Critical Discourse Analysis as a Theory and Review Methodology

Research-in-Progress

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Abstract

Research disciplines and subdisciplines are steeped in epistemological beliefs that guide and constrain research. These beliefs both enable scientific inquiry and limit scientific progress. Theory and review papers tend to be a means for reproducing ideological assumptions. However, review papers can also challenge ideological assumptions. This paper presents a method for systematically conducting critical reviews of IS literature by employing Habermasian strains of critical discourse analysis.

Keywords

Critical discourse analysis, Habermas, literature review, hegemony.

Introduction

Research disciplines are steeped in epistemological beliefs that guide and constrain the assumptions researchers make about phenomena and the way they study phenomena (Fleck 1979; Kuhn 2012; Lincoln et al. 2011; Orlikowski and Baroudi 1991). Within any discipline, research is often dominated by a small and dominant set of theoretical assumptions that persist until a different set of assumptions prove more useful (Fleck 1979; Foucault 1970; Kuhn 2012). That is, scientific disciplines suffer from ideological hegemonies. An ideological hegemony occurs when researchers within a discipline or subdiscipline become ingrained in viewing a phenomenon as commonly presented in prior research (Fleck 1979; Kuhn 2012). The word hegemony conjures thoughts of intentional structuring of ideologies by powerful elites; however, ideological hegemonies are not necessarily developed intentionally. Although “movers and shakers” within a discipline may act as barriers to publishing new ideas in mainstream journals (Straub 2009), researchers may innocently reproduce ideological assumptions as they read and build on existing research (Maxwell 2013).

Ideological hegemonies penalize and disincentive research which fails to conform with dominant ideologies (Kuhn 2012). In this way, ideological hegemonies limit the understanding of phenomena. However, hegemonies must not be viewed as entirely negative. Ideological hegemonies allow for continuation of thought across studies. Without ideological hegemonies, incremental advances in theories and scientific procedures would not be possible, and chaos would likely ensue (Foucault 1970; Kuhn 2012). However, ideological hegemonies do not last forever. Revolutions occur within science and within particular disciplines and subdisciplines (Fleck 1979; Foucault 1970; Kuhn 2012). These revolutions stem from the consideration of theoretical assumptions that are incompatible with those supported by the ideological hegemony or stem from the search for new epistemological foundations to explain disparate findings (Fleck 1979; Kuhn 2012). In summary, ideological hegemonies and scientific revolutions are both necessary for the development of scientific thought.

The information systems (IS) discipline has been subject to ideological hegemonies. For example, Orlikowski and Baroudi (1991) showed that the IS discipline was heavily dominated by positivist research. They found that IS researchers mostly adopted a realist ontology and an objectivist epistemology. At the time, IS research mostly neglected interpretive and critical research perspectives. Since 1991, the
disciplinary progress toward more diverse inquiry (Klein and Myers 1999; Myers and Klein 2011; Walsham 2006), though the journey continues. Similarly, the IS discipline has been criticized for producing few theories, prompting calls for more theory and review papers (Markus and Saunders 2007; Weber 2003; Webster and Watson 2002). Subdisciplines within the IS discipline have also suffered from ideological hegemonies. Information security (InfoSec) research, for example, has been mostly devoid of theory and empirics, has primarily focused on technical topics, and is slow to progress relative to the larger IS discipline (Siponen et al. 2008).

Literature reviews and theory and review papers may be a major source from which ideologies are reproduced and hegemonies established and maintained (Maxwell 2013). Yet, theory and review papers are essential in guiding research within a discipline (Webster and Watson 2002). Webster and Watson (2002) identify two types of review papers. The first type synthesizes existing literature and is ideal for mature bodies of research. The second type proposes theoretical foundations for emerging bodies of research. In both cases, if researchers are blinded by ideological hegemonies, the results of a review are likely to reproduce the assumptions found in existing research. Though such reviews may produce avenues for future research, the identification of research gaps may be constrained by the dominant ideological perspectives. Given advice to avoid excessive criticism in research (Straub 2009; Webster and Watson 2002), reproducing ideologies may be difficult to avoid. These constraints are the nature of what Kuhn labels normal science (Kuhn 2012). Unfortunately, the issue of ideological reproduction is not simple to remedy, as reproduction is both harmful and necessary to scientific progress.

Based on these ideas, literature reviews must not only reproduce existing ideologies, but they must also challenge ideological hegemonies. This need not and probably should not occur in a single review paper. That is, some reviews may be dedicated to synthesizing and reproducing a particular ideological perspective, while other reviews may seek to identify and challenge existing ideological assumptions. Researchers have developed useful mechanisms and schemas for coding and synthesizing research (e.g., Webster and Watson 2002), such as the narrative review, statistical meta-analysis, and taxonomy-based reviews (Aksulu and Wade 2010; Blake and Pratt 2006; Joseph et al. 2007). These review types reproduce ideological assumptions. However, the IS discipline has not invested heavily in the development of systematic mechanisms for conducting critical reviews to challenge ideological assumptions. Given the need for a systematic critical review process, we attempt to develop a critical review method in this paper.

Our method for conducting literature reviews seeks to identify and challenge ideological hegemonies in research, particularly in top mainstream journals. Mainstream research in top journals carries dominant ideologies to a large audience. Publishing in top journals is also directly related to career progression. Thus, top mainstream journals represent important sources from which to conduct critical reviews. Our method should be used in conjunction with current literature review methods and should not be overused. Constant criticism diminishes scientific development, but a lack of criticism only reproduces existing ideological assumptions (Kuhn 2012).

Importantly, our method may provide a way for the powerful “movers and shakers” within a discipline to participate in scientific revolutions. Scientific revolutions are often led by young scholars, because they are less steeped in the traditions of the discipline (Kuhn 2012). However, developing a systematic process for questioning key assumptions in a discipline may produce enough structure for “movers and shakers” to step outside of their thought patterns to view phenomenon from new perspectives.

Our method is based on Habermasian strains of critical discourse analysis (CDA) (e.g., Cukier et al. 2009). Critical discourse analysis views the use of language and the creation of discourse, such as journal publications, as social practice that is constrained by hegemonic powers (Fairclough et al. 1997). CDA attempts to identify hegemonies and hegemonic ideas reproduced in text. Thus, CDA offers an ideal means to assess the ideological assumptions that may be reproduced in research disciplines. Further, Habermasian CDA attempts to identify claims in text that impede the development of ideal speech communities—communities of discourse in which individuals can freely make assertions and assess others’ assertions in the absence of coercive, hegemonic powers (Habermas 1984).

Ideal speech communities are essential aims of scientific discourse. That is, scientific discourse is meant to produce debate around ideas with the best ideas receiving greater weight. Habermasian CDA identifies conscious and unconscious deception in communication in order to challenge hegemonies and move toward an ideal speech community (Cukier et al. 2009). We view ideological hegemonies in research
disciplines as a form of mostly unconscious deception. Our method has the potential to identify ideological hegemonies and highlight subjugated and ignored assumptions that could offer new perspective to the study of a phenomenon.

Given the length requirements for this paper, we now present the method and describe our progress in conducting an empirical example of the method.

A Critical Review Methodology

Our review method is an adaptation of the Habermasian CDA methodology proposed by Cukier et al. (2009). Cukier et al. developed an empirical method of CDA that examines communication for validity claims—truthfulness, legitimacy, and comprehensibility of the communication and sincerity of the speaker—proposed in Habermas’ theory of communicative action (Habermas 1984). In an ideal speech community, communication is directed toward achieving mutual understanding. However, communication in a community may also be strategically oriented toward influencing and manipulating others, and distorting others’ perceptions. Strategic forms of communication are in opposition to developing mutual understanding and are viewed as deceptive. Cukier et al.’s method identifies deceptive communication in discourse. The method relies on qualitative and quantitative analysis of texts to identify deception. Their method is based on three fundamental principles and four steps.

**Fundamental Principles**

Our review method is based on the three principles identified by Cukier et al. which we adapt and extend to fit the academic review process. We identify four principles below that should guide critical reviews.

**Principle 1: Assume an Ideal Speech Community**

When conducting a critical review, researchers should assume that publications are oriented toward achieving mutual understanding about a phenomenon. However, the researcher is responsible for testing each publication for the veracity of validity claims. By assuming an ideal speech community, researchers frame deceptive communication as an instance of hegemony that can be challenged to reestablish an ideal speech community (Cukier et al. 2009).

**Principle 2: Assume any Deception is Primarily Unconscious**

Deceptive communication can be conscious or unconscious (Cukier et al. 2009). However, when testing publications for the veracity of validity claims, in general, it is important to assume that any deception is unconscious. The purpose of our method is to identify assumptions that dominate research and not to identify individuals who or institutions that cling to a particular ideology. It may make sense to challenge media outlets as conscious, deceptive actors; however, accusations in scientific disciplines may undermine the trust and collaboration necessary to advance scientific understanding (Webster and Watson 2002).

Critical reviews should primarily critique the ideologies and not vehemently accuse authors or institutions. This is similar to Webster and Watson’s (2002) call for concept-centric and not author-centric reviews. CDA could be used to critique institutions and their structures; however, this is not the primary purpose of our review method. Our method seeks to identify dominant ideologies and alternative ideologies to spark academic debate. Such debates are the foundation of scientific progress (Kuhn 2012). Still, highlighting publication processes and practices that may lead to ideological hegemonies should be considered, possibly in discussion sections of critical review papers.

**Principle 3: Test all Publications for Each Validity Claim**

Researchers must assess each of Habermas’ validity claims in every publication. If a publication or body of publications fail any of the validity tests, the communication is labeled as deceptive (Cukier et al. 2009). Researchers should highlight common failures and provide suggestions for improvement. However, deception in communication should be viewed primarily at the level of the discipline. Thus, researchers should focus on aggregate findings about deception.
Principle 4: Conduct Reviews Within and Across IS Subdisciplines

The IS discipline consists of a variety of diverse subdisciplines. Researchers can use our method to examine IS subdisciplines or the IS discipline as a whole. Examining individual subdisciplines allows researchers to critically assess ideological assumptions particular to a phenomenon, such as IS use, information security policy compliance, or the value creating potential of IS. Researchers can also critically examine literature across IS subdisciplines. Testing across IS subdisciplines would necessitate the examination of higher-level ideological assumptions, such as examining the use of research paradigms. Some topics, such as discourse about IT artifacts, influence the entire discipline and should be addressed at the level of the discipline. Researchers should critically assess the assumptions made in these publications and highlight alternative perspectives in order to open debates about assumptions.

Analysis Steps

Our CDA review method is founded on the four steps in Cukier et al.’s CDA method. We adapt and extend these to fit the literature review process. We identify six important steps in conducting a CDA review, namely: 1) problem identification, 2) literature specification, 3) development of codes for validity claims, 4) content analysis and coding, 5) reading and interpretation, and 6) explanation of findings. The process is not linear; Steps 3, 4, and 5 may be iterative. In step 3, researchers develop an initial coding schema based on the purpose of the review. As researchers code and read the publications in Step 4 and 5, new codes may arise requiring the researchers to return to Step 3 for the newly developed codes.

Step 1: Problem Identification

Review papers require extensive work (Webster and Watson 2002); therefore, researchers should carefully assess the need to conduct a critical review. Before conducting a full-scale critical review on a body of literature, researchers should assess the potential that an ideological hegemony could exist within the discipline. A simple review of a representative sample of the literature based on specific criteria may be sufficient to suggest the need for a full-scale critical review. Prior literature reviews may be sufficient to warrant further examination as well. For example, Orlikowski and Baroudi (1991) noted a lack of paradigmatic diversity in IS research. Their findings could have signaled the need for a deeper, critical review. Criteria for identifying potential ideological hegemonies might include: lack of diversity in the use of research paradigms, theories, and methods, and consistency in definitions of a phenomenon or the lack of adequate definitions. Researchers should look for potential issues within particular IS subdisciplines or across subdisciplines as suggest by Principle 4.

The above criteria is sometimes used to argue about the maturity of a discipline. For example, few theories may suggest that a discipline has resolved theoretical contentions, and consistent definitions of a phenomenon may demonstrate convergence on the “true” phenomenon. However, they also represent the potential for a mature and powerful ideological hegemony. Thus, researchers should take the criteria above and other relevant criteria as a warrant to conduct a more thorough, critical review in order to ensure that an ideal speech community exists within the discipline. This is consistent with Principle 1. After researchers have conducted a critical review within an IS subdiscipline, researchers should conduct periodic evaluations of the progress of the subdiscipline. These periodic evaluations can be less extensive than the full-scale critical review described in this paper.

Step 2: Literature Specification

Researchers must begin by selecting an appropriate set of publications to analyze. First, researchers must decide whether to critically analyze discourse within a particular subdiscipline or across subdisciplines. This is consistent with Principle 4.

Second, researchers must choose a set of publication outlets to explore. In most cases, researchers should collect publications from the discipline’s top journals. The top journals represent mainstream perspectives (Clark et al. 2011) and tend to have the greatest influence on tenure decisions (Straub 2009). Thus, dominant ideologies found in top journals represent a potentially strong and harmful source of hegemonic power that can influence the diversity of scientific thought as well as the livelihood of researchers. CDA is
concerned with identifying constituents that have the power to strategically influence communication (Fairclough et al. 1997). Thus, a focus on top journals is appropriate.

The selection of outlets should be considered carefully, because the selection process may have implications for the results of the analysis. For example, if novel assumptions are subjugated to lower-tier publication outlets, including articles from the lower-tier outlets in a critical review could lead to an underestimation of the strength of any ideological hegemony with in a subdiscipline. However, if the ideological hegemony is pervasive across publication outlets, researchers may desire to include a greater set of outlets in order to show the full extent of the hegemony.

**Step 3: Development of Codes for Analysis**

After collecting publications for the review, researchers must develop a coding schema that empirically represents Habermas’ four validity claims. Cukier et al. (2009) provide a set of codes which researchers can use as a foundation for critical investigations of discourse. Table 1 presents their coding schema with adaptations for the academic context. We present an adaptation of their schema as a guideline, but we believe that researchers should actively adapt the schema to fit the purpose of the review. Along with the coding schema, codes may arise during the initial examination of the literature in Step 1. Further, researchers should be open to adapting their coding schema as they examine the publications. Codes pertinent to the literature may arise during the coding process. If new codes arise, researchers should recode previously coded articles for the new codes.

<table>
<thead>
<tr>
<th>Validity claim</th>
<th>Criteria for ideal community</th>
<th>Potential distortion</th>
<th>Validity test</th>
<th>Speech elements for empirical analysis</th>
<th>Section of publication to analyze</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensibility</td>
<td>What is said is audible (or legible) and intelligible.</td>
<td>Confusion</td>
<td>Is the communicatio n sufficiently intelligible? Is the communicatio n complete? Is the level of detail too burdensome for the reader or hearer?</td>
<td>Undefined theoretical concepts; Excessive undefined scientific jargon</td>
<td>Introduction section; Literature review section; Methodology section</td>
</tr>
<tr>
<td>Truth</td>
<td>The propositional content of what is said is factual or true.</td>
<td>Misrepresentat ion</td>
<td>Is evidence and reasoning provided sufficient?</td>
<td>Argumentatio n; Methodologic al rigor</td>
<td>Theory section; Methodology section</td>
</tr>
<tr>
<td>Sincerity</td>
<td>The speaker is honest (or sincere) in what she says.</td>
<td>False Assurance</td>
<td>Is what is said consistent with how it is said?</td>
<td>Connotative language; Hyperbole; Metaphor; Jargon</td>
<td>Discussion section</td>
</tr>
<tr>
<td>Legitimacy</td>
<td>What the speaker says is right or appropriate in the light of existing</td>
<td>Illegitimacy</td>
<td>Are competing ‘logics’ equally represented?</td>
<td>Comparison to research in subjugated publication outlets; Comparison to</td>
<td>Entire document</td>
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norms or values.

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<th>norms or values.</th>
<th>related research in other disciplines; Comparison of concept definitions across publications</th>
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Table 1. Coding Schema for Analysis of Publications, adapted from (Cukier et al. 2009)

Comprehensibility claims can be tested by examining definitional clarity within the publications. Researchers conducting a critical review might ask: How many important concepts are left undefined? Additionally, how many scientific jargon words are left undefined? Answers to these questions provide empirical evidence for comprehensibility claims. Unlike Cukier et al. (2009), we are less concerned with issues of sentence syntax. We assume that syntactical errors are mostly resolved during the review and editorial process. However, if researchers examine publication outlets that are not peer reviewed or edited, syntax may be important to consider. Definitions are typically included in the introduction and literature review sections of a publication. Methodology sections may also be dominated by overly complicated details and jargon, diminishing comprehensibility. Thus, researchers may focus on these areas of the document as they test comprehensibility claims.

Truth claims can be tested by examining argumentation (Cukier et al. 2009) and methodological rigor in the publications. Methodological rigor must be appropriately defined for different types of research. For example, rigor is different in positivist and interpretive research (Klein and Myers 1999). Researchers may examine documents to determine whether evidence warrants the claims the authors are making, whether the methods are appropriate to answer the research questions, and whether bias is adequately controlled given the method and research paradigm. Researchers should primarily look to the theory and methods sections of publications to determine truth claims. Theory sections contain authors’ argumentative claims about a phenomenon and methods sections contain information about how theories are tested or derived.

Sincerity claims can be tested by examining the existence of connotative language, hyperbole, metaphor, and jargon (Cukier et al. 2009). Violations of sincerity are false assurances made in a document. Authors must be cautious in their claims of causality and generalizability. In positivist research, causality is difficult if not impossible to establish. Experimental designs can approximate causation, but controlling for spurious relationships and the numerous forms of bias is difficult. Survey methods, unless experimental, are even less capable of establishing causality as they often fail to capture temporal precedence. In qualitative and interpretive research, discussions of reflexivity are important (Denzin and Lincoln 2005). Failing to address how a researcher’s biases may affect the co-creation of research results is contrary to the epistemological stance of interpretive research (Lincoln et al. 2011). Claims of generalizability are issues in all forms of research. Claims must be bound to the populations sampled. Thus, authors must be careful in their claims about their results. Discussion sections of publications may be particular vulnerable to violations of sincerity. Authors may unconsciously violate sincerity claims as they attempt to summarize results and identify contributions to IS practice.

Finally, legitimacy claims can be tested by comparing ideologies in the body of literature to ideologies found in literature from subjugated IS publication outlets or other related disciplines outside of the IS discipline. Researchers conducting a critical review must assess differences in definitions of key concepts, research paradigms, theories, methods, units of analysis, and other aspects of research that may interest the researcher. The researcher must then assess the extent to which some definitions, paradigms, etc. dominate discussions of the phenomenon within the IS discipline. The researcher should also consider the way social actors are represented. For example, researchers may question whether employees are viewed as threats or assets in the literature. The researcher may need to examine the entire document to test legitimacy claims.
Step 4: Content Analysis and Coding

After collecting publications for the review and developing a coding schema, researchers must code the document using the coding schema. This is consistent with Principle 3. Step 4 is designed to “identify empirical observations pertaining to validity claims and to determine frequency use of specific arguments” (Cukier et al. 2009, p. 182). Content analysis software can be used to facilitate the coding process. The quantitative observations derived through the analysis and coding process provide support for qualitative assessments made in Step 4. Cukier et al. (2009) suggests that analysis should occur within individual data points and across data points to highlight instances of hegemony and the strength of the hegemony. Thus, researchers should code individual publications and across publications.

Researchers might examine empirical counts of: words pertaining to important topics and ideas, counts of different definitions of key concepts, counts of theoretical perspectives, counts of methods employed in the papers, counts of jargon words, and other pertinent factors derived from the coding schema. Word counts might include empirical observations such as counts of positively or negatively framed adjectives and counts of verbs that describe actors’ actions. Dictionaries can be adopted or developed to facilitate and systematize the coding of word counts.

Step 5: Reading and Interpretation

After collecting quantitative empirical data through content analysis and coding, researchers should read through the publications to extract qualitative insight pertaining to the four validity claims. That is, researchers should examine the major assumptions and assertions made in the publications and test the assumptions and assertions against Habermas’ four validity claims. Reading of the publications should focus on the general orientation of the speaker and should not focus on “the level of the sentence or micro-textual level” (Cukier et al. 2009, p. 179). Although individual sentences are analyzed, decisions about the document or body of literature should be made at an aggregate level. Additionally, researchers should assess each validity claim separately, but their decisions about the communicative intent of the document should be made based on a cumulative understanding of all of the validity claims (Cukier et al. 2009).

The qualitative analysis is supplemented by the empirical observations collected in Step 4 (Cukier et al. 2009). New codes may arise during the reading and interpretation phase. Researchers should use any new codes to refine the coding schema developed in Step 3. Researchers can then proceed to recode the publications for the newly developed codes.

Step 6: Explanation of Findings

After gathering quantitative and qualitative data to test publications against the four validity claims, researchers must explain the aggregate findings. First, researchers should highlight the dominant perspectives found in the body of literature. Second, researchers should direct readers’ attention to alternative perspectives that are ignored or subjugated. This allows readers to understand the nature of hegemonies that may exist with the discipline. Third, researchers should suggest how hegemonies may have developed. Processes and practices that might influence the development of ideological hegemonies include: the process of building on the work of other researchers, the process of training researchers in PhD granting institutions, and the process and practice of reviewing and editing publications. According to Principle 2, researchers should avoid highlighting individual actors and institutions that may lead to hegemonies unless it is clear that hegemonies cannot be corrected without identifying and challenging the actors and institutions. Science is collegial and requires a certain amount of trust and respect. Finally, researchers should propose solutions to the processes and practices that may influence the development of hegemonies (Myers and Klein 2011). Solutions may be as simple as highlighting the lack of research diversity and calling for more diverse research, or as complex as proposing a method to restructure publication processes.

Limitations

We have proposed a literature review method based on Habermasian strains of CDA. While Habermasian CDA is well-accepted in many disciplines, it is not without limitations. First, other types of critical
analyses exist. For example, Foucauldian strains of CDA are not considered in this paper. We believe future research should assess the potential for other types of critical literature reviews. This paper is only meant to provide one avenue for conducting critical reviews. We hope this paper opens further debate about critically assessing the bodies of literature in the IS field. Second, the idea of an ideal speech community is based on certain values. Thus, adopting Habermasian CDA to critically analyze literature presents the potential to develop new ideological hegemonies. However, every perspective stands to introduce new hegemonies. Thus, we call for continued critical discussion of IS research.

**Applying the Critical Review Method**

We are currently conducting a critical review to provide an example of our method. We are examining behavioral InfoSec research, emphasizing research on compliance and noncompliance with information security policies. Security is increasingly important to organizations, as security breaches can be costly to organizations and their clients (Richardson 2009; Richardson 2011). Though InfoSec research has lacked theory, empirics, and a focus on management topics (Siponen et al. 2008), research on compliance and noncompliance relies heavily on theory, empirics, and management issues (Crossler et al. 2013; Willison and Warkentin 2013). However, behavioral InfoSec research is in a nascent state (Crossler et al. 2013). The nascent state of the subdiscipline provides an ideal situation for examining ideological assumptions. When a discipline or subdiscipline is new, it experiences a state of theoretical chaos as researchers search for a set of epistemological beliefs to adhere to (Kuhn 2012). Premature adoption of one theoretical perspective or a set of perspectives with the same epistemological foundations can limit the progress of the field. Where possible, our review method should be used early in the life of a discipline in order to identify growing ideological hegemonies. Deeply embedded hegemonies are difficult to challenge. The method should also be used when disparate findings plague a subdiscipline.

For steps 1 and 2, we collected behavioral InfoSec research in the basket-11 journals (Clark et al. 2011) and coded 24 articles for research paradigm (e.g., positivist, interpretive, and critical) and the methods employed (quantitative, qualitative, or mixed method). We found that most of the research relied on a positivist paradigm and quantitative methods, suggesting that an ideological hegemony may exist. We are now undertaking a full critical review. For step 3, we adapted Table 1 for the topics of compliance and noncompliance. For step 4, we conducted a preliminary manual and computer-aided (with NVivo 10) analysis of the literature. We found several patterns (ex., failure to define the dependent construct, overuse of self-report methods, assumption that normalized bureaucratic behavior is positive, heavy focus on extrinsic control). We are currently completing steps 5 and 6 to gather further insight.

**REFERENCES**


