The impact of media tone and ownership structure on information asymmetry following corporate misconduct

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Abstract

In this study we explore the impact of the tone used by financial media to communicate firm misconduct on information asymmetry. Based on a sample of misconduct news published by Wall Street Journal, we find that tone used to describe the misdeeds can affect the information asymmetry level after the news release. Moreover, ownership concentration can moderate the impact of tone on the information asymmetry. When the ownership concentration is higher, the impact of negative tone on the spread becomes weaker. Our findings suggest that the media can play a role in how information asymmetry is managed in the aftermath of firm misconduct, and that more negative wording to describe acts of misconduct may reduce the information asymmetry and adverse selection problem.

Keywords: information asymmetry, adverse selection, firm misconduct, tone, financial media

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1. Introduction

Firms are punished when they behave badly: CEOs are fired (Biggerstaff, Cicero & Puckett, 2015; Connelly, Ketchen, Gangloff & Shook, 2016), lawsuits are brought (Ali & Hirshleifer, 2017; Larkin & Pierce, 2016), and stock prices fall (Tay, Puah, Brahmana & Abdul Malek, 2016). However, neither the law nor the market punishes wrongdoers equally or consistently, and reactions to unethical behavior are influenced by a range of factors, including how announcements of these behaviors are made public. Although studies have begun to examine how the market punishes bad firm behavior through analyzing market returns (e.g. Carberry, Engelen & Essen, 2018), other market effects of misconduct remain underexplored.

In this paper, we analyze how the tone used to deliver misconduct news to shareholders affects information asymmetry and adverse selection. Information asymmetry occurs when information is unequally accessed or shared among different investors. Informed traders may get additional benefits using their private information sources to make investment decisions. This imbalance of information among investors can increase transaction costs and lead to the adverse selection problem.

Our objective is to understand how the media’s tone (positive or negative) in disclosing firm unethical behavior affects information asymmetry and adverse selection. In particular, we ask two questions: First, does the media tone used when disclosing corporate misconduct news have an effect on information asymmetry? Second, how does ownership concentration moderate the relationship between tone and information asymmetry?

To answer these questions, we first collected misconduct news of listed firms belongs to the S&P 500 index form the Wall Street Journal, for the period of 2011-2015. We consider corporate misconduct to be any action taken by a firm or its employees that causes harm for another party, and follow Qian, Gao, and Tsang (2014)’s definition as acts that deviate from the legal or social norms of corporate behavior, whether deliberately or unintentionally. We use a broad definition of misconduct to examine how wording can affect information asymmetry for a wide range of wrongdoing types to ensure that its effects are not driven by reactions to a certain type of wrongdoing and to increase our study’s generalizability. With this goal, we examine misconducts ranging from cutting employee’s healthcare, to selling defective products, to drilling for oil in contested land. Although most studies on corporate wrongdoing focus on one type of misconduct, such as product recalls (Zavyalova, Pfarrer, Reger & Shapiro, 2012) or accounting violations (Paruchuri & Misangyi, 2015), and chemical accidents (Diestre & Rajagopalan, 2014) we include a wide range of misconduct types since our focus is not on the effects of a single form of wrongdoing, but rather on the communication of such misconduct to the market and its subsequent effects on information dispersion.

To access the tone contained in the misconduct articles, we adopted the negative word list of Loughran and McDonald (2011) and the software Diction (Version 7). We use the relative spread as a proxy to measure information asymmetry following prior studies (e.g. Petersen & Plenborg 2006; Yoon, Zo & Ciganek 2011; Gajewski & Li, 2015). The empirical findings show that there is a negative relationship between the relative spread and the negative tone. Furthermore, higher ownership concentration can moderate negatively the impact of tone on the spread.
This study contributes to the literatures on information asymmetry and firm misconducts in two ways. First, this study contributes to the information asymmetry literature by showing that misconduct disclosure tone has an effect on bid-ask spread, suggesting that the words used when announcing information has an effect on the investor responses incurred. Second, several studies in the misconduct literature have examined investor reactions to firm misconduct in terms of firm evaluations (e.g. Carberry et al., 2018; Diestre & Rajagopalan, 2014; Paruchuri & Misangyi, 2015) and the effectiveness of firm actions in managing media coverage after wrongdoing (Zavyalova et al., 2012). However, there has been little study on how media tone can influence information sharing after misconduct, and our study contributes to the management and finance literatures by shedding light on this issue.

2. Literature review and hypothesis

Asymmetric information occurs when one party to an economic transaction possesses better information sources than others. It is an important financial topic because it leads to the adverse selection problem and increases the cost of capital. Prior empirical studies have generally found that incremental information supply can reduce both information asymmetry and adverse selection problems (Heflin, Shaw & Wild, 2005; Petersen & Plenborg, 2006, Brown & Hillegeist, 2007).

Indeed, the release of public information may directly reduce the information gap that exists among different investors. However, people may have different interpretations of the same piece of information, due to individual differences in educational and professional experience. Therefore, the understanding and the processing of information may also play an important role on information asymmetry and adverse selection. As prior studies have found, both the information content and the information presentation may impact the understanding of information and the communication efficiency. For example, a study by Bazerman (2002) shows that an investment decision can be changed when positive terms (such as “reducing costs”) are replaced by negative terms (such as “job losses”).

In this study, we analyze whether the tone (determined by the word choice) of financial media may have an impact on the adverse selection in the context of misconduct. Financial media plays an important role in the capital market for two reasons: first, it is an important public information source, and second, it is part of the supervision mechanism in the capital market. Prior studies have shown that the tone used by the financial media has a significant impact on the capital market. For example, the tone of the Wall Street Journal’s comments can significantly affect the movement of stock prices (Tetlock, 2007). Morris, Sheldon, Ames and Young (2005) have found that that the stock markets are strongly influenced by the language used by CNBC commentators, even when no significant arguments are provide by those commentators.

When firm misconduct news is reported by the financial media, the media performs its supervision function and sends a warning or negative signal to investors in the financial market. Studies have repeatedly shown that when misconduct news is announced, investors adjust, negatively, their expectations of firm performance and stock price (Carberry et al., 2018). Although the extent to which investors react negatively can vary drastically (e.g. Fukushima, 2014; La Monica, 2015), these reactions consistently result in devaluations of stock and perceptions of future firm performance.
We argue that both buyers and sellers will downgrade their expectations due to the misconduct and the negative tone contained in the news, but that a negative tone may have stronger power on sellers, due to the effects of confirmation bias. Confirmation bias predicts that people trend to process information by looking for information which is consistent with their existing beliefs, while ignore the information which is inconsistent with their expectation (Nickerson, 1998).

Investors taking a short position after the release of misconduct news should have a negative forecast on the firm’s future performance. This negative forecast may be directly caused by the release of the misconduct, or they may have had negative expectations on the company before the misconduct news broke out. In either case, the negative tone of the news is consistent with their existing or pre-existing belief and would likely reinforce their intention to sell, even at a higher discounted rate.

On the other hand, investors who maintain a long position after the breaking out of misconduct news should have a positive forecast on the future performance of the firm. They believe that the misconduct news has very limited negative effect on firm’s performance in long term. They may also take the release of misconduct news as an opportunity to purchase the stock with high potential at a lower price. Or, if they are block holders of the firm, they may conduct strategic trading to reduce stock volatility. The negative tone does not coincide with their existing belief of the firm’s standing. Although based on rationality, long investors should downgrade after the release of misconduct news. But they are likely to be less impacted by the negative media tone, compared to the short investors.

Since the negative tone has stronger impact on sellers, it is likely that the decrease of the selling price(ask) is relatively bigger than the decrease of the purchase price(bid). As a result, the spread between bid and ask would become smaller. Therefore, the negative tone should be negatively linked to the bid-ask spread. We develop therefore our first hypothesis:

**Hypothesis 1. There is a negative relationship between the degree of negative tone and the relative spread**

The ownership concentration may impact information asymmetry because the block holders (e.g. those who hold more than 5% of the shares outstanding) have better information sources and could use this information to better estimate the value of the firm. In contrast, smaller investors are in an unfavorable informational position and face higher information risk since they are less likely to have access to firm information, and in particular, to the type and depth of information available to firm insiders. Higher ownership concentration suggests a wider information gap between block holders and retail investors and may lead to larger information asymmetry problems. Many studies have found a significant relationship between ownership concentration and information asymmetry (Demsetz, 1968; Hamilton, 1978; Heflin & Shaw, 2000; Jennings, Schnatterly, & Seguin, 2002; Rubin, 2007).

We furthermore suggest that ownership concentration may moderate the impact of negative tone on bid-ask spread. Retail investors, especially the noise traders, may rely more on the public information and be strongly affected by the tone employed by financial media. Block holders with better inside information resources, are less likely to rely on publicly-available information sources and less likely to be influenced by the tone used in a media article to convey unethical firm actions.
Due to their information advantage and professional experience, we suggest that block investors’ judgment of the stock price and firm’s future profitability should largely be based on the firm’s fundamental valuations and the severity of the misconduct (as opposed to the way in which the misconduct is publicly announced). The rhetoric and tone of the misconduct news should have little effect on their investment judgment. When the ownership concentration is high, block holders have stronger impact on the stock liquidity and may moderate the effect of the media tone on the retail traders. Thus, we suggest that a higher proportion of block holder ownership will lead to a weaker impact on the bid-ask spreads of the negative media tone used to announce firm misconduct.

**Hypothesis 2.** Ownership concentration moderates the impact of negative tone on the stock bid-ask spread.

3. Methods

The main objective of our study is to analyze the impact of media tone and ownership structure on information asymmetry (measured by relative bid ask spread) after the reporting of corporate misconduct news. We first present our research sample, which is followed by a description of the measurements of our study’s central variables (in section 3.2)

3.1 Sample and Data Sources

The initial sample of the current study contains publicly-listed companies in the S&P 500 index, collected from the years of 2011 to 2015, inclusive. We chose these firms as the data pool because they feature higher media attention and abundant publicly available information.

Misconduct information was collected from the Wall Street Journal (online, New York version) from January 1, 2011 to December 31, 2015 for all firms. We choose to collect data from this database given that the Wall Street Journal is the most read business news source in North America (Agility PR, 2018), has commonly been used as a proxy for business media in other studies (Hamilton, 1995; Kross, Ro & Schroeder, 1990; Thompson, Olsen & Dietrich, 1987) and is widely cited in the business ethics scholarly literature (Singh & Ravikumar, 2019).

To collect misconduct articles, we first defined misconduct. Based on this definition and the range of misconduct types identified in previous corporate misconduct studies (Arnold & Engelen, 2017; Baker, Edelman & Powell, 1999; Baucus & Baucus, 1997), we created a set of keywords that were used to search the database in the given years, in conjunction with each firm name. We first conducted a pilot study using a range of terms that may signify a misconduct, such as “lawsuit”, “probe”, and “prosecute”. This process helped us to identify key areas of misconduct, allowing us to expand our keywords based on the terms that frequently arose. These keywords centered around five broad categories of misconduct that emerged from our pilot study (employee, product, financial, managerial, and environmental misconducts). Keywords for employee misconduct included terms such as “discrimination” and “firing”. Keywords for product misconduct included terms such as “recall”, “danger” and “defect”. These keywords were combined with the terms associated with misconduct, to create a total of 82 keywords. Using the Wall Street Journal database previously-mentioned, these 82 keywords were used in an article search for each firm in the S&P500 index for the 5-year period. With the help of 7 research assistants, each article was read, and if found relevant, archived. We maintained only articles that had our focal firm as the main and only actor in the misconduct (e.g. if several firms were being accused of a misconduct at once, these misconducts were not
included in our sample due to possible industry spillover effects). Each of these articles was then analyzed to identify their tone, as described below.

The daily and quarterly financial and accounting data and were obtained from the Bloomberg database. Data on ownership structure were extracted from the WRDS database. We required complete data on the financial and ownership structure and thus firms with missing data were excluded from our study. The final sample consists of 1078 misconduct news articles (from 212 firms) for the period of 2011-2015.

3.2 Measurement of Variables

**Information asymmetry.** Prior research has developed various methods of assessing the level of information asymmetry. Of these, the bid-ask spread appears to be the most frequently used proxy to measure information asymmetry in previous studies on accounting information (Welker 1995; Leuz & Verrecchia 2000; Petersen & Plenborg 2006). Following prior studies (e.g. Petersen & Plenborg 2006; Yoon, Zo & Ciganek 2011; Gajewski & Li, 2015), we first generated the daily relative spread by the absolute spread value scaled by the mean of bid and ask price.

\[ \text{Relative Spread} = \frac{\text{absolute (Bid-Ask)}}{\left(\frac{\text{Bid} + \text{Ask}}{2}\right)} \]

We then calculated the mean of the daily relative spread within 20 trading days after the misconduct news was published by the Wall Street Journal. We also calculate this average for the period of 40 and 60 trading days after the publication of the misconduct.

**Media tone.** We used different methods to access the tone of the misconduct news. We first adopted the negative word list developed by Loughran and McDonald (2011) to measure the degree of negative (Negative) tone contained in the misconduct articles. Loughran and McDonald have developed this word list based on financial reporting, which makes it suitable to study the tone used by the financial media – particularly concerning corporate misconduct news. We calculated the percentage of words belonging to the Loughran and McDonald list in a misconduct article to represent the negative degree of tone contained in the article.

We also used the software Diction (Version 7) to measure the media tone of a misconduct article. Diction is designed to measure the subtle influence of linguistic style by counting word frequency. The program includes thousands of words and can analyze 35 features of a text based on linguistic theories. To measure the optimism/pessimism of an article, Diction contains three categories of words indicating an increase in optimism (Praise + Satisfaction + Inspiration), and three categories of words representing an increase in pessimism (Blame + Hardship + Denial). It should be noted that no words are duplicated across these six categories (the detailed definition of these 6 categories is provided in Appendix I).

For each misconduct article, we first calculated the degree of pessimism (\( \text{Pes} \)) by totaling the percentages of words belonging to the Blame, Hardship and Denial categories. We then calculated the level of optimism (\( \text{Opt} \)) by totaling the percentages of words belonging to the Praise, Satisfaction and Inspiration categories. The net degree (\( \text{Net} \)) is then calculated by using the following formula:

\[ \text{Net} = \frac{\text{Opt} - \text{Pes}}{\text{Opt} + \text{Pes}} \]

Where
\textit{Opt} = \textit{increase in optimism} = \text{Praise + Satisfaction + Inspiration} \\
\textit{Pes} = \textit{increase in pessimism} = \text{Blame + Hardship + Denial}

\textit{Other variables}

The ownership concentration (Ownership) is measured by the Herfindahl-Hirschman Index of ownership concentration extracted from the WRDS database. A series of variables was also incorporated in the regression model to analyze the determinants of information asymmetry. These include firm size, market to book ratio, firm performance and stock return volatility. The selection of the control variables is based on the prior literature (e.g. Chang, D’Anna, Watson & Wee, 2008; Lang & Lundholm, 1993; Leuz & Verrecchia, 2000; Petersen & Plenborg, 2006).

Stock return volatility (Volatility) is measured by standard deviation of daily stock returns of the last quarter. Firm size (Size) is measured by the last quarter’s total assets in logarithm. The growth opportunity is measured by the market to book ratio (MtoB) (which is calculated as market capitalization / book value of the firm). The firm performance was measured by the last quarter’s return of equity (ROE). Stock Price (Price) is measured by the last quarter’s close price in logarithm.

4. Empirical Results

The descriptive statistics are displayed in Table 1. The relative spreads (Spread20) vary from 0.008\% to a maximum of 0.845\% in the 20-trading day window following the misconduct news release. The average spread is 0.041\%, 0.041\%, and 0.042\%, respectively, for the 20-, 40-, and 60-day trading window. By comparison, the standard deviations of the relative spread increase from 0.058\% to 0.074\% from the 20-day window to 60-day window. Using the negative word list created by Loughran and McDonald (2011), the most critical Wall street journal article in our data contains 11.076\% negative words. Using the words list created by Diction, the average Net tone of our articles is negative (-0.21824), indicating an overall pessimistic linguistic style which is consistent with our research context (the release of corporate misconduct news). The mean values of our control variables – i.e., total assets in logarithm, ROE, market to book ratio, and stock volatility - are 11.15, 0.0095, 1.013 and 1.537, respectively. Table 2 shows the results of Correlation Tests.

Table 3 shows the results of panel regression. We used time serial panel data, so we first ran the Hausman test to choose between fixed and random effects. The rejection of the null hypothesis indicates that the fixed effects is preferred.

In Model (I), using the relative spread within 20 trading days after the misconduct news release as our dependent variable, we observe that the coefficient of \textit{Negative} is -0.0042 and significant at the 10\% level. The relationship between negative tone and relative spread is negative. In other words, a news article that contains more negative words can lead to a decrease in the relative spread. Thus, Hypothesis 1 is supported.
The ownership concentration variable does not have a direct effect on the relative spread. However, the interaction of ownership concentration and negative tone (Ownership*Negative) has a positive and significant coefficient. Ownership concentration can therefore moderate the negative relationship between relative spread and negative tone. When ownership concentration is high, the impact of Negative tone on the relative spread is low. We can therefore validate Hypothesis 2 – that the ownership concentration can moderate negatively the relationship between negative tone and relative spread.

Among the control variables, firm size (Size) appeared to have a negative impact on the relative spread. Thus, it appears that bigger firms suffer smaller information asymmetry problems. This finding is consistent with prior studies (e.g. Cassar, Ittner & Cavalluzzo, 2015; Petacchi, 2015). We also find that firm performance (ROE) is positively linked to the relative spread while price (Price) is negatively linked to the relative spread. The effects of market to book and stock volatility on relative spread were not significant.

We reran the tests in Model II and III of Table 3 using Spread40 and Spread60 as the dependent variables, respectively. The results of Model II are very similar to the ones of Model I. In Model II, the coefficient of Negative is no longer significant, suggesting that the effect of negative tone disappears over time.

We also reran the regression tests using tone score (Opt, Pes and Net) calculated by the Diction software. We did not observe any significant tone effect with these tone measurements. It confirms the findings of Loughran and McDonald: a large proportion of negative words identified by other disciplines as representing negative events are words typically not considered to be negative in financial contexts.

We conducted collinearity diagnostics and found that the variance inflation factor value is 12.17 with the interaction term (Ownership*Negative). We then centered the interaction term and reran the regression and we did not find any change in coefficient direction in these tests; this shows that our findings are robust.

5. Conclusion

In this study we have tried to understand the role of the tone used by media to communicate firm misconduct on information asymmetry, and found that negative tone decreases information asymmetry, and that higher levels of company ownership of the firm mitigates these effects. This study calls for more nuanced research on firm misconduct, concentrating not only on direct investor responses to such unethical behaviors, but also the role played by external parties (such as the media) in communicating such news.

This study developed a way to understand how the tone used to communicate firm misconduct news can affect shareholder responses, particularly in terms of the views held by buyers and sellers of firm shares. We move beyond earlier studies such as Carberry et al. (2018) and Diestre and Rajagopalan (2014) to show that not only do shareholders negatively respond to misconduct but that the misconduct news can affect the level of adverse selection experienced by market
participants. Our results provide support for the idea that the tone used to communicate misconduct reported by the media can affect how investors interpret such information. One other explanation for this response behavior may be the role that uncertainty can play in stock valuation. When misconduct is described in highly negative tones, it may communicate to retail traders clearly about the firm’s standing and potential, thus reducing uncertainty.

We contribute to the information asymmetry literature by introducing the influence of confirmation bias on investor’s decision-making processes. In line with the behavioral finance literature (e.g. Kumar & Goyal, 2015; Montier, 2018), this study suggests that the use of theories based in psychology may help to explain surprising and/or counterintuitive findings in the traditional rationally-based finance literature.

Our study demonstrates the importance of building connections between fields in business – in particular, between finance, business ethics, and communications. Although the ethics literature has already examined how the media can promote ethical behavior (El Ghoul, Guedhami, Nash & Patel, 2016), our study suggests that the media can also affect how shareholders and potential investors can perceive unethical behavior.

Our findings suggest that the media has the power to reduce information asymmetry, making markets more fairly accessible, and decreasing the cost of capital. In this way, as suggested by Carberry et al. (2018), the media may act as a neutral third party which (with or without intention) plays a positive role in market governance. Given that the market itself cannot be relied upon to regulate misconduct (Wesley & Ndofor, 2013), it is critical to understand how unethical firm conduct may be controlled. Whether the media may play a less savory role by using a positive tone to describe misconduct, and whether this leads to increases in information asymmetry, is yet to be examined.

Another implication of our findings pertains to investors. Our data suggests that investors should be aware of their biases when making stock investment decisions. Although investors are generally viewed as rational actors according to the efficient market hypothesis, the current findings provide evidence in support of the idea that investors are influenced by the wording used to describe misconduct. Moreover, it appears that these investors are not only influenced by the tone of such news but also that they respond in biased ways: sellers accept the news as confirmation of their previously-held beliefs that the company’s prospects are weak, while buyers (who believe the firm’s prospects are strong) ignore such information altogether. Thus, we suggest that while analyzing acts of unethical behavior enacted by firms, investors should attempt to not be overly-influenced by the way in which such news is delivered.

Like all research, this study has a number of limitations, several of which can be used as avenues for future research. First, although we collected an entire range of different types of misconduct (e.g. employee, customer, management), we did not separate out the effects of different misconduct groups on bid-ask spreads. Thus, future research may wish to investigate whether negative tones used to disclose certain types of misconduct engender larger (or smaller) levels of information asymmetry. For example, one could imagine that negative tones describing management misconduct would lead to buyers to be more wary of the firm (thus reducing their likelihood of buying the stock) since it speaks to confidence in leaders’ decision making skills, whereas negative tones used to describe employee misconduct (such as hiring discrimination) would be less likely to have such dire effects on buyers and subsequent stock valuations.
Second, we focused only on news provided through the on-line version of the Wall Street Journal. Although this is the most widely circulated business news publication in the United States (Misachi, 2017), it may be that given the changing social media landscape, individuals may have received news of misconduct in advance of this online publication. However, given that journalism and communication studies have shown that popular social media websites such as Facebook and Twitter most often share links to media publications and lead readers to traditional news outlets (An, Cha, Gummadi & Crowcroft, 2011; Newman, 2011; Smith & Lee, 2010) we believe that our use of the Wall Street Journal as a representative of first news dispersion is reasonable. A key avenue for future studies is to examine how the tone used in a range of news sources, and social media sources in particular, may affect investors’ buying and selling propensities.

Third, we did not differentiate between legal and illegal types of misconduct. Although all of our identified forms of misconduct constitute unethical conduct, the legality of different types of wrongdoing may have an effect on both the tone used to communicate such actions and this tone’s resulting effect on shareholders. Misconduct that is illegal is more likely to bring both lawsuits and accompanying financial penalties for firms found guilty of such actions, meaning that they would be more likely to have a negative impact on the financial valuations of a firm. Thus, we encourage researchers to study the direct and interactive effects that misconduct legality is likely to play on these factors.

Finally, our use of advanced content analysis techniques to analyze article tone through word frequency has potential limitations. For example, using computer-aided coding processes can result in difficult in identifying dissonant descriptions within texts (c.f. Lamertz & Baum, 1998; Pollock, Rindova, & Maggitti, 2008), as noted by Zavyalova et al. (2012). Given the continuous advancement in data coding software and its accompanying techniques, we believe that future researchers will be able to gather increasingly larger amounts of texts with increasingly finer-grained analysis (Duriau, Reger, & Pfarrer, 2007).
REFERENCES


Hamilton, 1978 should be deleted from the text


Table 1. Descriptive Statistics

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<th>S.D.</th>
<th>Min.</th>
<th>Max.</th>
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Notes:

Negative: Degree of negativity = percentage of words belonging to the Loughran and McDonald (2011) negative words list.

Opt: Optimism = percentage of words belonging to the Praise, Satisfaction and Inspiration categories of Diction software.

Pes: Pessimism = percentages of words belonging to the Blame, Hardship and Denial categories of Diction software.

Net: Net degree of optimism = (Opt-Pes)/(Opt+Pes)

Ownership: Ownership Concentration = Herfindahl-Hirschman Index extracted from WRDS database.

Volatility: Stock return volatility= standard deviation of daily stock returns in the last quarter

Size: Firm size = last quarter’s total assets in logarithm

MtoB: Market to book ratio = market capitalization / book value

ROE: Last quarter’s return on equity

Price: Last quarter’s close price in logarithm
Table 2. Correlation Results

<table>
<thead>
<tr>
<th>Spread20</th>
<th>Spread40</th>
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<td>0.070**</td>
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*p < 0.1, **p < 0.05, ***p < 0.01
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t statistics in parentheses

* p<0.1, ** p<0.05, *** p<0.01
APPENDIX 1

Definitions of words list extracted from Diction Handbook.

PRAISE: Affirmations of some person, group, or abstract entity. Included are terms isolating important social qualities (dear, delightful, witty), physical qualities (mighty, handsome, beautiful), intellectual qualities (shrewd, bright, vigilant, reasonable), entrepreneurial qualities (successful, conscientious, renowned), and moral qualities (faithful, good, noble). All terms in this dictionary are adjectives.

SATISFACTION: Terms associated with positive affective states (cheerful, passionate, happiness), with moments of undiminished joy (thanks, smile, welcome) and pleasurable diversion (excited, fun, lucky), or with moments of triumph (celebrating, pride, auspicious). Also included are words of nurturance: healing, encourage, secure, relieved.

INSPIRATION: Abstract virtues deserving of universal respect. Most of the terms in this dictionary are nouns isolating desirable moral qualities (faith, honesty, self-sacrifice, virtue) as well as attractive personal qualities (courage, dedication, wisdom, mercy). Social and political ideals are also included: patriotism, success, education, justice.

BLAME: Terms designating social inappropriateness (mean, naive, sloppy, stupid) as well as downright evil (fascist, blood-thirsty, repugnant, malicious) compose this dictionary. In addition, adjectives describing unfortunate circumstances (bankrupt, rash, morbid, embarrassing) or unplanned vicissitudes (weary, nervous, painful, detrimental) are included. The dictionary also contains outright denigrations: cruel, illegitimate, offensive, misery.

HARDSHIP: This dictionary contains natural disasters (earthquake, starvation, tornado, pollution), hostile actions (killers, bankruptcy, enemies, vices) and censurable human behavior (infidelity, despots, betrayal). It also includes unsavory political outcomes (injustice, slavery, exploitation, rebellion) as well as normal human fears (grief, unemployment, died, apprehension) and in capacities (error, cop-outs, weakness).

DENIAL: A dictionary consisting of standard negative contractions (aren’t, shouldn’t, don’t), negative functions words (nor, not, nay), and terms designating null sets (nothing, nobody, none).