

This paper looks at three hypotheses: that regardless of the financially good or bad years of a corporation, the communication in the annual letters to the stockholders will be predominantly positive; that negative words are less frequent in a financially good year than a bad year; and that German readers also tend to accept the same preferred, positive words as Americans. All hypotheses were sustained after viewing 12 annual letters to stockholders in 1975 and 12 letters in 1977.

The Pollyanna Hypothesis provides a fertile area for further research: into business letters, business speeches, or other areas which fall into the genre of written or oral business communication.

The Pollyanna Hypothesis in Business Writing: Initial Results, Suggestions for Research

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WE DO NOT OFTEN READ BOOKS written in 1913, particularly about an eleven-year-old girl in a red gingham dress. Yet, during that year a book was published which later became the genesis for this paper: *The Pollyanna Hypothesis*. A brief monologue from that book will provide some insight into the concept:

There! Isn't this lovely? Is it far? I hope 'tis—I love to ride . . . Of course, if 'tisn't far, I shan't mind, though, 'cause I'll be glad to get there all the sooner, you know. What a pretty street! I knew 'twas going to be pretty. . . .¹

Pollyanna has come to represent a class of persons who are eternal optimists; who refuse to see the negative side of life; who see delight, sunshine, positiveness, and sweetness beyond measure.

Hence the purpose of our paper: can we see reflections of the Pollyanna Concept in business writing? Are there opportunities for further investigation?

We will limit our analysis to one aspect of written communication: the letter of the President or Chairman of the Board to shareholders in the annual report. Three hypotheses relating to business communication will be discussed:

1. Positive words occur more frequently in annual letters to stockholders regardless of a financially good or bad year.
2. Negative words occur less frequently in a good year than a bad year.

3. German respondents will parallel American respondents when viewing positive and negative words in isolation.

Stated another way, we are interested in this question: Is there any kind of linguistic correlation between a year of profit and a year of loss as expressed in the annual letter to stockholders?

PREVIOUS RESEARCH

It is not our intent in this brief paper to review all the research on the Pollyanna Hypothesis. A few sample assertions will give the reader some major research generalizations: positive, affirmative words are used more often than negative words (Postman, 1958),² similarly supported by Jenkins, Russell, and Suci (1958).³ The value of a word affects word frequency (Johnson, Thompson, and Frincke, 1960);⁴ words rated as good were higher in meaningfulness than words rated negatively (Noble, 1952);⁵ recall of pleasant events over the unpleasant was in the majority (Johnson and Lim, 1961);⁶ the goodness-frequency relation is present in all word classes (Johnson, 1966);⁷ and positive words are learned faster than negative nonsense syllable words (Ainsfeld and Lambert, 1966).⁸

In 1968, the most comprehensive review of all the literature on the subject was offered in a brilliant monograph by Zajonc (1968)⁹ who proposed a counter hypothesis that frequency of usage affects word value correlation, later restated by him in *Psychology Today* (1970)¹⁰ and still later in a statement with Harrison (1970).¹¹

A recent book entitled *The Pollyanna Principle: Selectivity In Language, Meaning, and Thought* summarized all the studies referred to above and also included some small research projects on the topic.¹²

Eleanor Porter's 1913 *Pollyanna* had no idea that her work would spawn an entire research genre, or would in 1969 become part of a scholarly definition, or have a principle named after her: "The Pollyanna Hypothesis asserts that there is a universal tendency to use evaluatively positive words (E+) more frequently and directly than evaluatively negative words (E-) in communicating."¹³

Nowhere in the above cited literature is attention given to business communication. Therefore, it is our intent to adapt some of the psychological principles and apply them to business communication, to which we shall now turn.

METHODOLOGY

Our approach is to apply a quantitative content analysis which analyzes positive-negative words in context, as opposed to viewing words in isolation as previous studies have done. Two aspects of the first and major hypothesis deserve comment. First, we will specifically examine one facet of business communication within two variables: a financially good and a financially bad year. Second, we will analyze positive and negative words in context.

Three steps make up our methodology: (1) sample selection; (2) determination of positive and negative words; and (3) data summary and analysis.

Sample Selection

The sample for the first three hypotheses consisted in viewing letters to stockholders in twelve corporations in two financially different years: a good year, 1977, and a bad year, 1975.

Corporate annual reports were chosen as the sample. They are accessible; addressed to a corporation's most important audience, its stockholders; and are issued on an annual basis. Furthermore, they were 1-4 page statements of persuasion where the writer attempted to influence readers.

Second, common good and bad years were sought to hold time as constant. Due to the need for common periods, overall economic conditions were used to determine the two years. We chose 1975 as the financially bad year since a severe recession occurred then; and 1977 as the good year since therein many companies reported record earnings.

Finally, the Dow Jones' 30 Industrials were used as the pool of candidate corporations. Also, the effect of bias present in certain industries would be reduced since these companies are involved in a wide range of business activities. Twelve corporations fit our criteria and became the sample for this study.¹⁴

Determination of Positive and Negative Words

Three parts made up our classification process. First, a list of base antonym pairs totalling 356 words was selected for determining positive and negative words in context. That is, we first had to determine which of two opposite words were positive

and which were negative in tone. This list came from two sources: Zajonc,¹⁵ created 148 of our antonym pairs and we added 30 more, primarily from the business world. Our additional 30 antonym pairs had to receive 100 percent agreement between 24 business professors before being added to the original 148 antonym pair list of Zajonc.

Following the additions, the entire list was given, occasionally rearranged, to over 100 students in the Graduate School of Business at The University of Michigan. Students circled the preferred word in each pair and thus determined the preferred word in isolation. Our results were not dissimilar from that of Zajonc's original list of antonyms; but we included this step in order to position the added business terms into the preferred-nonpreferred category. Exhibit 1 suggests the percentage of persons choosing the preferred word, the nonpreferred word, and the frequency data as compiled in the Thorndike-Lorge L-count.¹⁶

As preparation for further research, we also translated the 356 words into German to determine whether a different culture would select the identical preferred word in their native language as did Americans.

Second, we read the 24 annual letters to stockholders recording occurrences of each of our base 356 words. Third, each occurrence of a word was placed into one of three classifications according to contextual usage; for example, the following italicized words were classified as positive:

Positive Statements

1. The demand for our products is very *high*.

2. We expect costs to rise further, but at rates *below* those of the past two years.

The reader will see that in statement 2, *below* is a positive word in context since costs will be rising at a lower rate. In an isolated pair, *below* is a negative word when paired with *above*.

Words which reflect unfavorably on corporate goals are classified as negative, for example, the following italicized words:

Negative Statements

1. Net income *decreased* 46.2% compared with \$1,544,745, or \$5.68 a share in 1974.

2. The OPEC nations, because of their consolidated position, were *able* to *increase* crude oil prices about \$1 per barrel in October.

In statement 2 above, *able* and *increase* are negative in context since higher oil prices imply higher costs, a negative in business. When choosing the more preferred, positive term in isolation as *able-unable* and *increase-decrease*, the terms *able* and *increase* are positive words.

Words which reflect neither favorably or unfavorably were classified as neutral, for example, the following italicized words:

Neutral Statements

1. In this Annual report, we have set *down* another such statement of policy.

2. This is evident in the chart *below* that shows the comparative price movements of (our products) and competing materials since 1970.

Our neutral classification implies that certain antonymic words sometime have no effect on tone. *Down* and *below* are both negative alternatives, yet appear to have neither a favorable nor unfavorable impact on corporate goals.

Data Summary and Analysis¹⁷

Exhibit 2 shows the breakdown of the percentage of positive, neutral, and negative words in each of the 24 letters. It is this exhibit which allowed the first hypothesis to be tested, namely, that positive words occur more frequently than negative in annual letters to stockholders regardless of whether the involved corporation has had a financially good or bad year. The t-statistics were 7.05 for 1975, and 17.0 for 1977, exceeding the t-value of 1.796 needed for acceptability at the 95 percent level of confidence.

Exhibit 3 shows the percentage point change in positive and negative words from 1975 to 1977 for each of the 12 corporations. The second hypothesis—that negative words occur less frequently in a good year than a bad one—is upheld by a t-statistic of 2.32, which also exceeded the minimum level of acceptability at the 95 percent confidence level.

One other comparison was completed which answered this question: Would the identical English antonym when translated

into German produce a similar preferred (positive) and non-preferred (negative) list? This addition to the study was included because the writers will in the future review German annual reports, specifically the annual letter to stockholders, to determine whether the Pollyanna Hypothesis crosses cultures in business communication. The data is recorded in Exhibit 4.

Fourteen of the 178 antonym pairs have 100 percent agreement across cultures as to the preferred word. Indeed, over half of the preferred words selected from the 178 antonym pairs have 90 percent agreement in both languages; this is beyond mere chance. An additional interesting query—to be developed further—involves why certain antonym words in German receive 100 percent agreement but not in English, and vice versa. The tentative data suggests that the Pollyanna Hypothesis transcends linguistic barriers.

CONCLUSIONS

1. The main hypothesis of the study is valid; i.e., positive words occur more frequently than negative words in annual letters to stockholders regardless of the corporation's financial position. Hence, a financially bad year will include prose statements positive in nature which belie statistics reporting the negative year. One could infer that the annual letter is thus used to underplay the negative news, replacing it with positive conclusions.

2. Negative words are less frequent in a financially good year than a bad year. This conclusion seems logical in view of the Pollyanna Hypothesis and would further support the hypothesis that in any year the positive words would outnumber the negative.

3. Over half of the preferred words selected from 178 German antonym pairs had a frequency relationship similar to that of English. In fact, 100 words of a pair were preferred at an agreement level of 90 percent and above. This suggests that the Pollyanna Hypothesis is not limited to English, but has similar reflections in German.

RECOMMENDATIONS FOR FURTHER RESEARCH

What does the above information portend for the annual report as a piece of business communication? The conclusions of

this and earlier studies are starting points for further research into the field of positive and negative words and their effect on interpersonal communication. The hiding of negative information through excessive positive words suggests a contradiction between the financial figures and the prose treatment by management. Therefore, a number of important areas still need to be investigated.

First, studies similar to this one based on contextual word definition need to be undertaken on a much larger scale. This study was relatively small, 24 letters, and may serve as a pilot for further research.

Second, in the area of business communication, research into stockholders' reactions to letters of varying positive to negative ratios could be undertaken to provide quantitative support for the ratio affect on tone assumption.

Third, studies similar to this one based on contextual word definition could be undertaken in fields other than business communication. For example, interesting research opportunities exist in the areas of legal briefs and political speeches and writings.

Finally, similar studies could be undertaken in different cultures. The universality of the main hypothesis could be tested in numerous cultures.

EXHIBIT 1
Preference and Frequency for Business Terms

Percent Agreement	Preferred (a)	Nonpreferred (b)	Frequency (a)	Frequency (b)
100	useful	useless	215	129
100	assets	liabilities	55	47
100	solvent	insolvent	10	-
100	redeemable	nonredeemable	-	-
100	developed	underdeveloped	576	-
100	gain	loss	352	352
100	insurable	uninsurable	-	-
100	business assets	business liabilities	-	-
100	best	worst	1850	450
100	balanced	unbalanced	287	9
98	negotiable	nonnegotiable	-	-
98	upturn	downturn	-	-
98	payment	nonpayment	179	-
98	expansion	contraction	44	13

EXHIBIT 1, Continued
Percent and Frequency for Business Terms

Percent Agreement	Preferred (a)	Nonpreferred (b)	Frequency (a)	Frequency (b)
96	uptrend	downtrend	-	-
95	deposit	withdrawal	119	7
93	profit	nonprofit	366	-
91	parent	subsidiary	797	6
90	management	labor	189	628
89	noninflationary	inflationary	-	-
81	even	odd	4198	250
79	bull	bear	165	605
77	lender	borrower	7	4
71	save	spend	872	680
70	deflation	inflation	14	19
67	debit balance	credit balance	-	-
61	export	import	88	86
61	mortgagor	mortgagee	-	-
59	over-subscribed	under-subscribed	-	-
57	debit	credit	2	294

EXHIBIT 2
Classification of Words in Context

Company	1975			1977		
	Positive	Neutral	Negative	Positive	Neutral	Negative
A	68.9%	3.4%	27.5%	79.5%	%	20.5%
B	61.7	%	38.3	88.2	2.9	8.9
C	68.1	2.1	28.8	93.1	%	6.9
D	69.7	1.8	28.4	92.8	7.1	%
E	63.9	%	36.2	65.0	%	35.0
F	58.9	2.3	38.7	89.3	1.5	9.2
G	67.9	3.6	28.6	92.5	%	7.5
H	63.1	2.2	34.8	81.0	4.8	14.3
I	71.1	%	29.0	91.5	%	8.5
J	69.7	1.2	29.1	92.7	%	7.4
K	61.9	%	38.1	77.2	8.6	14.3
L	35.8	%	64.2	67.1	2.5	30.4
Mean	63.4%	1.4%	35.2%	84.2%	2.9%	13.6%
Std Dev	9.5	1.4	10.1	10.1	3.0	10.2

EXHIBIT 3
Percentage Point Change* in Classifications
from 1975 to 1977

Company	Positive	Neutral	Negative
A	10.6	(3.4)	(7.0)
B	26.5	2.9	(29.4)
C	25.0	(2.1)	(22.9)
D	23.1	5.3	(28.4)
E	1.1	—	(1.2)
F	30.4	(.8)	(29.5)
G	24.6	(3.6)	(21.1)
H	17.9	2.6	(20.5)
I	20.4	—	(20.5)
J	23.0	(1.2)	(21.7)
K	15.3	8.6	(23.8)
L	31.3	2.5	(33.8)
Mean	20.8	.9	(21.7)
Std Dev	8.6	3.6	9.3

*Change = 1977 Percentage -1975 Percentage

EXHIBIT 4
Percentage of Preferred Word Agreement
Between English and German Antonym Pairs

100% Agreement

useful	nützlich	favorable	günstig
assets	Aktiva	encourage	ermutigen
best	am besten	reward	Anerkennung
succeed	gelingen	peace	Friede
love	lieben	good	gut
success	Erfolg	friendly	freundlich
responsible	verantwortlich	willing	gern

99% Agreement

lender	Gläubiger	certain	sicher
uptrend	Aufwärtsbewegung	practical	ausführbar
white	weiss	resolutely	schlüssig
visible	sichtbar	present	anwesend
regular	regelmässig	mortal	sterblich

98% Agreement

clean	sauber	life	Leben
optimism	Optimismus	able	fähig

EXHIBIT 4, Continued

Percentage of Preferred Word Agreement
Between English and German Antonym Pairs

98% Agreement, continued

live leben

97% Agreement

balanced	ausgeglichen	agreeable	angenehm
developed	entwickelt	honest	ehrlich
gain	Gewinn	attentive	aufmerksam
agree	übereinstimmen	reasonable	vernünftig
up	auf	formal	förmlich
timely	zeitig	mature	reif
patient	geduldig	capable	fähig
competent	fähig	advantage	Vorteil
voluntary	freiwillig	victory	Seig
polite	höflich	possible	möglich
		better	besser
		hot	heiss

96% Agreement

upwards	aufwärts	light	hell
approve	billigen	positive	positiv
presence	Anwesenheit	found	gefunden
legal	gesetzlich	usual	gewöhnlich
add	addieren	near	nahe

REFERENCES

1. Eleanor Porter, *Pollyanna*, Colonial Press, Boston, 1913, p. 20.
2. L. Postman, "The Experimental Analyses of Motivational Factors in Perception," in: J.S. Brown, ed., *Current Theory and Research in Motivation*, University of Nebraska Press, 1953, pp. 59-108.
3. J.J. Jenkins, W.A. Russell, and G.J. Suci, "An Atlas of Semantic Profiles of 360 Words," *American Journal of Psychology*, 71 (1958), pp. 688-699.
4. Ronald C. Johnson, Calvin W. Thompson, and Gerald Frincke, "Word Values, Word Frequency, and Visual Duration Thresholds," *Psychology Review*, 67 (1960), pp. 332-342.
5. C.E. Noble, "An Analysis of Meaning," *Psychological Review*, 59 (1952), pp. 421-430.
6. R.C. Johnson and D. Lim, "Personality Variables in Associative Production," *Journal of General Psychology*, 15 (1961), pp. 199-204.
7. Ronald C. Johnson, "Word Effect and Word Frequency in Written English," *The Journal of General Psychology*, 75 (1966), pp. 35-38.
8. M. Anisfeld and W.E. Lambert, "When are Pleasant Words Learned Faster than Unpleasant Words?" *Journal of Verbal Learning and Verbal Behavior*, 5 (1966), pp. 132-141.

9. R.B. Zajonc, "Attitudinal Effects of Mere Exposure," *Journal of Personality and Social Psychology*, 9 (1968) 1-27, Monograph Supplement No. 2, Part 2.

10. R.B. Zajonc, "Brainwash: Familiarity Breeds Comfort," *Psychology Today*, 3 (February 1970), pp. 33-35, 60-64.

11. A.A. Harrison and R.B. Zajonc, "The Effects of Frequency and Duration of Exposure on Response Competition and Affective Ratings," *Journal of Psychology*, 75 (1970) 163-170.

12. Margaret Matlin and David Stang, *The Pollyanna Principle*, Schenkman, Cambridge, 1978.

13. Jerry Boucher and Charles E. Osgood, "The Pollyanna Hypothesis," *Journal of Verbal Learning and Verbal Behavior*, 8 (1969), p. 1.

14. Corporations used in the study were the following: Allied Chemical; Aluminum Company of America; American Can; American Telephone and Telegraph; DuPont; General Electric; Minnesota Mining and Manufacturing; Standard Oil of California; and Texaco.

15. Zajonc, *op. cit.*, 1968, pp. 4-5.

16. Edward L. Thorndike and Irving Lorge, *The Teacher's Word Book of 30,000 Words*, Columbia University, New York, 1944.

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