Ethics Statements: A Taxonomy from Natural Language

Strategic communication has been defined as the use of a communication medium that concentrates on the initiator's intentions (Dulek & Campbell, 2015; Thomas & Stephens, 2015). This definition redefines communication from a bilateral effort to send and receive information into an organization transmitting information to stakeholders potentially with the purpose of shaping the organization's image in the mind of the recipient. This shaping is organizational impression management (Mohamed, Gardner, & Paollillo, 1999). Henderson, Cheney, & Weaver (2015) state strategic communication includes all institutionalized messages for the public and would include such things as mission statements and vision statements.

As a result, ethics statements would also be included as strategic communication. Ethics statements, also called "codes of conduct", have been defined by Ki, Choi, and Lee (2012) for public relations firms as statements of ethical guidelines created as a framework to influence and critique actions of professional in the firm. Ethics statements for corporations have had a presence for many years but the Sarbanes Oxley Act of 2002 now requires these statements be created (Murphy, 2005). The academic universe is catching up with textbooks discussing the importance of ethics statements (e.g. Hill, Jones, Schilling, 2015; McShane & Von Glinow, 2015).

There is a paucity of research into statements of ethics for organizations. This paper uniquely fills part of the gap by taking a sample of organizations and discovers a natural language taxonomy for those statements. The first part of this paper is a literature review examining research already done on ethics statements and a review of taxonomies. The second part of this paper focuses upon the methods used to obtain the sample and the analysis to be

performed upon that sample. Next, the results of the analysis are given, including the taxonomy

of ethics statements, and this is followed by a discussion of the findings.

Literature Review

Ethics Statement Research

This section examines research done in the area of ethics statements. Even though the

creation of a code of conduct is a requirement of the Sarbanes Oxley Act of 2002, there has been

little research into these statements, neither how they come to exist nor the effect they have.

One of the earliest examinations of ethics statements came from Chatov (1980) where he

examined a multitude of ethical violations by employees but states that corporations are only

concerned with a subset of these violations. Chatov (1980) determines that an organization's

ethics statement is partially formulated with respect to the few ethical violations that create the

most potential problems for the organization.

Aldmour (2004) performed a study on teachers in the Karak Governorate in Jordan. One

of the research questions was whether the teachers were committed to the code of conduct of the

schools. These teachers were found to have a tepid following of the code of conduct but

maintained ethical standards due to relationships with parents and students as well as loyalty to

the school as an institution.

More recently, a study found that ethics statements had a positive effect in decreasing

malpractice occurrences. Li et al (2012) performed this research on members of Korean public

relations firms. These researchers also found that educating employees on the code of conduct

had a positive influence on the employees' ethical behavior. Unfortunately, this research also

revealed that the majority of those surveyed believed that ethical guidelines did not exist in their

firms.

Taxonomy Research

There are many definitions that exist for taxonomy but most have a common theme of taking a complex set and simplifying it by creating some form of classification for members of that set based on common characteristics of those members (Andersen, 2010; Autry, Zacharia, & Lamb, 2008; Duarte & Sarkar, 2011; Rich, 1992). Originally created for the classifying biological organisms into groups (Duarte & Sarkar, 2011), taxonomies have found a use in management research to help teach a subject by type (Autry, et al, 2008), to help facilitate future research toward developing comprehensive theory (Bunn, 1993; Rich, 1992) and to serve as a guide for conceptualizing scope and boundaries as well as for construct measurement (Marks, Mathieu, & Zaccaro, 2001).

Taxonomies have been created in many ways for marketing with including market segmentation (Lessig & Tollefson, 1971), television advertising (Laskey, Day, & Crask, 1989), advertising formats (Lamb, Pride, & Pletcher, 1978), marketing strategies (Hawes & Crittenden, 1984; El-Ansary, 2006), and customer buying decision methods (Bunn, 1993).

Many other management issues have taxonomies developed including employee turnover (Bluedorn, 1978; Dalton, Tudor, & Krackhardt, 1982), organizational knowledge (Chua, 2002; Dinur, 2011; Huang, Luther, & Tayles, 2007; Ramirez & Nembhard, 2004), innovation strategies (Duarte & Sarkar, 2011), organizational justice (Greenberg, 1987), firms that started globally (Knight & Cavusgil, 2005), logistics (Kuo-Chung & Li-Fang, 2004), university leadership behaviors (Mangi, Abidi, Soomro, Ghumro, & Jalbani, 2011), team processes (Marks, et al, 2001), and strategic groups (McGee & Howard, 1986).

Method

This section examines the methods used to find the natural language taxonomy for organizational ethics statements. When taxonomies are the goal of a study, the process is to create classes based on similarities between the studied objects, test the classes empirically, and then order the objects (Duarte & Sarkar, 2011). The traditional way of building taxonomies has been to create classes based on theory, to create measurements for those classes, then to verify the classes using quantitative techniques. One potential concern is the classes are determined prior to data being gathered and, therefore, the classification may not have usefulness (Duarte & Sarkar, 2011). Researcher bias and error can creep into the generation of classes. As a result, the groups may be disconnected from theory and reality (Kuo-Chung & Li-Fang, 2004).

McGee and Howard (1986) state the natural way to create classes is based on the characteristics of the items being classified. Autry, et al (2008) assert that creating taxonomies is inductive based upon the patterns found in the data itself. Thus, classifications should be obtained in a way that can eliminate researcher error and bias. In order to use language as a basis for categorization, text analytics was chosen for this study. Text analytics is a relatively new tool for analysis that "helps analysts extract meanings, patterns, and structure hidden in unstructured textual data" (Chakraborty, Pagolu, & Garla, 2013, p. 1) such as ethics statements. This analytical tool is then very useful in categorizing text such as discovering the natural language taxonomy.

Text analytics have been used in industry to help support decisions for product development (Markham, Kowolenko, & Michaelis, 2015), to help make decisions by pharmaceutical firms when analyzing drug patents (Yang, Klose, Lippy, Barcelon-Yang, & Zhang, 2014), and determining the satisfaction of hotel guests using online reviews (Xiang, Schwartz, Gerdes, & Uysal, 2015). Text analytics also has been used in limited research and

discovering new relationships. Such research includes categorizing reasons why community college students drop courses (Michalski, 2014), measuring cause and effect orientations of managers (Helmersson & Mattsson, 2013), and discovering nursing is centered on workplace issues rather than patient and family issues (Bell, Campbell, & Goldberg, 2015).

This section first examines the sample, how it was determined, and how the electronic information could be obtained. The second part looks at the process of using text analytics to extract the themes from the data.

Creation of the Sample

In order to use text analytics to discover a taxonomy, a sample of 146 ethics documents was created by first forming a web page that had direct Internet links to a code of conduct, a phrase often used in place of the phrase "ethics statement". These web links were chosen by using a search engine that returned every link the engine found. The search engine results were saved as a webpage to a local computer and then edited to remove links that were not related to the study and to remove other unwanted information such as advertisements and html code specific to the page. After completing this action, 146 links were left on the webpage. Some of the organizations that were part of the sample were Whirlpool, Comcast, Halliburton, and Dow Corning.

Extracting the Information

The modified webpage was uploaded to the author's website to become a seed page for a web crawler program. A web crawler is a special program that reads and saves text from webpages (Chakraborty, et al, 2013). This program must begin with a seed page that the program will read for text and then follow all the links on that page to read text on all the linked pages. The web crawler can continue to follow the links found on subsequent pages, pulling text

from all of these pages. For this research, only the text located on the Code of Conduct pages was taken because to explore additional links would probably mean getting information not related to the study. Thus, after initiating the web crawler program, the text for the Code of Conduct pages resided on the author's local computer.

The second step in processing the information was text parsing. Text parsing is a way of cleaning up the text by "identifying sentences, determining parts of speech, and stemming words" (Chakraborty et al., 2013, p. 5) while also performing spell checking. In short parsing is picking apart all the documents phrase by phrase and word by word so that similarities and differences between the various Codes of Conduct could be found.

Text filtering was the third step in processing the data. This step breaks down the terms based on syntax to create a listing of identifying terms. Identifying terms are those where documents can be differentiated from each other. For example, the word "and" could conceivably occur in every document. So this term is irrelevant in differentiating the individual documents and would be eliminated in the filtering process. However, the term "barrier" is a more specialized term that may occur in a few documents and, as a result, possibly be a differentiating term for that group of documents. Also, terms that occur in one document alone are not sufficient to identify themes in document groups so these are eliminated as well.

During the filtering step, the user can choose to add or to remove terms from the list generated by the software. The software by default includes all terms that occur in at least four documents. Because there were 146 documents in the sample, the list of terms kept by the software became quite extensive. Hence, instead of terms that appear in four or more was changed to terms that appear in twenty or more documents. The analysis was run both ways to

determine if there was a significant difference by changing this parameter and it was found the final groupings did not change.

Also during the filtering step, the user can elect to add or to remove parts of speech. Normally, minor parts of speech such as articles (for example "a", "an", and "the") are excluded as are conjunctions (for example "and" and "or"). Since the ethics statements are usually focused around doing something or being something, the choice was made to only run the analysis with verbs and nouns and to exclude all other parts of speech. The analysis was run both ways, with all the normally included parts of speech and again with only the verbs and nouns; there was no significant difference in the results except the wording in the final groupings was clearer.

The final step in the analysis was to categorize all the terms relative to the documents. During this phase key terms are identified for groups of documents; these key terms become the descriptors for the final group.

Results

This section examines the results of employing the method described in the previous section. What emerged from the analysis was natural language taxonomy for the ethics statements. The taxonomy consists of six classes, each of which is described below.

The first classification, accounting for about 12% of the documents, centers on the phrase "conflict of interest". Reading the ethics statements that contain this phrase indicates the firms creating these statements are concerned with avoiding situations or actions that may deem the firm as being impartial when in fact the firm is to be neutral. This type of statement will be labelled as Avoiders.

The second classification, 17% of the ethics statements, had as its verbal center the words "labor", "rights", "health", and "safeguard". The statements containing these key words show that these firms are concerned with human rights, particularly in the area of labor laws. The avoidance of child labor was a key theme in many of the documents. This type of statement will be labelled as Moralizers.

The third classification represents approximately 3% of the data and was typified by the words "charge", "order", "condition", and "cost". While these may not seem like related words, upon careful reading of the documents with these terms, the first three terms have the same meaning. This meaning is a predefined condition to avoid a later occurrence. For example, a committee is "charged" with a mission to accomplish a specific function later. There are "orders" for a group or firm to ensure a task is fulfilled. Some firms have "conditions" before allowing another action to occur. In simplified terms, there is an institutionalization of a set of criteria to accomplish an objective. That objective has to do with the last word – "cost". The code of conduct in this case is designed to avoid elements of a cost savings strategy if people would be harmed by those elements. This may be an indication of a people-oriented cost focus. This type of statement will be labelled Balancers.

The fourth classification that consists of 26% of the statements focuses on the words "partner", "company", "policy", and "product". The statements in the documents using these words indicates a concern with the firm and all of its strategic partners that each follow a given set of policies laid out to provide an acceptable product. While this sounds very similar to the third classification, the focus is upon the product instead of cost savings. This classification may be an indication of a differentiation strategy. This type of statement will be called Governors.

The fifth classification, 22% of the data, clusters around the words "cost", "market", "charge", and "account". Cost efficiency is a primary focus and the market environment is secondary but the firms do not want customers to be charged unfairly in the transactions. It is very interesting to note that "cost" and "market" are more heavily weighted terms than "charge" and "account", possibly indicating that while customer satisfaction is important, costs and staying competitive in the market environment may be more important. This type of statement will be called Marketers.

The sixth and final classification, the remaining 19% of the documents, focuses on the words "influence", "conflict", "interest", and "member". Reading the documents with these words indicates a desire to avoid exerting power over a person in the external environment with the purpose of changing rules and regulations. This exertion of power in many cases may be illegal. For example, some of the phrases discuss influencing with questionable tactics government officials to change legislation. Other phrases speak of coercing stock trading board members to ignore questionable behavior. This type of statement will be called Restrainers.

Discussion

Analysis

This study is unique in several ways. First, it examines ethics statements, a rarely studied topic, and develops a taxonomy for those ethics statements. Second, this study uses text mining to uncover the natural language indicators for the taxonomy. The six groups discovered are called Avoiders, Moralizers, Balancers, Governors, Marketers, and Restrainers. The Avoiders are statements that focus upon avoiding conflicts of interest. The Moralizers focus upon maintaining human rights and dignity. Balancers concentrate on cost savings but not at the expense of stakeholders. The Governors concentrate on a set of policies to create a marketable

product. Marketer statements contain values that focus on market forces, particularly customers.

Finally, the Restrainers are a set of values designed to avoid exerting questionable influence over

a person outside the firm.

The findings in this study are consistent with existing theory. Chatov (1980) found

several negative topics that were deliberately addressed in ethics statements. Some of these

topics include conflicts of interest, illegal political payments, falsification of corporate accounts,

and ignorance of work related laws. These are some of the very topics that caused groupings in

this study. However, while Chatov (1980) looked at factors that were included in ethics

statements, this study finds themes in entire statements which is more of a macro statement

examination.

Aldmour (2014) stated ethics statements add "transparency, responsibility and self-

control to the organizational behavior, and reflects the organizational confidence to its staff" (p.

337). He also adds these statements promote positive behaviors and stifle negative ones. The

implication is ethics statements should be created with specific behaviors in mind. The study

presented in this paper supports this supposition since all of the categories in the taxonomy

support some type of positive behavior.

Application

The previous discovery is worthless if there is no practical way to use it. The following

paragraphs discuss steps for identifying to which class a given ethics statement belongs and then

provides an example.

Since the original analysis used natural language to determine the original classes for

each of the sample statements, it stands to reason the methodology to determine a classification

of statements not included in the sample would also rest upon natural language. The key is to

identify whether key words are found in the statement or not. While there are other ways to classify statements, the steps provided below provide an efficient and understandable process. For the purposes of the previous analysis and this application, the singular form of a word and its plural are considered the same thematic entity. For example, "book" and "books" carry the same theme and, therefore, are interchangeable. In the steps below, only the singular is used in the process. Also, once a statement is classified then the remainder of the steps do not need to be executed; however, the steps must be executed in order.

1. If "code of conduct" and "cost" are present in the statement, then the statement will be classified as a Balancer.

2. If "code of conduct" and "appointment" are present in the statement and both "applicable law" and "country" are not in the statement, then the statement will be classified as an Avoider.

3. If "dignity" is present in the statement and "individual" is not present, then the statement will be classified as a Moralizer.

4. If "member" and "hold" ("holding" and "held" are also alternatives) are present in the statement and "market" ("marketing" is an alternative) is not present, then the statement will be classified as a Restrainer.

5. If "illegal" is present in the statement, then the statement will be classified as a Marketer.

6. If "competition" is present in the statement and "document" ("documented" and "documenting" are alternatives) is not present in the statement, then the statement will be classified as a Governor.

Two things are of note in this procedure. First, there are six steps to classify the six types of ethics statements. Generally, in order to classify into six groups, one would only need five steps with those items not meeting the five criteria being placed into the sixth group by default. However, the concept in providing six steps is to allow for the possibility of another type of ethics statement to emerge that cannot be classified into one of the six groups. It would be an error to classify this new type of statement into the sixth group by default; therefore, there is an allowance made for a seventh group, a new type previously not discovered.

Second, there are words in the procedure steps above that were not originally given in the analysis section. There are two reasons for this. Primarily, the list of words that define each class is actually fifteen to twenty words long; only a few of the major key words were given in the analysis section. Secondarily, as the procedure moves through the steps, some of the key words are eliminated so that the method of classification resorts to words that have not been used. For this purpose, the steps must be executed in order.

The following is an ethics statement for the American Institute of Chemical Engineers.

> Members of the American Institute of Chemical Engineers shall uphold and advance the integrity, honor and dignity of the engineering profession by:
>
> - Being honest and impartial and serving with fidelity their employers, their clients, and the public;
>
> - Striving to increase the competence and prestige of the engineering profession;
>
> - Using their knowledge and skill for the enhancement of human welfare.
>
> To Achieve these Goals, Members shall:

- Hold paramount the safety, health and welfare of the public and protect the environment in performance of their professional duties.

- Formally advise their employers or clients (and consider further disclosure, if warranted) if they perceive that a consequence of their duties will adversely affect the present or future health or safety of their colleagues or the public.

- Accept responsibility for their actions, seek and heed critical review of their work and offer objective criticism of the work of others.

- Issue statements or present information only in an objective and truthful manner.

- Act in professional matters for each employer or client as faithful agents or trustees, avoiding conflicts of interest and never breaching confidentiality.

- Treat fairly and respectfully all colleagues and co-workers, recognizing their unique contributions and capabilities.

- Perform professional services only in areas of their competence.

- Build their professional reputations on the merits of their services.

- Continue their professional development throughout their careers, and provide opportunities for the professional development of those under their supervision.

- Never tolerate harassment.

- Conduct themselves in a fair, honorable and respectful manner. (American Institute of Chemical Engineers, n.d.)

To begin to classify this ethics statement, step one must be executed. Using a simple text editor search feature, a search for "code of conduct" did not reveal any such term in the statement. Since the first step has "and" conditions, there is no need to search for anything else since the first condition was not met. Moving to the second step, again "code of conduct" is a primary word. But the previous search from step one showed that phrase was not in the statement. For step three a search for "dignity" was made and there is one occurrence. Since the first condition has been met, a new search for "individual" was made. Since there is no occurrence of this latter term, the conditions for step three are met and this statement can be classified as a Moralizer.

Limitations

As with any study, there are limitations. One such limitation may be the size of the sample. This study had 146 ethics statements in the sample consisting of profit and non-profit organizations but other research that developed taxonomies have much more. Kuo-Chung and Li-Fang (2004) used 1200 firms in Taiwan to develop their taxonomy of logistics. Ishida and Brown (2013) examined 162 franchisees in creating a taxonomy of franchise agreements. So it is possible an increase in the sample size may provide further clarification of the taxonomy.

The sample for this study also was not created randomly and that may create a limitation to the findings. The sample was created by an Internet search engine and search engines often find links based on many factors, including calculated relevance. As a result, the lack of randomness may contribute to some error in the findings. However, the findings of this study agree with existing theory which provides some validation.

Another limitation of this study may also be the scope of the sample. As mentioned, the sample consisted of for-profit and non-profit organizations. The results may have been different

if these types of firms had been examined individually, without influence from the other. Regardless, this taxonomy provides a good overview of the types of ethics statements.

Directions for Future Research

Ethics statements have not been researched extensively so any research into them will greatly assist in understanding their relationship to organizations. One possible area of research could be examining the types of ethics statements given above and whether the firms having a particular type actually honor the statement. The concept here is to determine if certain types of ethics statements are more likely to be honored.

Another area for future research is to determine if a particular type of ethics statement, if performed by the firm, actually influences measures of organizational performance. This type of research could also answer the question of whether ethics statements can change the success of an organization.

Finally, it would be interesting to see if there is a link between the type of statement and the type of organizational culture. If so, then conditions may be determined when the ethics statement influences culture and when the culture influences the formation of the ethics statement. This analysis may depend heavily upon whether the organization actually honors the statement or ignores it in practice.

Summary

The purpose of this paper was to create a natural language taxonomy for ethics statements. This paper presented a literature review of ethics statements and taxonomies, described the method of sample collection and data analysis, provided analysis of the findings, and discussed implications of those findings.

This paper has presented a rare look into ethics statements. Additionally, this paper uses the qualitative analysis tool text mining to develop a taxonomy for these ethics statements. Traditionally, a researcher develops taxonomies by setting up classes based on theory before data collection. This paper takes the uncommon route of using the language of the documents themselves to determine the classes for the taxonomy thereby eliminating researcher bias and error.

The results presented in this paper agree with existing management theory. Ethics statements have six types, namely, Avoiders, Moralizers, Balancers, Governors, Marketers, and Restrainers. These classes comprise the groups in which organizational ethics statements reside.

References

Aldmour, R.A.H. (2004). The degree of teachers' commitment to the code of conduct and ethics of profession as perceived by schools principals and educational supervisors in Karak Governorate. *European Scientific Journal, 10(10),* 336-355.

American Institute of Chemical Engineers (n.d.). Retrieved from http://www.aiche.org/about/code-ethics.

Andersen, J. (2010). A resource-based taxonomy of manufacturing MSMEs. *International Journal of Entrepreneurial Behavior & Research, 18(1),* 98-122.

Autry, C.W., Zacharia, Z.G., Lamb, C.W. (2008). A logistics strategy taxonomy. *Journal of Business Logistics, 29(2),* 27-51.

Bell, E., Campbell, S., & Goldberg, L.R. (2015). Nursing identity and patient-centeredness in scholarly health services research: a computational text analysis of PubMed abstracts 1986-2013. *BMC Health Services Research, 15(3),* 1-16.

Bluedorn, A.C. (1978). A taxonomy of turnover. *Conceptual Notes, 3(3),* 647-651.

Bunn, M.D. (1993). Taxonomy of buying decision approaches. *Journal of Marketing, 57,* 38-56.

Chakraborty, G., Pagolu, M., & Garla, S. (2013). *Text mining and analysis: Practical methods, examples, and case studies using SAS®*. Cary, NC: SAS Institute Inc.

Chatov, R. (1980). What corporate ethics statements say. *California Management Review, 22(4),* 20-29.

Chua, A. (2002). Taxonomy of organizational knowledge. *Singapore Management Review, 24(2),* 69-76.

Dalton, D.R., Tudor, W.D., & Krackhardt, D.M. (1982). Turnover overstated: The functional

    taxonomy. *Academy of Management Review, 7(1),* 117-123.

Dinur, A. (2011). Tacit knowledge taxonomy and transfer: Case-based research. Journal of

    Behavioral and Applied Management, 12(3), 246-281.

Duarte, V. & Sarkar, S. (2011). Separating the wheat from the chaff – a taxonomy of open

    innovation. *European Journal of Innovation Management, 14(4),* 435-459.

Dulek, R.E. & Campbell, K.S. (2015). On the dark side of strategic communication.

    International Journal of Business Communication, 52(1), 122-142.

El-Ansary, A.I. (2006). Marketing strategy: Taxonomy and frameworks. *European Business*

    Review, 18(4), 266-293.

Greenberg, J. (1987). A taxonomy of organizational justice theories. *The Academy of*

    Management Review, 12(1), 9-22.

Hawes, J.M. & Crittenden, W.F. (1984). A taxonomy of competitive retailing strategies.

    *Strategic Management Journal,*5, 275-287.

Helmersson, H., & Mattsson, J. (2013). Text-analytic measurement of effectuation and causation

    orientations among small and global business managers. *Quality & Quantity, 47(6),*

    3493-3507.

Henderson, A., Cheney, G., & Weaver, C.K. (2015). The role of employee identification and

    organizational identity in strategic communication and organizational issues management

    about genetic modification. *International Journal of Business Communication, 52(1),*

    12-41.

Hill, C.W., Jones, G.R., Schilling, M.A. (2015). *Strategic management: An integrated approach*

    (11th ed). Stamford, CT: Cengage.

Huang, C.C., Luther, R., & Tayles, M. (2007). A evidence-based taxonomy of intellectual capital. *Journal of Intellectual Capital, 8(3),* 386-408.

Ishida, C. & Brown, J.R. (2013). A taxonomy of monitoring in business-to-business relationships. *Journal of Marketing Theory and Practice, 21(2),* 123-139.

Ki, E., Choi, H., & Lee, J. (2012). Does ethics statement of a public relations firm make a difference? Yes it does!! *Journal of Business Ethics, 105,* 267-276.

Knight, G.A. & Cavusgil, S.T. (2005). A taxonomy of born-global firms. *Management International Review,45(3),* 15-35.

Kuo-Chung, S. & Li-Fang, S. (2004). Taxonomy in logistics management: A resource-based perspective. *International Journal of Management, 21(2),* 149-165.

Lamb, C.W., Pride, W.M., & Pletcher, B.A. (1978). A taxonomy for comparative adverting research. *Journal of Advertising, 7,* 43-47.

Laskey, H.A., Day, E., & Crask, M.R. (1989). Typology of main message strategies for television commercials. *Journal of Advertising, 18(1),* 36-41.

Lessig, V.P. & Tollefson, J.O. (1971). Market segmentation through numerical taxonomy. *Journal of Marketing Research, 8(4),* 480-487.

Mangi, R.A., Abidi, A.R., Soomro, H.J., Ghumro, I.A., Jalbani, A.A. (2011). Leadership behavioral taxonomies in universities. *Australian Journal of Business and Management Research, 1(7),* 145-151.

Markham, S.K., Kowolenko, M., & Michaelis, T.L. (2015). Unstructured text analytics to support new product development decisions. *Research Technology Management, 58(2),* 30-38.

Marks, M.A., Mathieu, J.E., & Zaccaro, S.J. (2001). A temporally based framework and

      taxonomy of team processes. *The Academy of Management Review, 26(3),* 356-375.

McGee, J. & Howard, T. (1986). Strategic groups: Theory, research, and taxonomy. *Strategic*

      Management Journal, 7(2), 141-160.

McShane, S.L. & Von Glinow, M.A. (2015). *Organizational behavior: Emerging knowledge,*

      global reality (7th ed). New York: McGraw-Hill.

Michalski, G.V. (2014). In their own words: A text analytics investigation of college course

      attrition. *Community College Journal of Research and Practice, 38(9),* 811-826.

Mohamed, A.A., Gardner, W.L., & Paolillo, J.G.P. (1999). A taxonomy of organizational

      impression management tactics. *Advances in Competitiveness Research, 7(1),* 108-130.

Murphy, P.E. (2005). Developing, communicating and promoting corporate ethics statements: A

      longitudinal analysis. *Journal of Business Ethics, 62,* 183-189.

Ramirez, Y.W. & Nembhard, D.A. (2004). Measuring knowledge worker productivity: A

      taxonomy. *Journal of Intellectual Capital, 5(4),* 602-628.

Rich, P. (1992). The organizational taxonomy: Definition and design. *The Academy of*

      Management Review, 17(4), 758-781.

Thomas, G. F. & Stephens, K. J. (2015). An introduction to strategic communication.

      International Journal of Business Communication, 52(1), 3-11.

Xiang, Z., Schwartz, Z., Gerdes, J.H., & Uysal, M. (2015). What can big data and text analytics

      tell us about hotel guest experience and satisfaction? *International Journal of Hospitality*

      Management, 44, 120-130.

Yang, Y.Y., Klose, T., Lippy, J., Barcelon-Yang, C.S., & Zhang, L. (2014). Leveraging text

      analytics in patent analysis to empower business decisions – A competitive

differentiation of kinase assay technology platforms by I2E text mining software. *World Patent Information, 39,* 24-34.