mu - \sigma$.

4. Results

To check the measures, a total of 172 texts were processed, which were then divided into 33 groups. For these groups, averages were calculated and the measures applied again. The results for the abovementioned attitudes are presented in Table 2. After testing the proposed measures on a body of 172 texts, the first results are presented below. As far as $p(\text{identity})$, $p(\text{security})$, $p(\text{emotional state})$, $p(\text{certainty})$, $p(\text{commonality})$, $p(\text{positive impression})$, $p(\text{negative impression})$ and $p(\text{overall impression})$ are concerned, the results showed that the measures constructed followed a reasonably normal distribution and thus may be safely used.

Table 2. The results for the measures of general attitudes [6].

	Identity	Security	Emotional State	Certainty	Commonality	Positive Impression	Negative Impression	Overall Impression
Average (μ)	0.494	0.454	0.086	0.398	0.415	0.287	0.205	0.082
Standard Deviation (σ)	0.121	0.135	0.047	0.042	0.058	0.066	0.074	0.117
$\mu + \sigma$								
$\mu - \sigma$	0.615	0.590	0.133	0.440	0.473	0.353	0.279	0.199
Number of texts/threshold								
$>\mu + \sigma$	35	34	29	27	25	23	30	31
$\mu - \sigma$	25	25	25	26	25	23	29	25
$(\mu - \sigma, \mu + \sigma]$	112	113	118	119				
$(\mu, \mu + \sigma]$					65	58	56	56
$(\mu - \sigma, \mu]$					57	68	57	60
Total	172	172	172	172	172	172	172	172

Table 3 presents the correlation matrix for the different measures of general attitudes, while Table 4 presents the correlation matrix for the different categories of text concerning the measures of general attitudes.

Not all proposals have been financed nor have all of those that have been financed been successful. This might be due to many reasons. We think that one of them is the fact that, regardless of how good and innovative the idea may be, no matter how well the proposed business plan was, there might have been several “small” details (which proved crucial) that rendered the proposal unsuccessful or helped other proposals to be more successful.

This tool might be useful to those who are examining applications for financing as well as potential business angles. On the other hand, this tool might prove to be very useful for potential businessmen, since they might be able to fix several “small” details that could ruin a valuable business idea. The measures of entrepreneurial qualities are listed below.

Table 3. The correlation matrix for the measures of general attitudes [6].

	Identity	Security	Emotional State	Certainty	Commonality	Positive Impression	Negative Impression	Overall Impression
Identity	1							
Security	0.984	1						
Emotional state	0.018	0.002	1					
Certainty	0.279	0.297	0.033	1				
Commonality	−0.501	−0.525	−0.108	−0.656	1			
Positive impression	−0.383	−0.379	0.173	−0.311	0.215	1		
Negative impression	−0.019	−0.078	−0.446	−0.147	0.386	−0.281	1	
Overall impression	−0.233	−0.195	0.382	−0.111	−0.097	0.811	−0.789	1

Table 4. The correlation matrix for the different categories regarding the measures of general attitudes.

	Political	Ancient	Religious	Celebrities	Business-Men	Rock Stars	Winners	Raped Women	Science	History
Political	1									
Ancient	0.774485	1								
Religious	0.893168	0.761678	1							
Celebrities	0.68979	0.98621	0.697285	1						
Business Men	0.804649	0.735367	0.826915	0.741911	1					
Rock Stars	0.88969	0.918956	0.815804	0.892037	0.844989	1				
Winners	0.683554	0.956768	0.66467	0.982662	0.800461	0.892976	1			
Raped women	0.868188	0.852755	0.690253	0.789089	0.648259	0.88914	0.764247	1		
Science	0.847149	0.48954	0.784679	0.443982	0.889369	0.705124	0.514863	0.562203	1	
History	0.974841	0.786086	0.824629	0.69181	0.708929	0.848523	0.671009	0.921361	0.744072	1

The definition of an entrepreneur and his expected qualities will lead to the characteristics one should measure in order to explore the degree of entrepreneurship hidden in written texts.

According to Peter Drucker (1985) [23], “... *Entrepreneurs, by definition, shift resources from areas of low productivity and yield to areas of higher productivity and yield. Of course, there is a risk they may not succeed. But if they are even moderately successful, the returns should be more than adequate to offset whatever risk there might be. ...*” Drucker (1985) [23] also recognizes innovation as the specific instrument for entrepreneurship. He also states that “*Entrepreneurs innovate. Innovation is the specific instrument of entrepreneurship*” [23].

Additionally, the successful entrepreneur looks like a dreamer. Furthermore, according to Schumpeter (2017; 1911) [40,41], the entrepreneur is a person that would not undertake very risky challenges, although Drucker (1985) [23] does not really agree with Schumpeter since he thinks that the greater risk of entrepreneurship is that entrepreneurs usually do not know what they do. This means that the main qualities of an entrepreneur can be listed as follows: exercise of initiative; the ability to make decisions in order to undertake beneficial activities; being a dreamer; being a hard worker; possessing a strong eye on social, political and economic issues; being self-reliant; being self-confident; looking forward to excellence; being optimistic; being a risk-taker, but not too much; and be courageous.

Determination is a heuristic which helps us measure whether the text examined indicates that the particular person is ready to fight for overcoming the potential obstacles in order to achieve his goal. In other words, p(Deter) shows the extent to which a person is willing to overcome obstacles in order to fulfill his plans and goals, as far as this can be sought from his texts.

$$\begin{aligned}
 p(\text{Deter}) = \text{abs} \{ & [f(\text{Strng}) + f(\text{Power}) + f(\text{Actv}) + f(\text{Ought}) + f(\text{Know}) + f(\text{Solve}) + f(\text{Arousal}) + f(\text{Means}) + f(\text{goal}) + \\
 & f(\text{Work}) + f(\text{Try}) + f(\text{Complt}) + f(\text{Rise}) + f(\text{Begin}) + f(\text{Persist}) + f(\text{Finish}) + f(\text{IAV}) + f(\text{DAV}) - f(\text{Fail}) - f(\text{Fall}) - f(\text{SV})] \}^* \\
 & \log_2 [f(\text{Strng}) + f(\text{Power}) + f(\text{Actv}) + f(\text{Ought}) + f(\text{Know}) + f(\text{Solve}) + f(\text{Arousal}) + f(\text{Means}) + f(\text{goal}) + \\
 & f(\text{Work}) + f(\text{Try}) + f(\text{Complt}) + f(\text{Rise}) + f(\text{Begin}) + f(\text{Persist}) + f(\text{Finish}) + f(\text{IAV}) + f(\text{DAV}) - f(\text{Fail}) - f(\text{Fall}) - f(\text{SV})] \}
 \end{aligned} \tag{9}$$

The proposed thresholds are very determined when $p(\text{Deter}) > (\mu + \sigma)$, quite determined when $(\mu + \sigma) \geq p(\text{Deter}) > (\mu - \sigma)$, and not determined when $p(\text{Deter}) \leq (\mu - \sigma)$.

Measure (score) of socioeconomic orientation is a heuristic which will show the degree of awareness the particular individual has of the socioeconomic environment in which he will have to act and do his business. This is about the exogenous factors.

$$\begin{aligned}
 p(\text{socec}) = \text{abs} [& f(\text{Strng}) + f(\text{Power}) + f(\text{Econ}^*) + f(\text{Legal}) + f(\text{Milit}) + f(\text{Polit}^*) + f(\text{Relig}) + f(\text{Doctr}) + f(\text{HU}) + \\
 & f(\text{Role}) + f(\text{Race}) + f(\text{Social}) + f(\text{IAV}) + f(\text{DAV}) - f(\text{Weak}) - f(\text{SV})]^* \\
 & \log_2 [f(\text{Strng}) + f(\text{Power}) + f(\text{Econ}^*) + f(\text{Legal}) + f(\text{Milit}) + f(\text{Polit}^*) + f(\text{Relig}) + f(\text{Doctr}) + f(\text{HU}) + \\
 & f(\text{Role}) + f(\text{Race}) + f(\text{Social}) + f(\text{IAV}) + f(\text{DAV}) - f(\text{Weak}) - f(\text{SV})] \}
 \end{aligned} \tag{10}$$

The proposed thresholds are great socioeconomic awareness when $p(\text{socec}) > (\mu + \sigma)$, rather socioeconomically aware when $(\mu + \sigma) \geq p(\text{socec}) > \mu$, medium socioeconomic awareness when $\mu \geq p(\text{socec}) > (\mu - \sigma)$ and little socioeconomic awareness when $p(\text{socec}) \leq (\mu - \sigma)$.

Measure (score) of political thought is a heuristic, which gives a more precise indication of the awareness of the individual about the exogenous factors and the obstacles they might face.

$$\begin{aligned}
 p(\text{polth}) = \text{abs} \{ & [f(\text{Ought}) + f(\text{Econ}^*) + f(\text{Legal}) + f(\text{Milit}) + f(\text{Polit}^*) + f(\text{Arousal}) + f(\text{Causal}) + \\
 & f(\text{Means}) + f(\text{Social})] \}^* \\
 & \log_2 [f(\text{Ought}) + f(\text{Econ}^*) + f(\text{Legal}) + f(\text{Milit}) + f(\text{Polit}^*) + f(\text{Arousal}) + \\
 & f(\text{Causal}) + f(\text{Means}) + f(\text{Social})] \}
 \end{aligned} \tag{11}$$

Proposed thresholds are great political awareness when $p(\text{polth}) > (\mu + \sigma)$, rather politically aware when $(\mu + \sigma) \geq p(\text{polth}) > \mu$, medium political awareness when $\mu \geq p(\text{polth}) > (\mu - \sigma)$ and little political awareness when $p(\text{polth}) \leq (\mu - \sigma)$.

After testing the proposed measures on a body of 172 texts [6], the first results are presented below in Table 5. With regard to $p(\text{socec})$, $p(\text{polth})$ and $p(\text{deter})$, the results showed that the measures constructed followed a reasonably normal distribution and thus might be safely used.

Table 5. The outcomes of formulas for the measures of entrepreneurial qualities.

p(Socecon)		p(Polth)		p(Deter)	
Number of texts	172	Number of texts	172	Number of texts	172
Mean	0.432485	Mean	0.22852	Mean	0.468275
Standard deviation	0.013478	Standard deviation	0.038794	Standard deviation	0.022304
$\mu + \sigma$	0.445963	$\mu + \sigma$	0.267314	$\mu + \sigma$	0.490579
$\mu - \sigma$	0.419007	$\mu - \sigma$	0.189727	$\mu - \sigma$	0.445971
$p(\text{socec}) > (\mu + \sigma)$	97	$p(\text{polth}) > (\mu + \sigma)$	49	$p(\text{deter}) > (\mu + \sigma)$	62
$(\mu + \sigma) \geq p(\text{socec}) > \mu$	4	$(\mu + \sigma) \geq p(\text{polth}) > \mu$	35	$(\mu + \sigma) \geq p(\text{deter}) > \mu$	69
$\mu \geq p(\text{socec}) > (\mu - \sigma)$	12	$\mu \geq p(\text{polth}) > (\mu - \sigma)$	36	$p(\text{deter}) > (\mu - \sigma)$	
$p(\text{socec}) \leq (\mu - \sigma)$	59	$p(\text{polth}) \leq (\mu - \sigma)$	52	$p(\text{deter}) \leq (\mu - \sigma)$	41

Table 6 presents the correlation matrix for the different measures of entrepreneurial qualities, while Table 7 presents the correlation matrix for the different categories of text concerning the measures of entrepreneurial qualities.

Table 6. The correlation matrix of the measures of entrepreneurial qualities.

	Determination	Socioeconomic Orientation	Political Thought
Determination	1		
Socioeconomic orientation	0.0764056	1	
Political thought	0.4453306	0.678347895	1

Table 7. The correlation matrix of the different categories regarding the measures of entrepreneurial.

	Political	Ancient	Religious	Celebrities	Business-Men	Rock Stars	Winners	Raped Women	Science	History
Political	1									
Ancient	0.977	1								
Religious	0.685	0.825	1							
Celebrities	0.989	0.934	0.570	1						
Business Men	0.992	0.996	0.774	0.961	1					
Rock Stars	0.997	0.990	0.737	0.975	0.998	1				
Winners	0.999	0.965	0.649	0.995	0.984	0.992	1			
Raped women	0.876	0.959	0.952	0.795	0.931	0.909	0.851	1		
Science	1.000	0.983	0.707	0.984	0.995	0.999	0.997	0.890	1	
History	0.915	0.980	0.921	0.845	0.960	0.942	0.894	0.996	0.927	1

Researchers tend to agree that two of the main qualities a strategic thinker should possess are the tendency to undertaking risk and the ability to create and communicate a vision [17,18]. Thus, the two measures we introduced in the current paper refer to those two qualities. A tool was proposed which might be useful to recognize a person’s ability to communicate a vision and/or the person’s determination to undertake risks was proposed in our current work.

Measuring risk taking is a score (that is the reason why it is measured on a four-grade scale) measuring the person’s tendency to undertake risks p(risk taking). The following formula is used in order to calculate the p(risk taking):

$$\begin{aligned}
 p(\text{risk taking}) &= \text{abs} \{ [f(\text{Pos}) + f(\text{Pstv}) - f(\text{Neg}) - f(\text{Negate}) + f(\text{Strng}) + f(\text{Power}) - f(\text{Weak}) + f(\text{Actv}) - f(\text{Psv}) + \\
 &f(\text{Undst}) - f(\text{Negate}) + f(\text{Know}) + f(\text{Solve}) + f(\text{Arousal}) + f(\text{C0nform}) + f(\text{Goal}) + f(\text{Try}) - f(\text{Fail}) + f(\text{Rise}) - f(\text{Fall}) \\
 &+ f(\text{Begin}) + f(\text{Finish}) + f(\text{Persist}) + f(\text{Time*}) + f(\text{Yes}) - f(\text{No})] \}^* \tag{12} \\
 \log_2 [&f(\text{Pos}) + f(\text{Pstv}) - f(\text{Neg}) - f(\text{Negate}) + f(\text{Strng}) + f(\text{Power}) - f(\text{Weak}) + f(\text{Actv}) - f(\text{Psv}) + f(\text{Undst}) - f(\text{Negate}) + \\
 &f(\text{Know}) + f(\text{Solve}) + f(\text{Arousal}) + f(\text{Conform}) + f(\text{Goal}) + f(\text{Try}) - f(\text{Fail}) + f(\text{Rise}) - f(\text{Fall}) + f(\text{Begin}) + f(\text{Finish}) \\
 &+ f(\text{Persist}) + f(\text{Time*}) + f(\text{Yes}) - f(\text{No})] \}
 \end{aligned}$$

Proposed thresholds are great risk-taker when $p(\text{risk taking}) > (\mu + \sigma)$, considerable risk-taker when $(\mu + \sigma) \geq p(\text{risk taking}) > \mu$, medium risk-taker when $\mu \geq p(\text{risk taking}) > (\mu - \sigma)$ and little risk-taker: when $p(\text{risk taking}) \leq (\mu - \sigma)$.

The score of visionary mood of a person aims at measuring the person’s ability to develop and communicate a vision. The following formula shows the way p(visionary) is calculated:

$$\begin{aligned}
 p(\text{visionary}) &= \text{abs} \{ [f(\text{Pos}) + f(\text{Pstv}) + f(\text{Virtue}) - f(\text{Neg}) - f(\text{Ngvtv}) + f(\text{Strng}) + f(\text{Power}) - f(\text{Weak}) - f(\text{Negate}) \\
 &+ f(\text{Arousal}) + f(\text{Goal}) + f(\text{Try}) + f(\text{Rise}) + f(\text{Begin}) + f(\text{Finish}) + f(\text{Persist}) + f(\text{DAV}) + \\
 &f(\text{SV})] \}^* \tag{13} \\
 \log_2 [&f(\text{Pos}) + f(\text{Pstv}) + f(\text{Virtue}) - f(\text{Neg}) - f(\text{Ngvtv}) + f(\text{Strng}) + f(\text{Power}) - f(\text{Weak}) - f(\text{Negate}) + f(\text{Arousal}) \\
 &+ f(\text{Goal}) + f(\text{Try}) + f(\text{Rise}) + f(\text{Begin}) + f(\text{Finish}) + f(\text{Persist}) + f(\text{DAV}) + \\
 &f(\text{SV})] \}
 \end{aligned}$$

Proposed thresholds are very visionary when $p(\text{visionary}) > (\mu + \sigma)$, quite visionary when $(\mu + \sigma) \geq p(\text{visionary}) > (\mu - \sigma)$, and not visionary when $p(\text{visionary}) \leq (\mu - \sigma)$.

After testing the proposed measures on a body of 172 texts, the first results are presented below. The first results for $p(\text{risk taking})$ and $p(\text{visionary})$ are presented in Table 8. They showed that the measures constructed followed a reasonably normal distribution and thus might be safely used.

Table 8. The results of the proposed measures on a body of 172 texts for $p(\text{risk taking})$ and $p(\text{visionary})$.

p(Risk Taking)		p(Visionary)	
Number of texts	172	Number of texts	172
Mean	0.473552	Mean	0.462514
Standard deviation	0.049963	Standard deviation	0.049384
$\mu + \sigma$	0.523515	$\mu + \sigma$	0.511897
$\mu - \sigma$	0.423589	$\mu - \sigma$	0.41313
$p(\text{risk taking}) > (\mu + \sigma)$	20	$p(\text{visionary}) > (\mu + \sigma)$	22
$(\mu + \sigma) \geq p(\text{risk taking}) > \mu$	89	$(\mu + \sigma) \geq p(\text{visionary}) > (\mu - \sigma)$	125
$\mu \geq p(\text{risk taking}) > (\mu - \sigma)$	34		
$p(\text{risk taking}) \leq (\mu - \sigma)$	29	$p(\text{visionary}) \leq (\mu - \sigma)$	25

After conducting the 2-tailed Pearson Correlation analysis for the two measures, we found that the correlation was significant at the 0.01 level. The results are as presented in Table 9.

Table 9. The results of the bivariate correlation analysis for $p(\text{risk taking})$ and $p(\text{visionary})$.

Correlations			
		p(risk taking)	p(visionary)
p(risk taking)	PearsonCorrelation	1	0.818 **
	Sig. (2-tailed)		0.000
	N	172	172
p(visionary)	PearsonCorrelation	0.818 **	1
	Sig. (2-tailed)	0.000	
	N	172	172

** Correlation is significant at the 0.01 level (2-tailed).

The relevant correlation matrix for the different measures of strategic thinking is presented in Table 10 below.

Table 10. The correlation matrix of the measures of strategic thinking.

	Risk Taking	Visionary Mood
Risk taking	1	
Visionary mood	0.734491	1

With regard to the different groups, the correlation analysis (2-tailed Pearson Correlation) relevant to $p(\text{risk taking})$ and $p(\text{visionary})$ showed that the correlation was significant at a 0.01 level. More specifically, the results which are presented in Table 11 showed a perfect relationship between different groups, since 1.000 showed a perfect positive relationship and -1.000 showed a perfect negative significance among the relevant groups.

Table 11. The correlation analysis (relevant to p(risk taking) and p(visionary)) for the different groups.

	Political	Ancient	Religious	Business-Men	Celebrities	Rock Stars	Winners	Raped Women	Science	History
Political	1									
Ancient	−1.000 **	1								
Religious	−1.000 **	1.000 **	1							
Business Men	−1.000 **	1.000 **	1.000 **	1						
Celebrities	−1.000 **	1.000 **	1.000 **	1.000 **	1					
Rock Stars	−1.000 **	1.000 **	1.000 **	1.000 **	1.000 **	1				
Winners	1.000 **	−1.000 **	−1.000 **	−1.000 **	−1.000 **	−1.000 **	1			
Raped women	1.000 **	−1.000 **	−1.000 **	−1.000 **	−1.000 **	−1.000 **	1.000 **	1		
Science	1.000 **	−1.000 **	−1.000 **	−1.000 **	−1.000 **	−1.000 **	1.000 **	1.000 **	1	**
History	1.000 **	−1.000 **	−1.000 **	−1.000 **	−1.000 **	−1.000 **	1.000 **	1.000 **	1.000 **	1

$p < 0.01$ (**).

5. Conclusions

This paper presented an answer to the emerging need of finding out a person's characteristics with a glance by only looking the person's written texts. The relationships among leadership, entrepreneurship and strategic thinking led the investigation into the characteristics leaders, entrepreneurs and strategic thinkers are likely to possess.

After having recognized the need, the software for a semantic analysis was selected. The construction of logarithmic measures was preferred because of its suitability to both the outcomes of the software and to the similarity to our intuitional perception of what a measure should look like. The selection of the set of texts to be examined was driven by the idea that it should cover the largest period of time possible. It should also cover the largest geographical area possible. The coverage of a large variety of professions and areas of activation was a criterion for the selection of the texts. Additionally, the texts should also belong to both men and women. Finally, a number of "neutral" texts, i.e., non-managerial, relevant to history, science, and raped women's interviews were picked. The fact that previous research has been conducted on this specific base of documents led us to use it for the new measures measuring entrepreneurship and strategic thinking, in order to be able to compare them in terms of consistency.

Regarding the possible statistical similarity between the texts, it was seen that although the categories of words and concepts tended to be statistically dissimilar, the texts both at the leader level and as a whole showed a statistical similarity in their structure. In other words, the examined leaders seem to have differentiated the used categories of words and concepts according to the occasion. However, at the level of feeling left by the texts, a statistical similarity is observed.

The most important implication of this study is allocated to academia. The results of this study could improve future empirical leadership-development research through testing relevant attributes of leaders in different organizations or expanding them by considering more leadership skills from other leadership styles.

In terms of the study's implications, a significant body of research has suggested that leadership development is an essential and effective tactic for businesses to employ in order to remain competitive in an ever-evolving environment. These studies have also endeavored to provide examples of significant facets of leadership development. Thus, the results of this paper demonstrate the characteristics that leaders should have.

A limitation arises from the fact that the measurement of similarity was based on the categories of words and concepts used, or on the basis of the calculated measures of the properties, and not on the basis of the words used. Therefore, the texts appeared to be quite similar to each other. The question is whether all the examined texts are really so similar to each other. Any differences are likely to be elicited by using an additional measure of word comparison.

The measures were constructed and discussed for three general categories: (1) general attribute measures, (2) entrepreneurship measures and (3) measure of the strategic thinking.

The examination of the measures of entrepreneurship and strategic thinking in more relevant (explicitly managerial and entrepreneurial) texts are suggested for future research, in order to ascertain the similarities and differences with the general groups presented in the current paper.

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