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Causal markers in tobacco industry documents: the pragmatics of responsibility

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Abstract

Causal constructions in English convey or deflect responsibility more or less strongly depending on which of three causality markers initiate the phrase or clause. Causal constructions initiated by *because* usually express strong causality, whereas *since* and *as*, when used to express causality, convey a weaker, disjunctive relation. The tobacco industry has engaged in a ferocious campaign to deny responsibility for causing adverse health effects like cancer. Accordingly, our data are comprised of corpora sampled from about four million previously internal documents that tobacco companies were forced to disclose as a result of litigation. We hypothesized that the valence of the causal claim (incriminating, exculpating, marketing advantage, or marketing liability for the tobacco industry), would determine the distribution of causal constructions initiated with *because* versus *since* and *as*. Findings confirmed that causal claim valence covaried significantly with causal marker choice. Statements framed with *because* constructions challenged tobacco's responsibility for causing disease or marketing losses. Statements that incriminated tobacco or admitted marketing liabilities were more likely to use disjunctive (causal *since*) phrasing. This application of pragmatic analysis to corpus linguistics is shown to be a valuable paradigm for evaluating stylistic means chosen with a view toward assuming or deflecting speaker responsibility in practical discourse.

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“At least the notion of responsibility, for one case, can be attributed to an entity even at many removes.” (Talmy, 1976: 115)

1. Introduction

1.1. Research overview

This research examines the use of causal markers in English to convey or deflect responsibility in a corpus of corporate documents produced by tobacco industry employees. For half a century the tobacco industry has been defending itself against charges by public health agencies that tobacco products cause a myriad of adverse health effects, including approximately 440,000 preventable deaths per year in the U.S.—about 20% of the total deaths (Centers for Disease Control, 2002) and about four million preventable deaths per year world wide (World Health Organization, n.d.). The stalwart and unified longstanding position of the tobacco industry (at least up until the year 2002 when the Philip Morris company finally did publicly acknowledge a link between smoking and cancer) has been that medical science has failed to prove that tobacco use causes cancer. (See, e.g., the tobacco industry’s classic “Frank Statement” on tobacco and disease authored by the public relations firm of Hill and Knowlton, 1959.) This position highlights the problematic nature of causality for the tobacco industry. We hypothesized that a closer look at this focus on causality could shed light on the relationship between responsibility and language within the tobacco industry.

1.1.1. Causative constructions

Causative constructions of all types have been thoroughly studied in linguistics research since the 1970s. Extensive typologies (see Aissen, 1979; Kortmann, 1996; Song, 1996) have mapped out the syntax and semantics of causative sentences not only in English, but also cross-linguistically. Causatives are particularly interesting because they involve “the two most important grammatical roles,” agent and patient (Palmer, 1994: 8). Although most accounts of causative constructions deal with “caused action that is syntactically subordinated to a verb of causation whose subject is the agent of causation,” (Aissen, 1979: vii) our analysis focuses more specifically on markers of reason and consequence. Causal markers fall into the type of causative construction that explicitly expresses reason or cause and results in the consequential event(s) described in another clause. Two semantic conditions are necessary for causative constructions (Comrie, 1976):

1. The caused event must happen at a time after the causing event.
2. The caused event must be wholly dependent on the causing event, to the point that one could infer a counterfactual—that the caused event would not have taken place had the causing event not taken place first.

The second condition – that of plausible counterfactual inference of causative constructions – is central to Talmy’s (1976) work in this area. He argues for a definition of

causative constructions where “one would consider only that situation in a related set to be semantically causative . . . in which the essential event takes place and, *ceteris paribus*, would not take place if it were not for another event” (Talmy, 1976: 51). Givón (1975) links the semantic ramifications of causative constructions to legal status. He asserts that control as expressed by causative constructions “is tantamount to premeditation” in the eyes of the law (Givón, 1975: 86). To sum up, causative constructions are treated consistently in semantic analyses as entailing responsibility, control and culpability on the part of the causal agent.

The interplay of control and culpability was in fact underscored in the legal battles the tobacco industry faced in the 1990s. A series of private and governmental lawsuits charged the tobacco industry with responsibility for a generation’s worth of negative consequences in the realm of public health. Central to these court cases was the production of internal tobacco company documents, which were introduced in several legal proceedings in attempts to demonstrate the industry’s culpability with its own words. We determined that an investigation of some aspect of causative constructions could help reveal patterns of responsibility and guilt in the tobacco industry as a whole. Accordingly, this research isolates one set of overt indicators of causality, frequently referred to within the realm of causal adverb clauses (Quirk and Greenbaum, 1973) or causal markers of “reason and consequence” (Leech and Svartvik, 2002: 204). We assess the distribution of clauses and phrases initiated with three markers of causality – *because*, *since* and *as* – in a corpus of tobacco industry documents.

We hypothesized that the valence of causal claims would influence the choice of *because* constructions (typically adjunctive with semantically strong causality) as against constructions with *since* or *as* (which are typically disjunctive, with semantically weaker causality or co-occurrence). The valence of the claim expressed or warranted was coded as either *incriminating* the industry for negative health effects, *neutral* with respect to culpability, *exculpating* the industry, congratulatory on *expanding market share*, or apologetic for *losing market share*. That is, this study examined the distribution of *because*-, versus *since*- and *as*-initiated causal constructions in order to reveal pragmatic strategies vis-à-vis presuppositions of responsibility and blame in the tobacco industry.

1.1.2. Grammatical perspectives on causality in English

For this study we do not distinguish between *because of* phrases and adjunctive *because* clauses. Although syntactically distinct (*because of* only takes noun phrase complements), *because* and *because of* are semantically equivalent. Both are categorized with *since* and *as* as markers of cause and result in contemporary corpus-based grammar (Leech and Svartvik, 2002).

Because clauses are most frequently adjunctive, whereas *since* and *as* clauses are invariably disjunctive (Quirk et al., 1980). A disjunctive position (usually at the beginning of a sentence and more easily extractable from the matrix clause than is the case for adjuncts) is not as causally forceful as an adjunctive position. Adjuncts are typically fully integrated into a sentence, in contrast to disjuncts, which are frequently ancillary, as well as offset with commas. *Because* is the only causal marker that can be used in adjunctive constructions. The sentence-embedded nature of *because of* phrases parallels the integrated

aspect of adjunctive *because* clauses. Accordingly, we include *because of* phrases in our analysis as adjunctive.

Consider the following sentence:

- (1) “Opinion leaders – newsmen, legislators and the ‘issue-oriented’ in general – are vital *because* [**since/*as*] they are directly concerned with the social and legislative issues which urgently confront us [the tobacco industry].” (Afterward, n.d., a.k.a. Bates #: TIMN006527-5829)

The subordinate clause in (1) is an adjunctive construction indicating direct causality; it introduces a necessary antecedent to the state or action expressed in the main clause. *Since* and *as* are arguably unacceptable in this context. Another example from within the tobacco industry illustrates the rhetorical impact of adjunctive causal clauses:

- (2) “Now like spoiled children, the zealots are stamping their feet in anger and frustration *because* people still wish to smoke, and they are attempting to impose their mores on the unwilling people.” (American Tobacco, 1967)

On the other hand, disjuncts typically express less direct causal links that may include some type of evaluation, or else comment on the issue of primary importance in a sentence. All three causal markers in English can be employed in disjunctive constructions, e.g.,

- (3) *As/since/because* I see smoke, there must be a fire over there.

Should a listener attempt a semantically strong causal reading of sentence (3), it would imply an impossible causal or temporal connection: that due to my seeing of smoke, a fire then must be burning in that direction. A more natural reading of this disjunction yields the implication of co-occurrence, with only implied, not explicitly direct, causality.

Consider the commentary nature of the causal clause initiated by *since* in the following example from a tobacco industry document:

- (4) “We were naturally interested, *since* so much of TRC biological research had long term objectives, to find out what research in the U.S.A. was being carried out to reduce the long term activity of cigarette smoke.” (R,PJ, T,GF, 1964)

Sentences such as those in examples (3) and (4) show an approximated, conditional or evaluative causality instead of a direct causal link.

1.1.3. Psycholinguistic research on causality

In addition to the syntactic and semantic investigations already mentioned, some psycholinguistic evidence likewise supports a distinction between *because* and *since* causal constructions. One empirical study examined the effect of direct versus indirect causal links on comprehension and recall, and found that readers take longer to process

semantically indirect causal relationships (e.g., those typically expressed in *since* clauses) than more direct causal ones (Keenan et al., 1984). Conversely, direct causality (typically expressed in our research as *because* constructions) facilitated general cognitive processes such as comprehension, recall and retention when compared with indirect causality. In a similar vein, Black and Bern (1981) found that people best retain information from those parts of a text that are most central to the causal structure, sections in our study that are most likely to be encoded with *because*.

We anticipate that differential usage of *since* and *because* by executives and professional communicators employed by the tobacco industry will be consistent with these psycholinguistic results. Specifically, we theorize that *because* will appear most frequently in conjunction with propositions that industry spokespersons would likely wish to be recalled by readers. Reiterating our hypothesis, we assume that *because* should occur in conjunction with favorable information which advantages the industry, and for which the industry would wish to claim direct responsibility. On the other hand, the semantically distant relationship established by disjunctive causal clauses (initiated by *since* or *as*) would be used by these executives and professional communicators to convey causal information which is disadvantageous to tobacco interests and which they would prefer to be overlooked by readers. Thus, *since* and *as* would be more frequently employed in instances where the tobacco industry could be seen as culpable for adverse health and/or marketing outcomes. *Since* and *as*, we anticipated, would be used to mitigate blame, whereas *because* would be used to accentuate responsibility for positive outcomes.

1.1.4. Research hypothesis

A disproportionately high frequency of adjunctive *because* will appear in causal constructions expressing positive valence for which tobacco industry agents can be presumed to be interested in avowing responsibility. Conversely, a disproportionately low frequency of adjunctive *since* and *as* will appear in sentences expressing negative valence for which tobacco industry agents can be presumed to be interested in deflecting responsibility.

1.2. The tobacco industry documents

As early as the mid-1950s, tobacco companies individually and collectively began defending themselves against mounting scientific evidence that tobacco use causes cancer (Hilts, 1996; Tobacco Industry Research Council, 1953). A watershed event occurred in 1994 when a disgruntled paralegal surreptitiously provided sensitive industry documents to cancer control researchers (Glantz et al., 1996). For the first time, the public health community held evidence in the tobacco industry's own words indicating that cigarettes pose a dire threat to health, that the tobacco industry was fully aware of that threat, that it may have actually manipulated its product to increase that threat, and that it nonetheless aggressively marketed its product to vulnerable populations. Aided by the availability of those documents, successful litigation in the state of Minnesota resulted in the public disclosure of thousands of formerly confidential documents from all major cigarette manufacturers and their trade organizations (Rybak et al., 1998). Next, as part of an

extensive master settlement agreement hammered out in 1998 by the tobacco industry and 46 state attorneys general via the National Association of Attorneys General (NAAG), the tobacco industry as a whole was forced to release approximately 3.5 million internal documents to the public (Malone and Balbach, 2000). This master settlement agreement commits the tobacco industry to a number of additional responsibilities, including maintaining an on-line archive of these documents and adding to it all documents that are produced in subsequent litigation until 2007.

To produce this archive of tobacco industry documents, legal aides emptied out file cabinet after file cabinet, stamped a singular identification number (Bates number) on each page, scanned each page into an image file, created a computer searchable index, and sent photocopies in boxes to repositories. The complete document set, together with a search engine, is available on the Internet as image files (How to access tobacco industry documents, 2002).

What is notable about this document set, besides its sheer unprecedented volume, is its inclusiveness. It consists mainly of specimens never intended for external scrutiny. (Indeed great pains were expended attempting to shield this discourse from disclosure.) Because it was compelled by court order, and because the master settlement agreement is so wide-ranging, the tobacco industry document archive constitutes a very comprehensive portal on a generally secretive community of discourse. The documents range widely in type and content, from handwritten notes, luncheon receipts and audio taped staff meetings to lengthy biochemical research reports, marketing proposals and project budgets. It is from this universe of discourse that the Tobacco Document Corpus (TDC) draws.

2. Methods

2.1. *The tobacco documents corpora at the University of Georgia*

The research reported in this article is part of a larger project, “Linguistic Analyses of Tobacco Industry Documents.” The overall objectives of the larger project are (1) to compile systematically sampled corpora of tobacco industry documents; (2) to make these corpora available to researchers in a variety of disciplines in language and communication studies, health sciences, and policy analysis; and (3) to conduct a variety of language analyses on the corpora in order to elucidate the stylistics of public deception and manipulation in which the tobacco industry engaged. The careful sampling and archiving of this corpus together with its comprehensive and well-contextualized character allow for flexibility and variety of project investigations.

At the time of this writing, we have assembled three corpora consisting in the aggregate of about 1200 documents, amounting to 521,820 words. All three corpora draw from the “NAAG snapshot” of about 3.5 million documents available as of December 1988 and supplemented by 34,000 pre-1999 documents that were originally excluded from public release because of their highly confidential nature (known as the “Bliley set”).

Details about the sampling plans for the corpora can be found in Darwin et al. (2002) and Kretzschmar et al. (2004). Briefly, the three corpora used in this study are: (1) a stratified random sample of about 800 documents selected to represent the NAAG snapshot

plus Bliley set in terms of three parameters: decade of origin, audience membership (industry internal or external), and audience specificity (named or unnamed addressee); (2) a stratified random sample of 100 documents directed to industry-external audiences, intended to enrich the representation of externally targeted discourse; and (3) a nonrandom “rhetorical sample” of 195 documents organized into 35 multiple-draft cases and 24 cross-audience cases.

2.2. Sampling causal constructions

Only corpus documents containing *because*, *since* or *as* were originally included in the subsample subjected to causal analysis. Seventy-seven of these documents that were not in a public health or general public register (e.g., research journal articles or personnel policies) were discarded, since they did not appear to be marked for positive or negative valence. Temporal and comparative (i.e., noncausal) usages of *since* and *as* were identified by hand and excluded from further consideration. Since only two tokens of *as* were left, these were omitted in subsequent analysis. What remained was a total of 241 instances of *because* and *since* located in 165 different documents. There were 195 causal constructions initiated by *because* and 46 disjunctive constructions initiated by *since*.

2.2.1. Responsibility valence

The primary factor considered in this study is the valence of tobacco industry responsibility. Each causal construction was coded by two independent raters for five categories of responsibility valence. Valence refers to the conceptual direction of the construction, generally either in support of the tobacco industry or against it. *Exculpating* valence was defined as expressing any causal result that exonerated the tobacco industry from charges of fomenting disease, or which showed the industry taking steps to mitigate adverse health effects, or projecting itself as mitigating adverse health effects. Sentence (5), for example, exculpates the tobacco industry by placing blame for teen smoking on peer pressure instead of youth-targeted marketing. This shift of focus staves off charges against the tobacco industry for illegally targeting youth in marketing settings.

- (5) “So there has to be some other reason why [underage teenagers] continue to smoke. And we feel it’s definitely *because* of peer pressure. We want to get the percentage down as low as possible.” (Tobacco Institute, 1991)

Exculpating strategies such as the one above include placing the responsibility (and therefore the blame) for adverse public health effects on someone/something else (genetics, co-occurring factors), casting the tobacco industry as pro-active by portraying it as vigorously pursuing health research, asserting that the industry has public health interests at heart, and/or using rhetorical devices that cast other industries as worse than tobacco.

The following example (sentence 6) precisely shows *because* being used rhetorically to undermine the morality of the anti-tobacco/ anti-smoking movement, and thus exculpate tobacco by implying that its detractors are not credible.

- (6) “The other side [anti-tobacco] is engaging in a reckless propaganda campaign of mis-truths, half-truths, innuendo, false piety, and downright deceit. In some ways, they are doing this *because* their case is so weak. And they are not going to stop doing it as their legal and political positions deteriorate. Which they will.” (Bible, 1996)

Incriminating valence constructions express causal claims that cast the tobacco industry as responsible for negative or negligent public health outcomes. Incriminating propositions would concede responsibility for ill effects of tobacco smoking, admit positive effects due to smoking cessation or resulting from anti-tobacco activities, or allude to tobacco industry falsification and/or distortion in scientific studies. For example,

- (7) “*Since* a lot of smokers have indicated that the warning notices might induce smoking cessation, . . . it seems probable that the actual increase in smoking cessaation (sic) at the very time of the introduction of the warning notices could be at least partly attributable to these labels.” (Philip Morris, 1981)

After an initial screening of the data, it became clear that the categories of *exculpating* and *incriminating* could not exhaustively account for the valence of the total number of causal constructions. Instead, three additional categories emerged from the data, and the entire data set was recoded accordingly. *Advantageous marketing outcomes* include causal statements alluding to increasing market share by means of intense marketing. We reasoned that since the main goal of the tobacco industries is to “grow” the business, reference to marketing advantages would have positive valence, and would constitute a class of outcomes for which tobacco executives and operatives would wish to avow responsibility. (The one exception to that assessment would be any statement that implied illegal marketing to minors; such statements would be classified as *incriminating*.) However, since these statements did not directly address the intersection of the tobacco industry and public health, we gave them a different code so as to separate them from other exculpating statements. The following is an example of an advantageous market outcome for the tobacco industry.

- (8) “All the four commercials (Viceroy, Winston, Kent and Marlboro) did very well in terms of recall and comprehension, *because* all of them have very heavy advertising.” (Survey Research Hongkong Ltd., 1979)

In contrast, *adverse marketing outcomes* consist of references to loss in market share or to bungled marketing research and campaigns. From the point of view of the authors of these documents, responsibility for actions that could result in loss of market share calls for deflection. An adverse marketing outcome is explained in the following example:

- (9) “This is a strong franchise which we are having trouble establishing in overseas markets. . . This is disappointing *because* the female segment in numerous markets is important and growing.” (Bible, 1988)

Table 1

Cross-tabulation between causal adverb choice and responsibility valences (deviation from expected values in parentheses)

	Because	Since
Exculpating	111 (+4)	18 (−4)
Advantageous marketing	27 (+4)	2 (−3)
Incriminating	24 (−4)	9 (+3)
Adverse marketing	11 (−3)	6 (+3)

Finally, raters agreed that 32 constructions were of neutral valence. These situations mainly pertained to matters of research methods such as instrumentation and sampling. Since these were of no interest with respect to avowing or deflecting responsibility, they were omitted from the analysis.

Two raters independently examined all *because* and *since* causal constructions. Based on a method suggested by Lombard et al. (2002), intercoder reliability for all clauses and phrases was established at 88%. Disagreements were resolved through discussion before final analysis.

3. Results

Table 1 presents the raw frequency of *because* and *since* in each of the four categories of responsibility valence. To reiterate, our rubric for valence was the following: the clause or noun phrases indicate either (1) creation of a positive public health image for tobacco industries, (2) undermining of a positive public health image, (3) positive market and growth result, (4) negative market and growth effects, or (5) neutral responsibility effects. Parentheses in each cell show the deviation from expected values (i.e., observed minus expected value, where the latter is the product of row and column frequencies). Not surprisingly, the sample contained relatively few statements of causality which the industry would wish to disavow; overall, only 24.1% of the causal constructions fell into the two negative valence categories.

A Chi-square analysis was conducted to determine the degree of association between causal marker choice and the responsibility valence implied by statements containing those markers. Accordingly, choice of causal marker (*because*, *since*) was cross-tabulated with responsibility valence (exculpating, incriminating, advantageous marketing, adverse marketing). The resulting Chi-square test indicated a statistically significant association between causal marker selection and valence ($\chi^2_{3d.f.} = 9.52, p < .05$).¹

Inspection of the deviations in each cell, which accounted for the significant statistical result, indicates that constructions conveying both incriminating and adverse marketing

¹ The analysis presented in Table 1 includes the 10 instances in the data of disjunctive *because* clauses. As it happened, these were distributed nearly proportionately across the four valence categories (1, 4, 1, 4). When these ten data were removed from the analysis, the value of the Chi-square statistic barely changed.

outcomes were characterized by lower incidence of *because* and higher incidence of *since* than would be expected to occur by chance alone. Conversely, constructions conveying exculpating attitudes and advantageous marketing outcomes manifested higher incidences of *since* than could be explained by chance alone.

4. Conclusion

Our interest in causal markers and their pragmatic “weight” stemmed from a broad question of whether, and how, the tobacco industry used linguistic devices to defer responsibility for creating a major health crisis during the course of the past half century. We see this study as one of many elements of a comprehensive answer to that question. Results confirm the hypothesized relation between causal markers and their pragmatic presuppositions. That is, particularly strong, adjunctive causal associations were expressed when the tobacco industry was exculpating its actions or avowing responsibility for advantageous (from the industry’s perspective) marketing outcomes. On the other hand, weaker disjunctive causality was expressed in those relatively few sentences which did admit culpability for adverse health effects or marketing outcomes. Of course this pattern was not categorical; some incriminating constructions were initiated by *because* and some exculpating clauses used *since*. Nonetheless, the pattern is sufficiently distinct and also statistically confirmed to be taken as evidence of systematic linguistic manipulation. This evidence is consistent with the especially objectionable – but also linguistically sophisticated – overall pattern of corporate behavior of the tobacco industry. Linguistic investigations such as these can help unearth the often subtle means by which this industry manipulates social consciousness to optimize the political and economic climate in which it functions. As such, it constitutes a contribution of pragmatics to discourse analysis (and indeed critical discourse analysis) with the assistance of corpus methods.

One intriguing question remains. It has to do with the intentionality underlying the selective distribution of causal markers found here. To be sure, many tobacco documents do reveal well-honed and very explicit control of language use. For example, one 1993 tobacco industry document was labeled a “language exploratory” regarding environmental tobacco smoke (ETS) (Young and Rubicom, 1993). It discusses the creation of “messages, language, sound bytes [sic], ‘voices’” aimed at emotionally impacting both proponents and adversaries of smoking (Young and Rubicom, 1993). However, most of the metalinguistic discourse in this and similar documents is limited to selection of lexical items, e.g., terms such as “HVE’s—highly vocal extremists” as preferred to “Anti-Smoking Lobby and Activists” (Young and Rubicom, 1993). In the matter of selecting one or another type of causal construction, in contrast, we speculate that the authors had most likely internalized the implicit pragmatic rules which govern adjunctive and disjunctive clauses, and that they were operating on a much less conscious level of linguistic performance. Occupying the professional roles of promoters and defenders of the tobacco industry, they simply deployed those pragmatic rules accordingly. Because of this, we are less confident of attributing intentionality in these cases.

Previous work in corpus linguistics and pragmatics has been successful in isolating and researching specific aspects of language such as the use of questions (Hyland, 2002), indicators of authorial intent (Hyland, 1998), cleft and pseudo-cleft constructions (Collins, 1991), and adverbs of modality (Hoye, 1997). In contrast, corpus approaches to pragmatics have been in some way limited because corpus texts are relatively a-contextual (McEnery and Wilson, 1996). The TDC enjoys a much richer contextualization in the sense that it is located not only in mode and subject matter, but also in a sequence of real-life events that are well documented by external sources. It is this meta-data aspect of the TDC that affords it a special status among corpora. As such, it is among the prime candidates for further applications of corpus methods to pragmatics. The data set from which the present corpus is drawn is associated with information about specific authors and their ties to the tobacco industry, and about the rhetorical exigencies that drive many of the documents. In some cases, the document set even contains explicit meta-discourse about language use intentions of tobacco industry affiliates. As more corpora are developed from previously closed archives (e.g., the Enron Corpus, Klimt and Yang, 2004), we expect that applications of pragmatic analysis to this strain of corpus linguistics will prove to be a valuable paradigm for assessing discourse in a variety of corporate and governmental communication contexts.

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