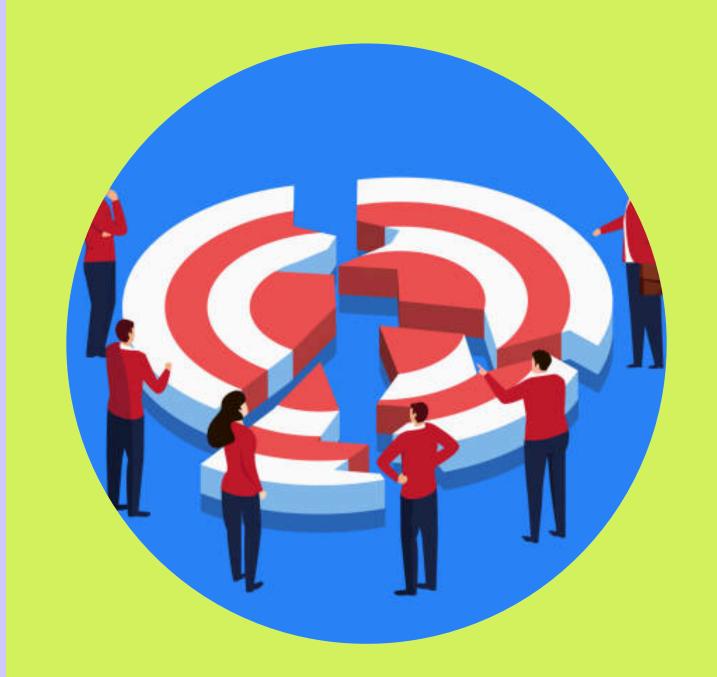COMPUTATIONAL TEXT ANALYSIS FOR
COMMUNICATION RESEARCH

Crisis Communication Strategy Analysis

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Analyzing how corporate crisis
communication strategies have
changed over time

Research Objectives

Our research dives into the evolution of crisis communication strategies, starting with the infamous Johnson & Johnson Tylenol recall in 1982. We aim to understand how companies manage public sentiment during crises and how these strategies have changed over time.

O1 How have companies' crisis management strategies changed over time since the famous J&J recall of 1982?

O2 Have new, more (or less) effective strategies emerged since the 1982 events?

O3 Are there common strategies companies incorporate during a crisis?

Hypothesis: Following the famous J&J recall (which established a gold-standard protocol by which companies could/should follow), the effectiveness of crisis communications within the pharmaceutical/drug industry should change (improve) over time, in line with this standard.

The 1982 Tylenol Recall

Cyanide-laced Tylenol capsules caused seven deaths in Chicago.

- Immediate public panic and a nationwide recall of 31 million bottles.

J&J's Response:

- Prioritized consumer safety by halting production and issuing a full recall.
- Communicated transparency through media, earning public trust.
- Introduced tamper-proof packaging, setting a new industry standard.

Importance to Our Research:

- Established the 'gold standard' for crisis communication strategies.
- Benchmark for evaluating how other brands handle crises.
- We will explore how modern strategies align with or diverge from this approach.

Data Collection & Corpus Building

Step 1: Using the language of a case study describing the famous J&J Tylenol recall, we developed a list of generally positive and/or striking words used to describe the events

- We then used this list of (10) words for analysis (i.e. to compare their usage/frequency/etc. within each respective decade's corpus)
- Crisis Communication Strategies (link)-J&J case study

Step 2: Corpus Building per Decade (Industry specific)

- Nexis Uni-Search Terms:
  - (Narrow by) News articles; Timeline (according to decade); Industry: Pharmaceutical & Biotechnology; Geography: North America; Search within results: "said"
- Then>Download> Range: 1-200 articles; File Type: .RTF (downloaded docs as RTF)
- Then> copy & pasted .RTF files into text (.txt) files into Jupyter
- 200 articles per decade; 1000 articles analyzed total
- Dimension: gauge public sentiment/media coverage/tone as proxy measure for crisis communication strategy effectiveness (i.e. was the tone positive, negative, etc.?)

Analysis Structure

Relevant Dimensions:

1) Individual Decade Corpus Analysis:
- **Popular, key words/lexical diversity:**
  - **frequency lists (tokens, Counter function)**
  - **Collocations (bi & trigrams)**
- **Sentiment/tone/syntax: sentence context, positive? negative? (KWIC functions using J&J word list)**
- **Discourse features: rhetorical devices, verbs (frequency lists)**

2) Change over time dimension: then compare each decade's corpus/corresponding analysis dimensions to each other (i.e. comparison/histogram plots using word frequency lists)

Following Analysis: 2–3 Specific Cases

- **Corpus: Direct, public company statements**

- **Same analysis strategies:**
  - **Word frequency analysis: Keywords defining "successful" strategies per company corpus (i.e. popular words used in apologies)**
  - **Tone/context analysis**
  - **Discourse features**
- **Compare each dimension across each company**

Analysis Steps

01 **Document Preparation:**
- Removed non-essential elements, such as tables of contents, and formatted documents into structured lists.
- Tokenized and normalized text to create a standardized word list.
- Flattened the resulting list to generate a comprehensive "word inventory" per decade (composed of all words in each news article)

03 **Contextual and Sentiment Analysis:**
- Leveraged KWIC() functions to analyze the corpus.
- Assessed tone (positive or negative) and contextual relevance using a predefined J&J–specific word list.

02 **Word Filtering and Frequency Analysis:**
- Excluded common "stop words" to focus on meaningful content.
- Conducted frequency counts using the Counter() function.
- Constructed bi–gram and tri–gram word combinations to identify recurring patterns and relationships.

Results

1980s:

- Corporate messaging reflected negative press and connotations regarding company actions and public image.

- There was ambiguity in accountability, particularly about who should bear responsibility for public health and safety issues.

- Reports indicated instances of test evasion/cheating.

- Greater emphasis appeared to be placed on maintaining corporate image rather than addressing public health concerns effectively.

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1990s:

- Notable improvements were observed in corporate messaging, with a greater mention of more secure safety methods/protocols.

- Ambiguity persisted, particularly around drug efficacy and the reliability of safety claims.

- FDA's role becoming central, though concerns about corporate transparency remained.

2000s:

- Messaging demonstrated a clear shift toward prioritizing public health and patient safety.

- Greater mention of "public health."

- Companies increasingly emphasized compliance with regulatory standards, including the need for longer and more rigorous drug studies.

- References to "quality assurance" and consumer safety became more frequent, reflecting a higher corporate commitment to addressing public concerns.

- Enhanced communication of safety warnings and trust-building marked a significant effort to rebuild credibility and strengthen consumer confidence.

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Next Steps

- Finish analysis for 2010s & 2020s.
- Conduct change over time analysis: gather observations from each decade & compile an overarching list of comparisons.
- Conduct more specific case analysis by centering on 2-3 industry-specific cases using same analysis steps/process as the first domain.
  - Develop a corpus for each specific case based on direct public statements made by the company (as opposed to second-hand material a.k.a. news)
- Apply same analysis strategies to gather the effectiveness of more specific strategy/company language.