University of Pennsylvania Working Papers in Linguistics

Volume 12
Issue 1 *Proceedings of the 29th Annual Penn Linguistics Colloquium*

Article 22

1-1-2006

The Perfect in Context: A Corpus Study

Atsuko Nishiyama
University at Buffalo, the State University of New York, an1@buffalo.edu

Jean-Pierre Koenig
University at Buffalo, the State University of New York, jpkoenig@buffalo.edu

The Perfect in Context: A Corpus Study

The Perfect in Context: A Corpus Study

Atsuko Nishiyama and Jean-Pierre Koenig*

1 Introduction

Several recent studies of the English present perfect have argued that its interpretation requires addressees to draw pragmatic inferences (Portner 2003, Borillo et al. 2004, Nishiyama and Koenig 2004). Portner (2003) and Borillo et al. (2004) argue that the perfect presupposes or elaborates a *topic*, whose identity must be inferred; Nishiyama and Koenig (2004) suggest that the perfect introduces into the discourse *free variables* whose values must also be inferred and constitute implicitures in the sense of Bach (1994). However neither proposal specifies the rules speakers may or must use to draw the relevant pragmatic inferences or whether such inferences are plausibly drawn by addressees. This paper purports to fill this gap through the study of over 600 English perfect examples from a diverse range of genres (newspapers, discussions, conversations, and narrative texts). The results of our study show (i) that the required inferences belong to one of only a few inference patterns and are easy enough to be plausibly drawn; (ii) that Borillo *et al.*'s (2004) and Portner's (2003) topic-driven analysis of the perfect cannot account for all uses of the English present perfect.

2 Two Recent Inferential Theories of the Present Perfect

Discourse topics and the perfect. Portner (2003) proposes that part of the meaning of the perfect consists in a presupposition that sentences that include a verb in the perfect are answers to the discourse topic, which he regards as an implicit question. For example, sentence (1) presupposes the availability to speech participants of a question such as (2a) and can be used in a context such as (2b).

(1) Mary has read *Middlemarch*.

(2) a. We need to get an explanation of George Eliot's style; who can we ask?

*We would like to thank Jürgen Bohnemeyer, Paula Chesley, Roelant Ossewaarde, Christopher Phipps, and the audience of the 29th Penn Linguistics Colloquium for comments on the content of this paper.

b. Well, George Eliot wrote Middlemarch, and if someone reads an author's books, they understand her style. Unless they're stupid of course. Mary is smart, and she has read *Middlemarch...*

Borillo et al. (2004) propose, within Segmented Discourse Representation Theory (SDRT), that the perfect creates an Elaboration structure in which the utterance situation or writing context provides a topic which sentences containing a perfect elaborate on.

Inferred perfect state view. Nishiyama and Koenig (2004) modify and extend the standard analysis of the perfect within Discourse Representation Theory (DRT) outlined in Kamp and Reyle (1993), van Eijck and Kamp (1997) and de Swart (1998) and propose the following meaning for the perfect:

(3) The perfect introduces into a Discourse Representation Structure:
   i. an eventuality ev, whose temporal trace precedes reference time r (speech time n for present perfects) ($\tau(ev) \prec r$), and
   ii. a state s (hereafter, the perfect state), whose temporal trace overlaps reference time r ($\tau(s) \circ r$) and whose category is inferable from the occurrence of ev.

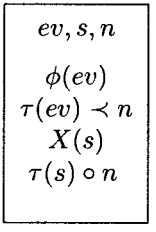

Figure 1: DRS for the meaning of the present perfect

Figure 1 represents the simplified DRS that results from the interpretation of a sentence whose verb and arguments contribute the eventuality description ϕ (hereafter, the base eventuality description). The first line lists the discourse referents introduced by the present perfect. ev is an eventuality of any type, which the second line, *i.e.*, the first discourse condition, requires to satisfy the base eventuality description ϕ. τ is a function that maps an eventuality onto its temporal trace. $\tau(ev) \prec n$ on the third line says that the temporal trace of ev precedes speech time n ($\prec$ =temporal precedence), since reference time r equals speech time n in the present perfect. The fourth line, $\tau(s) \circ n$,

says that the temporal trace of the perfect state s overlaps speech time n ($\circ$ = temporal overlap). Nishiyama and Koenig's main innovation is the claim that the category of the perfect state s is semantically a free variable (X in Figure 1), which must be filled in by the addressee (Kay and Zimmer 1978, Partee 1984, Bach 1994). The presence of a free variable X is a semantic constraint (imposed by the perfect form), but the value of X has to be filled in via pragmatic inferences. Possible values of X for sentences (4) and (5) and the traditional labels for the corresponding uses of the perfect are shown informally in (4a)-(4b) and (5a)-(5b), respectively.[1]

(4) Ken has broken his leg.
   a. His leg is currently broken.
      —Entailed resultative reading
      ($X(s)$=Ken's_leg_be_broken(s))
   b. Ken is behind in his project.
      —Conversationally implicated resultative reading (Depraetere 1998)
      ($X(s)$=Ken_be_behind_in_his_project(s))
   c. #Susan is married to Mike.
      ($X(s)$ =Susan_be_married_to_Mike (s).)

(5) Ken has lived in London.
   a. Ken (still) lives in London.
      —Continuative reading
      ($X(s)$= Ken_live_in_London(s))
   b. Ken knows good restaurants in London.
      —Conversationally implicated resultative reading
      ($X(s)$=Ken_know_good_restaurants_in_London(s))

Nishiyama and Koenig argue that the pragmatic process through which the value of X is determined is, broadly speaking, neo-Gricean in nature, and can be modeled using the Minimization and Maximization principles of (Levinson 2000). The fact that the inference process addressees must engage in is governed by these principles, properly exclude as values of X temporally coincidental but otherwise unrelated states such as (4c). In normal contexts, addressees cannot infer that Susan is married to Mike from the fact that Ken

[1] We call *entailed resultative perfect reading* readings in which the value of X corresponds to the resultant state entailed by the base eventuality description. We call *conversationally implicated resultative perfect reading* or *(non-entailed) resultative perfect reading* the reading that results when the value of X is a resultant state that is not entailed from the base eventuality description.

broke his leg. Despite its success in accounting for *all* uses of the English present perfect without resorting to ambiguity, Nishiyama and Koenig's proposal, like Portner's and Borillo's, does not provide any details on the rules addressees might use to derive the value of X; nor does it provide corpus evidence of the plausibility of the inferential process that it claims hearers or readers of sentences containing a perfect must engage in. The next section presents the results of a corpus study that provides such evidence.

3 A Corpus Study

We collected data from various genres, two newspapers of the same date (July 1st 1996), the first two discussion articles of the same month of the year (July 1996) in CQ Researcher Online (http://library2.cqpress.com/cqresearcher), conversation data from the Switchboard Corpus (Graff et al. 1998, files sw2001.txt through sw2019.txt), and narrative data from Netlibrary (http://www.netlibrary.com/) (two novels, one biography). We examined the interpretation of all present perfect examples including those that occurred in embedded clauses in the corpora. Non-finite forms of the perfect, e.g., the perfect following modal auxiliaries or *to* were excluded from analysis, as well as the idiomatic expression *'ve got to*.

We first classified all examples in accordance with the traditional labels for perfect uses. 81.82 percent of all examples were either entailed resultative perfects or continuative perfects (Type (i) below)[2]; most of the other examples were existential or non-entailed resultative perfects (18.02 percent) (mostly Type (ii) and (iii) below). Table 1 shows the percentages of entailed resultative, continuative, existential, and non-entailed resultative perfect readings in each corpus.

[2]The percentage includes the examples which can be categorized either as entailed resultative or continuative perfect uses in Table 1.

Table 1: Numbers and Percentages of entailed, continuative, existential, and resultative perfect examples in corpora[1]

	Entailed resultative	Continuative	Existential	Non-entailed resultative	Others	Total
A	24	22	0	13	2	61
B	64	68	6	13	0	151
C	86	52	8	7	2	155
D	32	38	10	20	0	100
E	46	59	9	23	1	138
Total	252 (41.65%)	239 (39.50%)	33 (5.46%)	76 (12.56%)	5[2] (0.83%)	605 (100%)

[1] See Michaelis (1998) for definitions of the uses of the perfect mentioned in the table.

[2] Four of these five examples can be interpreted either as entailed resultative or continuative perfect readings, while one can be interpreted either as a continuative or resultative perfect.

[A] Newspaper1:*Reuters Financial News, 07.01.1996.*

[B] Newspaper 2:*Wall Street Journal, 07.01.1996.*

[C] Discussion:CQ Researcher, 07.1996.

[D] Conversation:Switchboard Corpus (SW2001-SW2019)

[E] Narrative:H.G. Wells, *The Time Machine*; I. Bernard Cohen, *Howard Aiken: Portrait of a Computer Pioneer*; Willa Cather, *O! Pioneer!*

4 Default Inference Patterns

We then determined for each type of perfect use which inference rules addressees must have used, were they to successfully determine the category of the perfect state which the perfect introduces in discourse according to Kamp and Reyle and others (the value of X in Nishiyama and Koenig (2004)). We isolated three major classes of inference patterns.

Type (i) ***Entailed or continuative perfects:*** For this most frequent class of examples, readers need draw only trivial inferences in order to find the value of X. The state either described or entailed by the base eventuality description persists until the present. To derive X, readers need only apply the presumption of *persistence* default rule (McDermott 1982). (6) and (7) are examples of continuative perfect readings, while (8) and (9) illustrate entailed resultative perfect readings.

(6) ..., he **has been** a member of her household ever since. (X=He is a member of her household.) (Cather 1996, p.24)

(7) Since the war ended, the U.S. **has kept** 5,000 troops in Saudi-provided housing, ... (X=The U.S. keeps 5,000 troops in Saudi-provided housing.) (Graff 1995-1997, *Wall Street Journal.07.01.1996*)

(8) Yeltsin's health **has become** a major issue in the closing days of Russia's presidential race. (X=Yeltsin's health is a major issue in the closing days of Russia's presidential race.) (Graff 1995-1997, *Wall Street Journal.07.01.1996*)

(9) A few tribes **have managed** to establish a foothold in their local economies without the benefit of gaming revenues. (X=A few tribes have a foothold in their local economies without the benefit of gaming revenues.) (Cooper 1996, July 12)

Type (ii) ***Speech Act/Epistemic perfects.*** Some perfect sentences have speech act verbs or epistemic verbs as their main verbs and the value of X can be inferred via default rules that reflect the speaker and hearer's expectations about each other's speech acts. They can be divided into two subtypes.

Subtype (ii-a) ***Evidential uses.*** Speakers and authors may use a perfect to communicate that the complement of performative or epistemic verbs such as *say*, *promise*, or *see* presently holds or is likely to hold in the future, as seen in (10) and (11).

(10) Sumitomo **has said** its losses from Mr. Hamanaka's trading stand at $1.8 billion. ($X$=Sumitomo's losses from Mr. Hamanaka's trading stand at $1.8 billion.) (Graff 1995-1997, *Wall Street Journal.07.01.1996*)

(11) Britain's opposition Labor Party **has** also **promised** a ban on all tobacco advertising if it wins the election due to be held by May next year. (X=There is likely to be a ban on all tobacco advertising if the Labor Party wins the election.) (Graff 1995-1997, *Reuters Financial News, 07.01.1996.*)

To infer the value of X, readers of (10) rely on the default rule that if somebody says something, it is (typically) true. Similarly, to infer the value of X, readers of (11) rely on the default rule that if somebody promises something, it is likely to become true. Both rules are based on the sincerity conditions associated with the speech acts of saying and promising, respectively (Searle 1969, Searle and Vanderveken 1985) and reflect our expectations that speakers are sincere when they speak. They can be described as follows ($>$ means 'nonmonotonically/defeasibly entail' Pelletier and Asher (1997)).

(12) $\forall x \forall p(say(x,p) > true(p))$
(13) $\forall x \forall p(promise(x,p) > likely(Future(p)))$

Relying on such rules, readers can easily infer that what Sumitomo says is true in (10) or that what the Labor Party promised is likely to become true if they win in (11).

Subtype (ii-b) ***Topic negotiation.*** Speakers sometimes use a perfect at the beginning of a conversation to set up a topic. (14)-(15) are examples of such uses from the Switchboard corpus.

(14) **Have** you **done** a lot of camping recently? (X=I want to talk about camping.) (Graff et al. 1998, sw2009.txt)
(15) A: **Have** you **seen** DANCING WITH WOLVES? (X=I want to talk about the movies.)
B: Yeah. I've seen that, that's, uh, that was a really good movie. (Graff et al. 1998, sw2010.txt)

The speaker in these examples uses the present perfect to negotiate a topic she wants to talk about. She does so by asking the addressee whether an epistemic pre-condition for having a conversation on her chosen topic is satisfied, by asking, e.g., the extent of the addressee's experience or knowledge of the topic. In such uses, the speaker counts on the addressee making use of the default rule that if she wants to know whether he knows something (and thus can talk about it), she probably wants to talk about it.

(16) $\forall x \forall y($ *ask_addressee_know (x, y)* > *want_talk (x, y))*

In (15) the addressee (B) accepts the topic by saying that he has had the experience of watching the movie and therefore knows and can talk about it. Importantly, the perfect is used in examples (14) and (15) at the start of a new conversation between two strangers where it makes little sense to presume the existence of a presupposed or shared topic between the speech participants. Such examples are therefore difficult to explain for Portner (2003) and Borillo et al. (2004) who claim that the use of a perfect form presumes the existence of a shared topic in the context.

Of course one might argue that the perfect putative presupposition that there is a mutually agreed topic for the current conversation may be accommodated in examples such as (14) and (15). We find this possibility quite unlikely. Accommodation is a repair strategy by which addressees can make sense out of the speaker's utterance, despite its pragmatic infelicity (Lewis 1979). For

example, if an addressee does not know that the speaker has a daughter and hears that the speaker's daughter is getting married, then he might be willing to accommodate the failed presupposition and simply assume *post facto* that the speaker has a daughter. But consider the conversational turns that follow example (15).

(17) B: Probably one of the best things about it was the scenery and, uh, I thought the story was pretty good, too. I, I think Kevin Costner did a really good job with it.
A: **Have** you ever **lived** in that part of the country? (X=I want to talk about that part of the country.)
B: No. I haven't.
A: **Have** you ever **visited** it? (X=I want to talk about that part of the country.)
B: Um, I've visited the Wyoming area. I'm not sure exactly where DANCES WITH WOLVES was filmed.
A: I think it was the black hills of South Dakota.
B: Could be. I, n-, I haven't been to South Dakota. **Have, have** you **been** up to that? (X=I want to talk about South Dakota.)
A: Well, I lived in Omaha for five,
B: Oh. (Graff et al. 1998, sw2010.txt)

In (17) participant A uses the perfect several other times to shift topic. By uttering *Have you ever visited it?* or *Have you ever lived in that part of the country?*, the speaker suggests that she now wishes to discuss the region in which *Dances with wolves* was filmed. The repeated use of the perfect to introduce or shift topic makes it unlikely that B accommodates a presupposed existing topic: The notion of topic shift is inconsistent with accommodating a presupposition that there exists a mutually agreed upon topic.

Furthermore, these examples and several similar ones we found were taken from a telephone conversation between two people who do not know each other and who could chat about whatever they wanted although a topic was suggested by the research team that culled the Switchboard Corpus. The fact that there is less mutual ground among strangers, the fact that no shared situational information could provide a topic makes it also particularly unlikely for the speaker to expect the hearer to be willing to accommodate the presupposition that there was an already agreed upon topic. Resorting to accommodation to explain away examples (14)-(17) would render the notion of presupposition vacuous in that it is hard to imagine what unsatisfied presupposition would not be able to be accommodated, if those in examples (14)-(17) are.

Finally, examples such as (14) and (15) are particularly problematic for Portner (2003) who takes the view that topics are implicit questions to which sentences whose main verb is in the perfect form provide an answer, since these perfects occur in interrogative clauses.

Type (iii) ***Common sense entailment.*** Authors sometimes use the perfect to indicate that the occurrence of an event provides evidence or an explanation for the truth of a claim she made or will make. The value of X in these cases is the state description conveyed by a clause that preceded or followed the sentence containing the perfect. For example, in (18) the event introduced by the perfect sentence (that the U.S. Air Force flew an average of 1,500 missions a month) supports and provides evidence for the assertion conveyed by the first sentence. The fact that the U.S. forces flew so many missions serves as proof that they were busy.

(18) Iraq still keeps U.S. forces busy, too (=X). U.S. Air Force fighter jets **have flown** an average of 1,500 missions a month over southern Iraq since 1992, in an effort to make sure Iraq doesn't violate a no-fly zone or attack its Shiite population. (Graff 1995-1997, *Wall Street Journal.07.01.1996*)

In order to find the value of X in example (18), readers need to make use of a rather specific common sense entailment rule such as (19).

(19) $\forall x \forall y (\textit{fly\_1,500\_missions\_a\_month\_over}\ (y, x) > \textit{keep\_busy}\ (x, y))$

(20) is a similar example.

(20) House Democratic leader Richard Gephardt of Missouri,who has been less enthusiastic about budget cutting than Mr. Clinton, **has played** a key role in recruiting the party's congressional candidates. Many are merely reflecting his priorities, as opposed to those of the White House.(=$X(s)$) (Graff 1995-1997, *Wall Street Journal.07.01.1996*)

Here, Gephardt's key role in recruiting candidates explains that many congressional candidates reflect his priorities. Readers infer the value of X, using another rather specific common sense entailment rule, the one stated in (21).

(21) $\forall x \forall y (\textit{play\_key\_role\_recruiting}(x, y) > \textit{reflect\_priorities\_of}(y, x))$

It is striking that the value of X for the overwhelming majority of present perfect examples we have looked at so far can be found through very general default principles. 81.82 percent of all the examples belong to Type (i), where

the value of X can be derived through the principle of persistence. 11.24 percent of the examples belong to Type (ii), where the value of X can be inferred through general default expectations regarding speech acts. In total, 93.06 percent of the examples of perfect we looked at require general default rules to assign a value to X. Only a small number of examples (4.63 percent), such as (18) and (20), requires specific commonsense knowledge rules. Table 2 summarizes the types of rules used to determine the value of X in our sample.

Table 2: Perfects of Type (i)-(iii)

type	(i) Persistence	(ii) Speech Act/Epistemic (ii-a) Evidential Use	(ii-b) Topic negotiation	(iii) Common sense	Others
A, B	180	21 Ex:1, R:20[a]	0	9 Ex:4, R:5	2 Ex:1, R:1
C	140	5 Ex:0, R:5	0	6 Ex:4, R:2	4 Ex:3
D	70	7 Ex:2, R:5	13 Ex:0, R:13	8 Ex:3, R:5	2 Ex:2
E	105	18 Ex:2, R:16	4 Ex:2, R:3	5 Ex:2, R:3	6 Ex:4, R:2
Total	495 (81.82%)	51 (8.43%)	17 (2.81%)	28 (4.63%)	14 (2.31%)

[A,B] Newspaper
[C] Discussion:CQ researcher
[D] Conversation:Switchboard
[E] Narrative
[a] 'Ex:1' and 'R:20' are the numbers of existential and resultative perfect readings

Three differences distinguish Type (i-ii) and Type (iii). First, the entailment rules used in Type (iii), such as those in (19) or (21), are much more specific than the kinds of rules used in Type (i) and Type (ii). Second, the value of X can be found in the surrounding text, either before or after the sentence containing the perfect in Type (iii), as shown in (18) and (20). In (18) the first sentence's state description corresponds to the value of X for the second sentence, which contains the perfect. In (20) the value of X for the perfect in the first sentence is provided by the state description found in the second sentence. Third, the perfect in Type (iii) is instrumental in establishing the coherence of the discourse in which the sentence containing it occurs.

More precisely, the commonsense entailment rule used to find the value of X in Type (iii) is a crucial premise needed to establish the discourse relation between the sentence that contains the perfect and the sentence that contains the state description that is the value of X.

We illustrate this dual function of the commonsense entailment rule on sentence (18), following the approach to discourse coherence developed in SDRT (Asher and Lascarides 2003). In SDRT, for two sentences or other pieces of text to form a coherent discourse segment, there must be a discourse relation R that relates their corresponding meaning representations or DRSs. More precisely, R takes two utterances' meaning representations as its arguments ($R(\pi_1, \pi_2)$ where π_i is a label for the DRS of an utterance or clause) and is nonmonotonically inferred from the information content of utterances, discourse contexts, and world knowledge. Our claim is that the use of the perfect *have flown* in sentence (18) facilitates the establishment of the coherence relation R. This is because the perfect triggers a search for the value of X and the retrieval of the commonsense rule in (19). The use of this rule, in turn, helps establish an *evidence* coherence relation between the sentence in which the perfect occurs and the sentence that includes the state description that is the value of X, because of the discourse coherence rule in (22).

(22) Evidence Rule
$\forall\alpha\forall\beta\forall P\forall P'\forall e\forall e'((P(e,\alpha) \wedge P'(e',\beta) \wedge (P(e) > P'(e'))) \rightarrow \mathit{Evidence}\ (\alpha,\beta))$

(22) says that if the eventuality descriptions P and P' are true of e and e' in DRSs α and β and one can defeasibly infer $P'(e')$ from $P(e)$, then α is evidence for β. In other words, if one makes two claims such that one can (defeasibly) infer the truth of the first from that of the second, the second claim is evidence in favor of the first claim. By evoking a rule on the basis of which one can defeasibly derive $P'(e')$ from $P(e)$, the perfect in (18) helps trigger the rule in (22) on which the coherence of the discourse in (18) partly rests. The simplified segmented discourse representation structure (SDRS) for (18) is shown in Figure 2. (π_1 and π_2 are labels for the simplified DRSs corresponding to the first and second sentences of (18), respectively).

5 Conclusion

Since Reichenbach (1947), studies of the perfect have recognized the role of the English perfect in discourses. But few studies have looked at a large data set of perfect examples. This paper has tried to assess anew the role the En-

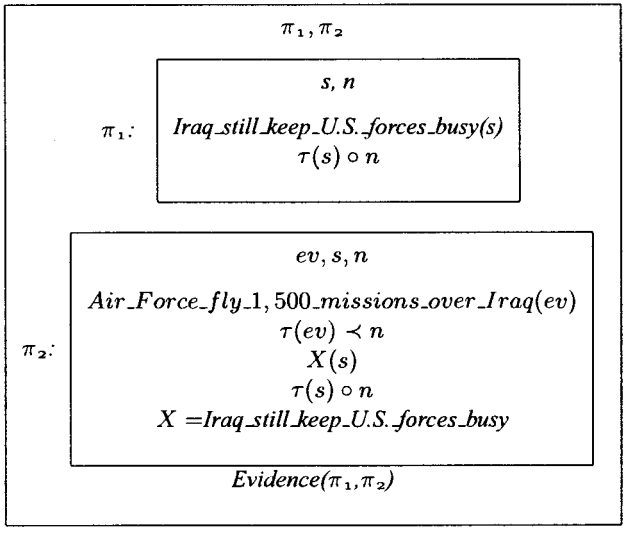

Figure 2: SDRS for (18)

glish perfect plays in discourse by examining the kinds of interpretations 605 present perfect examples receive and the inferences readers and hearers need to make to arrive at these interpretations. Several preliminary conclusions result from this examination. First, theories of the perfect that hypothesize that it presupposes or elaborates a topic do not seem to account for all uses of the perfect, in particular its use in conversation to establish or shift topic. Second, the overwhelming majority of present perfects are continuative or entailed resultative perfects whose understanding only requires trivial inferences on the part of hearers. Third, the remaining examples fall into a few inference patterns that either use general default rules or easily accessible commonsense rules. The overall picture that emerges from our corpus study is that determining the nature of the perfect state posited by theories that treat the perfect as a stativizer is a feasible task. Of course, determining the nature of the perfect state is not the end of the story. Present perfects serve further "perlocutionary" functions in texts and conversations. Although we cannot go into these further discourse functions in this paper, let us suggest that each of the types of perfect we isolated seems to serve a distinct one. The perfect use in Type

(i) and (iia) serve to introduce the value of X in discourse, although Type (iia) further qualify this introduction, by mentioning the source of the information regarding this state. The perfect use in Type (iib) is used to negotiate topics. Finally, the perfect use in Type (iii) serves to establish discourse coherence. We summarize these various uses and other differences among the different kinds of inferences addressees must perform when interpreting present perfects in Table 3.

Table 3: Inference types and discourse functions

	Type (i)	Type (ii)		Type (iii)
		(a) Evidential	(b) Topic Nego	Commonsense
General inference	+	+	+	-
Value X in a surrounding text	-	-	-	+
Discourse function of the perfect	Introduce implicitly $X(s)$ in discourse	Introduce with qualification $X(s)$ in discourse	Topic negotiation	Help establish discourse relation

References

Asher, Nicholas, and Alex Lascarides. 2003. *Logics of Conversation.* Cambridge: Cambridge University Press.

Bach, Kent. 1994. Conversational impliciture. *Mind and Language* 9:124–162.

Borillo, Andreée, Myriam Bras, Anne Le Draoulec, Arie Molendijk, Henriëtte De Swart, H. J. Verkuyl, Co Vet, Carl Vetters, and Laure Vieu. 2004. Tense and aspect. In *Handbook of French Semantics*, ed. Henriëtte De Swart and Francis Corblin, 233–350. Stanford: CSLI Publications.

Cather, Willa. 1996. *O Pioneer!*. Raleigh: Alex Catalogue. (http://www.netlibrary.com/).

Cooper, Mary. 1996, July 12. Native Americans' future. In *The CQ Researcher Online.* (http://library.cqpress.com/cqresearcher/cqresrre1996071200).

Depraetere, Ilse. 1998. On the resultative character of present perfect sentences. *Journal of Pragmatics* 29:597–613.

van Eijck, Jan, and Hans Kamp. 1997. Representing discourse in context. In *Handbook of Logic and Language*, ed. J. van Benthem and Alice G.B. ter Meulen, 179–237. Cambridge: The MIT Press.

Graff, David. 1995-1997. *North American News Text Corpus.* Philadelphia: Linguistic Data Consortium, University of Pennsylvania.

Graff, David, Alexandra Canavan, and George Zipperlen. 1998. *Switchboard-2 Phase 1*. Philadelphia: Linguistic Data Consortium, University of Pennsylvania.

Kamp, Hans, and Uwe Reyle. 1993. *From Discourse to Logic, Part1, 2*. Dordrecht: Kluwer Academic Press.

Kay, Paul, and Karl Zimmer. 1978. On the semantics of compounds and genitives in English. *Sixth California Linguistics Association* .

Levinson, Stephen C. 2000. *Presumptive Meanings: The Theory of Generalized Conversational Implicature*. Cambridge: MIT press.

Lewis, David. 1979. Scorekeeping in a language game. *Journal of Philosophical Logic* 8:339–359.

McDermott, Drew. 1982. A temporal logic for reasoning about processes and plans. *Cognitive Science* 6:101–155.

Michaelis, Laura A. 1998. *Aspectual grammar and past-time reference*. London, New York: Routledge.

Nishiyama, Atsuko, and Jean-Pierre Koenig. 2004. What is a perfect state? In *WCCFL 23*, 595–606. University of California, Davis: Cascadilla Press.

Partee, Barbara. 1984. Compositionality. In *Varieties of Formal Semantics: Proceedings of the Fourth Amsterdam Colloquium*, ed. Frank Veltman, 281–311. Dordrecht: Foris Publications.

Pelletier, Francis Jeffry, and Nicholas Asher. 1997. Generics and defaults. In *Handbook of Logic and Language*, ed. J. van Benthem and Alice G.B. ter Meulen, 1125–1177. Cambridge: The MIT Press.

Portner, Paul. 2003. The (temporal) semantics and (modal) pragmatics of the perfect. *Linguistics and Philosophy* 26:459–510.

Reichenbach, Hans. 1947. *Elements of Symbolic Logic*. New York: Free Press.

Searle, John R. 1969. *Speech Acts*. Cambridge: Cambridge.

Searle, John R, and Daniel Vanderveken. 1985. *Foundations of Illocutionary Logic*. Cambridge: Cambridge University Press.

de Swart, Henriëtte. 1998. Aspect shift and coercion. *Natural Language and Linguistics Theory* 16:347–385.

Department of Linguistics
609 Baldy Hall
University at Buffalo, the State University of New York
Buffalo, NY 14260-1030
an1@buffalo.edu
jpkoenig@buffalo.edu