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Słowa kluczowe: lingwistyka kognitywna, analiza dyskursu, wspomaganie korpusowe
Key words: cognitive linguistics, discourse analysis, corpus-assisted

A COGNITIVE PRAGMATICS APPROACH TO ANALYSING PRESS DISCOURSES

[...] language does not directly reflect the world. Rather, it reflects our unique human construal of the world1.

Introduction

The purpose of this article is to propose an approach to studying news discourses that is informed by theories of Cognitive Linguistics and makes use of the tools of corpus linguistics. For the most part, a linguistic approach to discourse relies heavily on the theories of Pragmatics. Application of Cognitive Linguistics tends to be limited to aspects of the Cognitive Metaphor Theory (CMT)2. Although these studies have provided interesting insights, Cognitive Linguistics claim the paradigm has much more to offer the field of discourse analysis. This paper is an attempt to sug-

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gest some of these applications, particularly in connection with the tools of corpus linguistics. This is also an attempt to present, to some extent, my current doctoral research which analyses the ways in which the written word is used in local and national press to conceptualize various sides of the debate over evolution education in the United States.

**Conceptualisation** is a cognitive process involving meaning creation that cannot be studied directly by the researcher. What are available for analysis are the words used to express conceptualisation. Within the framework of Cognitive Linguistics “linguistic structure is a direct reflex of cognition in the sense that a particular linguistic expression is associated with a particular way of conceptualising a given situation”\(^4\). Thus, the words people choose provide a link to their way of viewing a situation. Theories within Cognitive Linguistics such as the above mentioned CMT and Frame Semantics can help in identify how these conceptualisations are linguistically construed\(^5\).

However, as Harder argues, “invoking a conceptualization in communication is unsuccessful if the conceptualization is not mapped onto the discourse target as part of the process of understanding the utterance as a whole”\(^6\). One way in which entrenchment is both achieved and made apparent is through repetition\(^7\). In the context of the press, this would be seen in a proliferation of a metaphor or frame as the accepted way of viewing related events. One of the advantages of a corpus-assisted approach is its ability to reveal and provide statistical data regarding repeated or key words and phrases.

It is hoped that the triangulation of methodologies suggested in this paper will provide insight in to an extended cultural debate and will be able to contribute to ongoing work in a variety of fields, including various branches of linguistics, communication studies, and American culture.

I will begin with an overview of the debate and my source materials. This will be followed by arguments for the advantages of using the tools of corpus linguistics for discourse analysis. Then, I will give an overview of Cognitive Linguistics and the ways in which the framework may serve as a vantage point for observing linguistic conceptualisation in the debate over evolution education.

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3 I want to emphasise that the focus of this paper is to discuss the use of linguistic tools to analysis press discourse.


6 P. Harder, *Conceptual Construal*, p. 306.

7 *Ibidem*, p. 311.
Overview of the debate over evolution education in the US

Although controversy has accompanied the theory of evolution from its inception, it was not until after World War I that opposition became a serious political and legal issue in the United States. Between 1920 and 1929, thirty-seven pieces of legislation limiting the teaching of evolution were considered in 20 different states across the country. The first bill banning the teaching of human evolution that included a penalty clause became law in Tennessee in 1925. Almost immediately, the American Civil Liberties Union (ACLU) advertised free legal services should someone want to test the law. In hopes of boosting its popularity and economy, the city of Dayton responded. They ‘arrested’ John T. Scopes, a teacher who agreed to cooperate and testify that he had covered the forbidden subject while substituting for a biology class. The result was the now well-known ‘Scopes Monkey Trial’ of the same year in which progressive William Jennings Bryan came head to head with iconoclast Clarence Darrow. Scopes was fined 100 dollars, which was later repealed on a technicality, but it was an inconclusive win for the prosecution. Although, in the aftermath of the trial, the word evolution was virtually removed from US public school textbooks until the 1960s, the ACLU was successful in its secondary aim: to portray the thinking behind such laws as intolerant and ignorant.

The debate disappeared from the public scene until the late 1950s when new science standards were prepared. In the 1960s lawyers and teachers fought successfully to allow the teaching of evolution. Creation science also developed during that decade, the teaching of which in public schools was declared unconstitutional in the 1980s. The late 1980s and early 1990s saw the emergence of the Intelligent Design (ID) movement. Current debates focus on how to teach evolution, the scientific validity of ID, and whether or not the theory of evolution can/should be taught as ‘controversial’ within the scientific context.

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8 R. Numbers, Darwinism Comes to America, Massachusetts 1998, p. 88.


13 Examples are recent bills passed in Louisiana and Tennessee in 2012.
Source Material

The US Press is clearly not a homogeneous group. On the contrary, it includes a large number of publications written by diverse individuals. Furthermore, these publications include a wide variety of writing such as news stories, book reviews, editorials, and letters to the editor. Recognizing the difficulty, if not impossibility, of collecting the entirety of publications discussing evolution education, the decision was made to select a set of articles relevant to the topic from the last ten years (January 2003 – December 2012). Furthermore, because echoes of the Scopes trial continue to be felt and reflected in press coverage, the analysis will include a ten year period around the Scopes’ Trial (March 1923 – February 1933). See Figure 1 below.

The decision to start in 1923 was due to the fact that “Time Magazine”, the only newspaper or magazine with a fully digitalized archive covering the Scopes Trial, began publication in March of that year. The ten year period was chosen by convention. For this set of articles, the general search term “evolution” was used, followed by a removal of articles that addressed non-biological evolution. This material was supplemented with 13 articles on the trial written by journalist H. L. Mencken, who coined the phrase “Monkey Trial”. To include opinions of comparative weight for the anti-evolution side, two publications by William Jennings Bryan were also included, The Menace of Evolution and Bryan’s closing argument at the Scopes Trial.

Regarding the modern sub-corpus, as both access to electronic data bases and the writing on evolution has increased substantially, the search terms used could be much more specific. These articles were gathered using ProQuest National News Core, ProQuest Research Library and Ebscohost MasterFILE Premier. ProQuest provided nation-wide base of news and magazine articles. The Ebscohost data base was used to search for articles published in states where the debate over the teaching of evolution has been particularly visible. The articles for both sub-corpora were then searched manually to ensure relevance.

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14 While it is possible to access articles from other newspapers and magazines from that time period, they tend to be photographs of the original article/microfiche and cannot be read by the software used for this analysis.

15 Examples of articles excluded include those about changes in literature, art, or other aspects of society and culture.

16 The idiomatic use of “Monkey” has inspired a variety of creative compounds over the last eight decades, from “Monkeytown” (for Dayton in 1925) to “Monkey bill” (for the 2012 Tennessee legislation).


18 Not all states that debated evolution education have been included, but only those from which over 30 articles on the topic could be found.
Figure 1. Evolution Education Corpus\textsuperscript{19}

<table>
<thead>
<tr>
<th>Subdivision</th>
<th>Source</th>
<th>Search terms</th>
<th>Texts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scopes’ era (March 1923 – February 1933)</td>
<td>Time Magazine</td>
<td>evolution</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td>Menken’s Scopes’ Trial Articles</td>
<td>NA</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>William Jennings Bryan</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Total Scopes Era</td>
<td></td>
<td></td>
<td>195</td>
</tr>
<tr>
<td>Modern ‘National’ (2003–2012)</td>
<td>ProQuest Research Library (magazine articles)</td>
<td>ab(evolution OR creationism OR “intelligent design”) AND ab(education OR school OR classroom OR teach* OR taught)\textsuperscript{a}</td>
<td>256</td>
</tr>
<tr>
<td></td>
<td>ProQuest National Newspapers Core</td>
<td>ab(evolution OR creationism OR “intelligent design”) NEAR/4 ab(education OR school OR classroom OR teach* OR taught)</td>
<td>268</td>
</tr>
<tr>
<td>Total Modern ‘National’</td>
<td></td>
<td></td>
<td>524</td>
</tr>
<tr>
<td>Modern ‘Local’ (2003–2012)</td>
<td>Texas</td>
<td>(evolution OR creationism OR “intelligent design”) AND (education OR teach' or classroom OR taught)</td>
<td>107</td>
</tr>
<tr>
<td></td>
<td>Tennessee</td>
<td></td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>Kansas</td>
<td></td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>Pennsylvania</td>
<td></td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>Ohio</td>
<td></td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>Florida</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>Total Modern ‘Local’</td>
<td></td>
<td></td>
<td>374</td>
</tr>
<tr>
<td>TOTAL – ALL SOURCES</td>
<td></td>
<td></td>
<td>1103</td>
</tr>
</tbody>
</table>

\textsuperscript{a} The * is used in conducting corpus searches to indicate “teach” with any letters following ie. teacher, teaching.

Although “any corpus is a compromise between the desirable and the feasible”\textsuperscript{20}, it is hoped that the combination of these articles will provide a representative sample of how national and local press – both in news stories and editorials – conceptualize this conflict.

\textsuperscript{19} The numbers are approximate. Further divisions are planned to remove irrelevant sub-articles in sections such as letters to the editor and book reviews which contain several texts in one article. These texts, as well as the other articles, will be also be marked according to general attitude towards evolution education.

Corpus-assisted discourse studies (CADS)

Analysis of newspapers for discourse content has traditionally been done manually. This allows for a more detailed analysis of the text(s) and surrounding cultural and social context; however, as Baker et al.\(^\text{21}\) note, discourse analysts have themselves recognized the weaknesses of this method. Firstly, the number of text(s) that one can include in a manual study of discourse is limited, which raises questions as to which texts(s) to choose and how to ensure that the texts chosen are representative, and not affected by researcher bias. Secondly, some discourses are only visible when seen through their repetition over a variety of articles.

These weaknesses can be surmounted through the application of the tools provided by corpus linguistics. For this particular project I will primarily be using WordSmith\(^\text{6}\)\(^\text{22}\). Among other things, this program calculates a list of words in the text(s) and their frequency; provides statistically defined lists of keywords\(^\text{23}\), collocates and word clusters; and allows the researcher to call up a concordance of any words, or sets of words, that demand further analysis.

Using a software tool such as WordSmith6 makes it possible to study a greater number of texts, thus reducing the risk of selection bias and increasing the likelihood of uncovering discourse trends across the board. Furthermore, it generates quantitative data to accompany the qualitative analysis through providing frequency lists and statistical values for collocations and keywords.

Some researchers have criticized the application of corpus in discourse analysis for ignoring context. However, this critique is unsubstantiated, as shown by researchers who have competently incorporated insights from both context and corpus lines when making their conclusions\(^\text{24}\). This is exemplified in the CADS approach, which Partington, who coined the phrase, summarizes as “the investigation and comparison of features of particular discourse types, integrating into the analysis, where appropriate, techniques and tools developed within corpus linguistics”\(^\text{25}\). Thus the possibilities for statistical analysis made available through corpus linguistics are used in conjunction with other theoretical approaches to linguistic and non-linguistic meaning. This is also the perspective from which I approach the possibilities made available by corpus tools.


\(^{23}\) Keywords are words that are statistically more frequent in the text under analysis than they are in a reference corpus of the same language.


While corpus-assisted analysis does not limit itself to a particular school of linguistic thought, it does represent a usage based approach to meaning and thus corresponds to the theoretical groundwork of Cognitive Linguistics. In fact, Gries argues that the two approaches complement each other well.

The Cognitive Pragmatics Approach

What sets cognitive linguists apart from other traditions is their focus on usage-based meaning, the role of cognitive processes involved in meaning creation, and commitments to the developments in the cognitive sciences as a whole. In this section will look at three theories within the Cognitive Linguistic paradigm and their application for discourse analysis: the encyclopaedic approach to meaning, Frame Semantics, and the Conceptual Metaphor Theory.

Encyclopaedic meaning

The traditional view of linguistic meaning makes a distinction between semantics (what a word means) and Pragmatics (how that word is used). It views semantic meaning as something that can be decontextualised. Cognitive Linguistics rejects such a dichotomy, arguing that lexical items serve as prompts to a set, or sets, of encyclopaedic meanings which are used and manipulated by discourse participants in real-time meaning construction.

To give an example of the difference between a traditional approach to lexical meaning and an encyclopaedic approach, consider the word *scientist*. A scientist can be defined as “a person who is studying or has expert knowledge of one or more of the natural or physical sciences.” However, a person’s encyclopaedic knowledge might include work environment: *lab, beaker*; research: *cancer, vaccines*; or fictional characters: *Doc Brown, Doctor Who, Dr. Frankenstein*. Furthermore, character traits a society identifies as belonging to scientists such as *hardworking, objective, and innovative* might also compose part of the readers understanding of *scientist*.

This is not the same as the meaning that results from context. The context in which a lexical item is used serves as a guide for accessing the most appropriate sense or meaning of that item in real time processing. For example, the context of

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28 See: V. Evan, M. Green, *Cognitive Linguistics*.
a film review of Back to the Future would prompt for a different conceptualization of scientist than a report on a recent medical breakthrough. Hence, when the source of an article on an issue of medical research, technology, or, in this case, evolution, is identified as a scientist, certain implicatures are present according to the encyclopaedic knowledge that is activated. These might include that the information provided is reliable, unbiased, sound, and expert. Not only does that suggest reasons as to why scientists often feature in advertisements, but also as to why there is so much debate as to what constitutes a “real scientist” in the context of the debate over evolution.

While cognitive linguists will talk of prototype, core, or salient meanings, they will not accept the idea of context independent meaning. This is because “when we engage in any language activity, we draw unconsciously on vast cognitive and cultural resources, call up innumerable models and frames, set up multiple connections, coordinate large arrays of information, and engage in creative mappings, transfers, and elaborations.” Inevitably, as will be shown below, semantic and pragmatic meaning become blurred as a ‘simple’ lexical choice may activate frames, provide perspective, suggest a scale of values, and establish mental mappings for figurative and literal comparison.

Frame Semantics

Perspective includes the way language is used to present a certain image or construal of an event. One explanation for perspective, developed for linguistic application by Fillmore, is Frame Semantics: the theory that the words we use activate frames or schemas of world knowledge. For example, shore and coast both refer to the place where a body of water meets land. However, shore activates a [travel by water] frame, whereas coast activates a [travel by land] frame. In this way, frames can be seen as a way of structuring encyclopaedic knowledge.

Fillmore adds that linguistic construal can also include assumptions about the culture and values of a society in which the word is used. The word heretic “presupposes an established religion, or a religious community which has a well-defined notion of doctrinal correctness”. This is but one example of how application of Frame Semantics can be applied to pragmatic notions of presupposition.

Adjectives also call up different frames of cultural knowledge and values. Fillmore gives the examples of stingy and thrifty, which can both be used to explain

32 C. Fillmore, Frame Semantics, p. 384.
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the same financial decision. However, each activates pragmatic scales within different frames: *Stingy*: generous; *thrifty*: wasteful. The frame activated is at least as revealing of the speaker/writer’s perspective on the event as it is of the facts of the transaction (or lack thereof): “objective properties do not determine the content of understanding”\(^{33}\).

Furthermore, framing accounts for two ways of negating a given construal. Negation can occur within the frame: *Actually, in his financial situation, that was quite generous*. In this case the frame is accepted but the interlocutor disagrees with the application of the *stingy*: generous scale. An alternative response might be *he isn’t stingy he’s thrifty*, whereby the original frame is rejected and a replacement frame is suggested\(^{34}\). Coulson describes how the controversy over abortion in the US is not a result of different definitions of “life”, but of viewing “life” through different frames and background assumptions\(^{35}\).

In the debate over evolution opponents can argue over the level of scientific certainty regarding the claims of evolution (scalar, within the frame). This is seen in attempts to emphasise the theoretical nature of evolution, as in the text the Dover, Pennsylvania school board required its ninth grade biology teachers to read, resulting in the above mentioned trial\(^{36}\). Alternatively, it can be presented as a conflict between science and religion (between two frames). One example of this in practice is the suggestion that the controversy over evolution can be taught, but in a history, culture, or comparative religion class, not in a science class. This shifts the controversy from the [applied science] frame to the [social sciences] frame.

From the examples above, we can see that Frame Semantics can be useful addressing pragmatic issues from the perspective of cognition: “[...] language is rarely neutral, but usually represents a particular perspective, even when we are not consciously aware of this as language users [...]”\(^{37}\).

Cognitive Metaphor Theory (CMT)

As mentioned in the introduction, one very productive application of Cognitive Linguistics to discourse analysis has been in the area of metaphor and metonymy. Most of this work can be traced back to publication of *The Metaphors We Live*...
By[^38], in which the authors present the CMT. They make the claim that metaphor is not merely a linguistic phenomenon. On the contrary, metaphorical associations are located at the conceptual level and based on our physical experience of the world (embodied). Linguistic realizations of the same conceptual metaphor are various; however, when we identify the conceptual metaphors underlying their linguistic expression, we are able to learn how a person or society conceptualises a particular subject. For example, one often cited conceptual metaphor they suggest is ARGUMENT IS WAR. This is then realized linguistically in such phrases as your claims are indefensible and he attacked every weak point in my argument[^39]. While not all of the conceptual and linguistic metaphors proposed by Lakoff and Johnson have held up under the scrutiny of corpus analysis and there is some debate as to whether the examples above support ARGUMENT IS WAR or ARGUMENT IS A GAME[^40], the centrality of metaphor and metonymy to cognitive processes is now widely accepted within Cognitive Linguistics. Regarding the debate over evolution, the presence of lexicalized WAR metaphors in the corpus comes as little surprise; however the lexicalization of ARGUMENT IS A GAME is present as well, as exemplified in Figure 2.

Figure 2. Lexical examples of ARGUMENT IS WAR/GAME in corpus headlines

| ARGUMENT IS WAR                        | (1) Intelligent Design Prof. Under Fire at Baylor’s Church-State Institute  |
|                                      | (2) Creationism Crusade                                                    |
|                                      | (3) Battlefield Report from the Evolution War                               |
| ARGUMENT IS A GAME                    | (4) Intelligent Defense                                                     |
|                                      | (5) Time for Science to Go on the Offense                                  |
|                                      | (6) Evolution Lawsuit Opens With Broadside Against Intelligent Design      |

These are not the only ways in which the debate is conceptualised metaphorically. Furthermore, even in cases where the conceptual metaphors are the same, the perspective provided may differ. For example, the phrases expressing the debate as a GAME could be forced to fit the following chronological order: (5), (6), (4); alternatively, they could be seen as complements to the different perspectives in (1), (2), and (3). In (1) ID is under attack; in (2) creationists are portrayed as aggressors; in

[^39]: Ibidem, p. 4.
(3) no side is villanised. Hence, identification of Conceptual Metaphors is only one step in understanding how their usage expresses the journalist’s conceptualisation of the debate.

One of the questions for further analysis will be which conceptual metaphors are the most salient or entrenched in the press discourse sampled and whether this differs according to genre, location, or author’s stance on the debate.

Conclusion

To conclude, I would like to quote Fauconnier on the relationship between Cognitive Linguistics and Pragmatics. “Within cognitive frameworks for studying meaning construction, many standard issues of Pragmatics remain as important as ever – we seek to account for scalar phenomena, speech acts and performatives, presupposition, referential opacity, so-called figurative speech, metonymic pragmatic functions, and implicature – but old problems are framed in novel ways”\(^{41}\). It is my hope that this article can be a step forward in showing how some of the issues of Pragmatics can be formed in new ways within the paradigm of Cognitive Linguistics. As the paradigm is usage based, conclusions will be drawn, not through introspection, but from the data present in the corpus.

Summary

The purpose of this article is to propose an approach to studying news discourses that is informed by theories of Cognitive Linguistics and makes use of the tools of corpus linguists. It is also an attempt to present, to some extent my current doctoral research into conceptualisation of the debate over evolution education. It is hoped that the triangulation of methodologies will contribute to ongoing work in fields such as linguistics, communication studies, and American culture.

LOGIKA KOGNITYWNA W ANALIZIE MEDIALNYCH Dyskursów InforMACYjNYCH

Streszczenie

Artykuł ma na celu zaproponowanie metody badania medialnych dyskursów informacyjnych, czerpiącej z osiągnięć lingwistyki kognitywnej oraz narzędzi wypracowanych na gruncie lingwistyki korpusowej. Stanowi on również próbę zaprezentowania badań prowadzonych przez autorkę w ramach przygotowywania rozprawy doktorskiej na temat konceptualizacji debaty toczącej się wokół nauczania w szkołach amerykańskich o ewolucji człowieka. Zaproponowana w pracy metodologia może okazać się pomocna w badaniach prowadzonych w dziedzinach lingwistyki, komunikacji społecznej oraz kulturoznawstwa amerykanistycznego.