Historical patterns for the grammatical marking of stance

A cross-register comparison

Douglas Biber
Northern Arizona University

English has a rich supply of grammatical devices used to express "stance", epistemic or attitudinal comments on propositional information. The present paper explores historical change in the preferred devices used to mark stance. By examining the entire system of stance devices, the study attempts to investigate the underlying patterns of change. Three major patterns are possible: (1) changes in social norms could result in speakers and writers expressing stance meanings to differing extents in different periods; (2) the grammatical system for the expression of stance could undergo change, showing an overall decline in the use of some grammatical devices, replaced by an increase in the use of other devices; (3) the patterns of use could undergo sharper register diversification over time, with particular stance devices taking on more specialized uses in particular registers. These possibilities are explored through corpus-based analysis of the written and speech-based registers in the ARCHER corpus, tracking the patterns of change across the past three centuries.

1. Introduction

Over the last several years, linguists have become increasingly interested in the linguistic mechanisms used by speakers and writers to convey their personal feelings and assessments. Such investigations have been carried out under several different labels, including "evaluation" (Hunston 1994; Hunston and Thompson 2000), "intensity" (Labov 1984), "affect" (Ochs 1989), "evidentiality" (Chafe 1986; Chafe and Nichols 1986), "hedging" (Holmes 1988; Hyland 1996), and "stance" (Barton 1993; Beach and Anson 1992; Biber and Finegan 1988, 1989;

Biber et al 1999: Chapter 12; Conrad and Biber 2000; Precht 2000). These investigations of personal expression have been conducted with a variety of complementary methodologies, ranging from detailed descriptions of a single text sample to empirical investigations of general patterns in large computer-based corpora.

Although most of the studies listed above have had a synchronic focus, there have also been several related studies taking a diachronic perspective. For the most part, these diachronic studies have focused on a single linguistic system: modality. Some of these studies document the patterns of use in a particular historical period. For example, Fitzmaurice (2002) describes the use of modal verbs in eighteenth-century British English letters; Kytö (1991) describes the use of modal verbs in a range of seventeenth-eighteenth-century American English registers; and Myhill (1995, 1997) focuses on the functions of modal verbs in nineteenth and twentieth-century American English drama.

Other studies document historical patterns of change in the use of modals. Biber, Conrad, and Reppen (1998, Chapter 8) describe a general decline in the use of modals, accompanied by a rise in the use of semi-modals, over the past three centuries. Krug (2000) provides a much more detailed description of the increasing use of semi-modals (especially *(have) got to*, *have to*, and *want to*), in several registers of both American English and British English. Leech (to appear) adopts a shorter-term perspective, showing how there have been dramatic changes in the use of modals and semi-modals over the past 30 years. For example, while modal verbs are generally on the decline, selected modals (e.g., *can* and *will*) and selected semi-modals (e.g., *be going to* in American English) are used with increasing frequencies.

One methodological issue for these studies concerns the question of what forms to include as a "semi-modal". Four factors are often considered in making this decision: (1) loss of inflection; (2) idiomatic meaning; (3) phonological reduction; and (4) functional use to express modality. Many combinations of verb/adjective + *to*-clause are possible candidates as semi-modals. However, these combinations can be ranked along a cline of conformance to the four criteria; for example:

>   *got to – have to – be going to – want to – need to – be able to*

At one extreme, the combination *got to* can be considered a semi-modal by all four criteria: it is morphologically invariant, has an idiomatic meaning unrelated to the meaning of *get*, is normally reduced in pronunciation (*gotta*), and clearly expresses a modal sense of obligation/necessity. At the other extreme, combinations like *need to* and *be able to* meet only one criterion for semi-modal

status: they express meanings related to modality, but they are not morphologically invariant, idiomatic, or normally reduced in pronunciation.[1]

In fact, there are numerous verbs and adjectives that control a *to*-clause to express modal-like meanings. For example, verbs such as *(would) like to*, *wish to*, and *hope to* express a kind of intention or weak volition, similar to the modals *might* or *would*. Adjectives like *possible to* or *likely to* express possibility (similar to the modals *can*, *could*, *might*, and *may*), while *competent to*, *fit to*, and *inclined to* express specific meanings related to ability or intention. Given the range of these other forms that express modal-like meanings, it is reasonable to ask why forms like *need to* and *be able to* have been privileged with semi-modal status in some previous accounts.

There are many additional devices in English that express "stance" related to meanings of modality. These include a wide range of complement clause constructions (e.g., *seem to*, *appear that*, *intention to*, *fact that*) and stance adverbs (e.g., *apparently, certainly*). In addition, other kinds of stance meanings are relevant to the study of personal expression, although they would not be considered to be core expressions of modality. These include a range of attitudinal expressions, like *surprisingly*, *hopefully*, *be annoyed that*, *would prefer to*.

To date, few historical studies have examined the entire system of devices used to mark stance, including (semi)modal verbs, adverbials, and complement clause constructions. One exception is Fitzmaurice (2003), who describes how a range of stance features are used in eighteenth-century letters written to Addison. In general, though, historical studies have focused primarily on the subsystem of modality, and no study to date has tracked historical change in the full system of stance devices.

In contrast, I adopt this wider perspective in the present paper. I employ a corpus-based approach, based on analysis of the ARCHER Corpus, to track historical change in the use of a wide array of stance devices over the course of the past three centuries. The analysis considers patterns of use for three major grammatical systems used to express stance: (semi)modals, adverbials, and complement clause constructions. Several specific grammatical devices are distinguished (e.g., *that*-complement clauses controlled by a verb, adjective, or noun), as are specific semantic domains (e.g., factive, non-factive, likelihood, and attitudinal adverbials). In this way, it is possible to track historical change for specific forms and subsystems relative to other changes within the system. In addition, the study compares the historical patterns of use across registers, showing how particular registers are innovative in different ways.

By examining the entire system of stance devices, the study is able to

address the underlying patterns of change. Three major patterns are possible: (1) changes in social norms could result in speakers and writers expressing stance meanings to differing extents in different periods; (2) the grammatical system for the expression of stance could undergo change, showing an overall decline in the use of some grammatical devices, replaced by an increase in the use of other devices; (3) the patterns of use could undergo sharper register diversification over time, with particular stance devices taking on more specialized uses in particular registers (similar to the register diversification of WH and *that* relative clauses documented by Romaine 1980).

Section 2 of the paper introduces the stance devices considered here and surveys their synchronic patterns of use, as a baseline for the historical analyses. Section 3 briefly introduces ARCHER, the corpus used for analysis. Then, in Section 4, I turn to the historical analysis of stance devices. The major patterns of change are documented in 4.1, while individual lexico-grammatical associations are described in 4.2. Finally, in Section 5 I summarize the findings and discuss implications relative to the motivations underlying these patterns of change.

2.   A survey of stance devices in English: Synchronic patterns of use

2.1 Major types of stance devices

The framework for the analysis of stance used here is adapted from the *Longman Grammar of Spoken and Written English* (LGSWE; Biber, Johansson, Leech, Conrad, and Finegan, 1999: especially Chapter 12). The LGSWE describes the major patterns of use associated with each grammatical variant, employing a corpus-based analysis of texts from four registers: conversation, fiction, newspaper language, and academic prose. The analyses were carried out on the Longman Spoken and Written English (LSWE) Corpus, which contains c. 40 million words of text overall, with c. 4–5 million words from each of these four registers.

In the LGSWE, three major structural types of stance marking are distinguished: modal verbs, stance adverbials, and complement clause constructions. As Table 1 shows, there are several subcategories under each of these.

Modal and semi-modal verbs are used to express many different kinds of meaning. In the present analysis, though, only three major subcategories are distinguished: possibility/permission/ability, logical necessity/obligation, and prediction/volition.

Stance adverbials are primarily single adverbs (e.g., *frankly*, *obviously*),

although they can also include prepositional phrases and noun phrases functioning as adverbials (e.g., *in general, no doubt*). Four semantic classes of stance adverbials are distinguished: attitudinal, non-factive, factive, likelihood.

Complement clause constructions in English provide an especially rich source of stance expressions. For the present analysis, I consider only *that*-complement clauses and *to*-complement clauses, although WH-clauses and *ing*-clauses can also serve stance functions. For both clause types, the stance is expressed by the controlling element — a verb, adjective, or noun — while the proposition that is framed by the stance is expressed in the complement clause. The particular stance meanings expressed by the controlling element can be grouped into several major semantic classes, such as expressions of likelihood (*hypothesize that, possible that, opinion that, seem to, likely to*). The controlling elements with *to*-clauses express an even wider range of stance meanings than those with *that*-clauses, including desire/intent verbs, ability adjectives, and nouns expressing future plans or possibilities.

The study adopts a liberal approach in defining the sets of controlling elements for complement clauses, including any form that can be interpreted as expressing author/speaker attitude or assessment of likelihood. For example, communication verbs are included as a stance category controlling both *that*-clauses and *to*-clauses. The inclusion of these forms can be justified in two ways: First, the use of a communication verb as controlling element marks the information in the complement clause as non-factive. Thus, in a simple statement, an assertion is presented as fact:

(1)   reduced-fat margarines will make the sandwich soggy

However, when the same statement is framed by a communication verb, the author avoids responsibility for its truth-value:

(2)   Kline reported that reduced-fat margarines will make the sandwich soggy

Second, different communication verbs express a wide range of particular stances. For example, the author/speaker is able to imply different degrees of support for the truth value of a proposition through the choice of communication verb. Thus compare the force of *revealed that, informed that, asserted that, reported that, suggested that, implied that*. In addition, other communication verbs entail particular attitudes, such as *urge that*, and *warn that*.

Similar arguments can be made for the other subcategories of controlling elements with complement clauses. Many of these categories directly express epistemic or attitudinal meanings, while others indirectly reflect such attitudes

Table 1. Major grammatical devices used to express stance

A. Modals and semi-modals
possibility/permission/ability modals (*can*, *could*, *may*, *might*)
logical necessity/obligation modals (*must*, *should*); semi-modals (*have to*, *got to*, *ought to*, *better*)
prediction/volition modals (*will*, *would*, *shall*); semi-modal (*be going to*)

B. Stance adverbials
attitudinal adverbials (e.g., *surprisingly*, *hopefully*, *wisely*)
non-factive adverbials (e.g., *frankly*, *mainly*, *truthfully*)
factive adverbials (e.g., *undoubtedly*, *obviously*, *certainly*)
likelihood adverbials (e.g., *evidently*, *predictably*, *roughly*)

C. Complement clauses
That **complement clauses**
–   **controlled by a verb** (e.g., *we predict that the water is here*)
          non-factive/communication verb (e.g., *imply*, *report*, *suggest*)
          attitudinal verb (e.g., *anticipate*, *expect*, *prefer*)
          factive/certainty verb (e.g., *demonstrate*, *realize*, *show*)
          likelihood verb (e.g., *appear*, *hypothesize*, *predict*)
–   **controlled by an adjective** (e.g., *it is strange that he went there*)
          attitudinal adjectives (e.g., *good*, *advisable*, *paradoxical*)
          likelihood adjectives (e.g., *possible*, *likely*, *unlikely*)
–   **controlled by a noun** (e.g., *the proposal that he put forward*)
          non-factive/communication noun (e.g., *comment*, *proposal*, *remark*)
          attitudinal noun (e.g., *hope*, *reason*, *view*)
          factive/certainty noun (e.g., *assertion*, *observation*, *statement*)
          likelihood noun (e.g., *assumption*, *implication*, *opinion*)
To- **complement clauses**
–   **controlled by a verb** (e.g., *He hoped to go*)
          communication/speech act verb (e.g., *urge*, *report*, *convince*)
          cognition verb (e.g., *believe*, *learn*, *pretend*)
          desire/intent/decision verb (e.g., *aim*, *hope*, *prefer*)
          modality/cause/effort verb (e.g., *allow*, *leave*, *order*)
          likelihood/simple fact verb (e.g., *appear*, *happen*, *seem*)
–   **controlled by an adjective**
          likelihood adjectives (e.g., *prone*, *due*, *apt*, *likely*)
          ability/willingness adjectives (e.g., *competent*, *hesitant*)
          personal affect adjectives (e.g., *annoyed*, *nervous*)
          ease/difficulty adjectives (e.g., *easy*, *impossible*)
          evaluative adjectives (e.g., *convenient*, *smart*)
–   **controlled by a noun** (e.g., *agreement*, *intention*, *plan*)

or assessments of likelihood. A complete list of the forms included under each subcategory is given as Appendix I. (See also Biber, Conrad, et al. (in press) for an analysis of these stance devices in spoken and written university registers.)

2.2 Synchronic patterns of stance devices across registers

To provide a baseline for the historical analyses reported in Section 4, I summarize here some of the major synchronic patterns of stance marking, taken from the LGSWE.

Overall, stance is expressed to a greater extent in conversation than in expository written registers. Figure 1 shows the combined frequencies of modal/semi-modal verbs, stance adverbials, and stance complement clause constructions. Modal/semi-modal verbs and stance adverbials are considerably more common in conversation than in fiction, news, or academic prose. Modal/semi-modal verbs are especially frequent in all registers, while stance adverbials are much less common than the other grammatical categories.

It might be expected that semi-modal verbs predominate in conversation. While it is the case that semi-modals are frequent in conversation, it turns out that the core modal verbs are much more common (see LGSWE, Figure 6.9). That is, both semi-modals and core modal verbs are more common in conversation than in the written registers.

Figure 1 shows that stance complement clause constructions have a different overall distribution: common in conversation, fiction, and news, but less common in academic prose. It turns out that the registers also differ in the particular stance complement construction they favor. Figure 2 shows that conversation favors a single pattern: verb+complement clause (accounting for c. 90 per cent of all stance complement clause constructions). In contrast, the verb+complement clause pattern accounts for only c. 50 per cent of this stance category in academic prose, with extraposed and adjective+complement patterns also being common. News also shows a heavy reliance on the stance adjective+complement clause pattern.

As Figure 3 shows, there are even more specific differences here: Conversation relies primarily on *that*-clause constructions. In contrast, news favors *to*-clause constructions, including both verb+*to*-clause and adjective+*to*-clause patterns. Academic prose shows an even heavier reliance on *to*-clause constructions to mark stance.

The specific patterns and functions of these devices are described in more detail in the LGSWE (see especially pp. 483–97; 557–63; 647–55; 662–75;
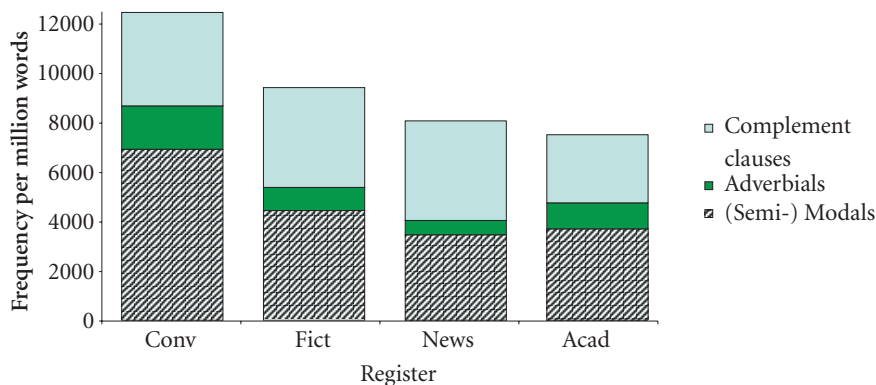
Figure 1. Distribution of stance markers by major grammatical category (based on LGSWE Fig 12.1)

699–24; 853–75; 966–86). For example, the verb+*that*-clause pattern in conversation is quite restricted, relying primarily on the repeated use of a very small set of verbs, especially *think*, *know*, and *say*. In contrast, the stance *to*-clause constructions in news rely on a wide range of verbs and adjectives from many different semantic domains, including *want*, *like*, *seem*, *appear*, *try*, *fail*, *be expected*, *certain*, *likely*, *important*, etc.

In sum, three major patterns emerge from these analyses:

1.   There are overall differences across registers in the extent to which stance is expressed at all: much more common in conversation than in news or
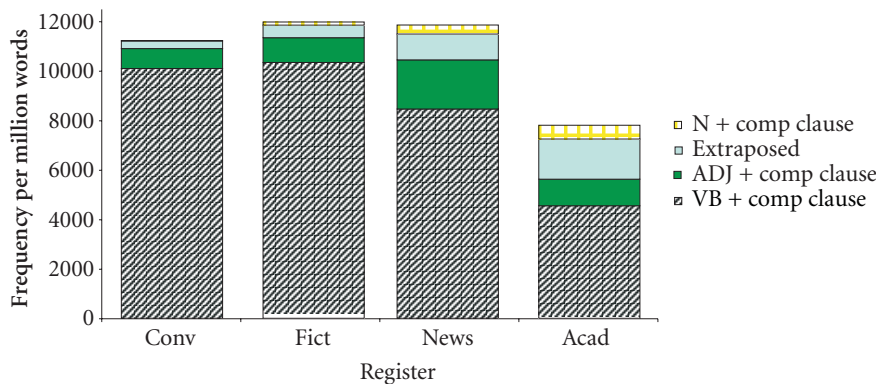

Figure 2. Breakdown of stance markers within the complement clause category (based on LGSWE Fig 12.3)
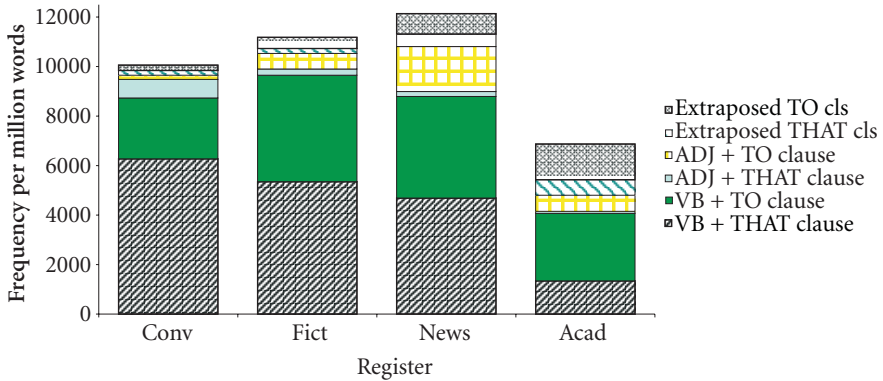
Figure 3. Breakdown of stance markers for *That*-clauses and *To*-clauses (based on LGSWE Fig 12.4)

academic prose.

2. Different stance devices are used to differing extents; modals are especially common, but surprisingly, stance complement clause constructions are almost as common (and even more frequent in News).

3. There are dramatic differences across registers in the preferred devices used to express stance; for example, modals and verb+*that*-clause combinations are dominant in conversation, while verb and adjective + *to-clause* combinations are especially common in news.

Building on this brief description of stance markers in present-day English, I turn now to the historical patterns.

3. Overview of the ARCHER corpus

The historical study of stance markers is based on analysis of the ARCHER corpus (Biber, Finegan, and Atkinson 1994). ARCHER — A Representative Corpus of Historical English Registers — was designed for a specific research agenda: to analyze historical change in the range of written and speech-based registers of English from 1650 to the present. The general design goal for the corpus has thus been to represent a wide range of register variation, sampled systematically across texts from the last three and a half centuries.

The overall structure of the corpus comprises ten major register categories, sampled in 50 year periods from 1650 to the present, as summarized in Table 2.

Altogether, the complete corpus includes 1,037 texts and c. 1.7 million words. Among the written registers, the corpus includes personal styles of communication (journals/diaries and personal letters), prose fiction, popular exposition represented by news reportage, and specialist expository registers, represented by legal opinions, medical prose, and scientific prose. The corpus similarly includes several different kinds of speech-based registers: dialogue in drama and dialogue in fiction as reflections of casual face-to-face conversation, and sermons as a reflection of planned monologue styles.

Registers are represented by 10 texts per 50-year period, in most cases chosen using random selection techniques (with available bibliographies serving as sampling frames). American English registers are sampled for only one 50-year period per century. Biber, Finegan, and Atkinson (1994) and Biber, Conrad, and Reppen (1998: Methodology Box 2) provide more details about the design, sampling and compilation of ARCHER.

Four registers from ARCHER were chosen for the historical analysis of stance features: drama, personal letters, newspaper reportage, and medical prose. Table 3 summarizes the composition of this sub-corpus by register category. These four registers cover much of the range of register variation available in ARCHER, and they allow easy comparisons to the findings from the LGSWE (summarized in Section 2 above): drama provides an indication of the

Table 2. Overview of ARCHER (A Representative Corpus of Historical English Registers)

Total size: 1,037 texts; c. 1.7 million words.
Time-span covered: 1650–1990, divided into 50 year periods
Dialects covered: British (all periods) and American (1 period per century)
Registers:

7	Written Categories: journals/diaries, personal letters, fiction prose, news reportage, legal opinions, medical prose, scientific prose
3	Speech-based Categories: drama, fiction dialogue, sermons

Target Sampling: 10 texts, at least 2,000 words, per genre (and dialect) in each period.
A full sampling for a register includes 100 texts:
1650–1699, British: 10 texts
1700–1749, British: 10 texts
1750–1799, British: 10 texts   1750–1799, American: 10 texts
1800–1849, British: 10 texts
1850–1899, British: 10 texts   1850–1899, American: 10 texts
1900–1949, British: 10 texts
1950–1990, British: 10 texts   1950–1990, American: 10 texts

characteristics of face-to-face conversation in earlier periods, while newspaper reportage and medical prose correspond closely to news and academic prose in the LSWE Corpus. Personal letters were included because of their importance in previous studies of stance (e.g., Biber and Finegan 1989; Besnier 1989; Fitzmaurice 2002, 2003). Similar to conversation, letter writers have highly involved purposes. In fact, these previous studies have shown that personal letters can be even more marked for stance than conversation, apparently because they are less face-threatening (because of the physical separation of participants).

In general, the analyses of stance focus on British English texts, because they have a more complete representation in ARCHER (see Table 2 above). However, selected patterns of change are reported for American English when they are especially noteworthy.

4.   Historical change in stance marking patterns.

4.1 Changing stance patterns in drama, personal letters, newspaper prose, and academic prose

As noted in Section 1 above, modal verbs are probably the most studied subsystem of stance in English. The study here provides additional evidence that modals have undergone a recent decline in use. As Figure 4 shows, modals have undergone a marked decline in all registers, especially over the last 50 years. Specific modal verbs affected by this decline include *may, must, should, will,* and *shall.* These patterns agree generally with the even more recent patterns of change documented by Leech (to appear).

Table 3: Breakdown of registers used for the present study

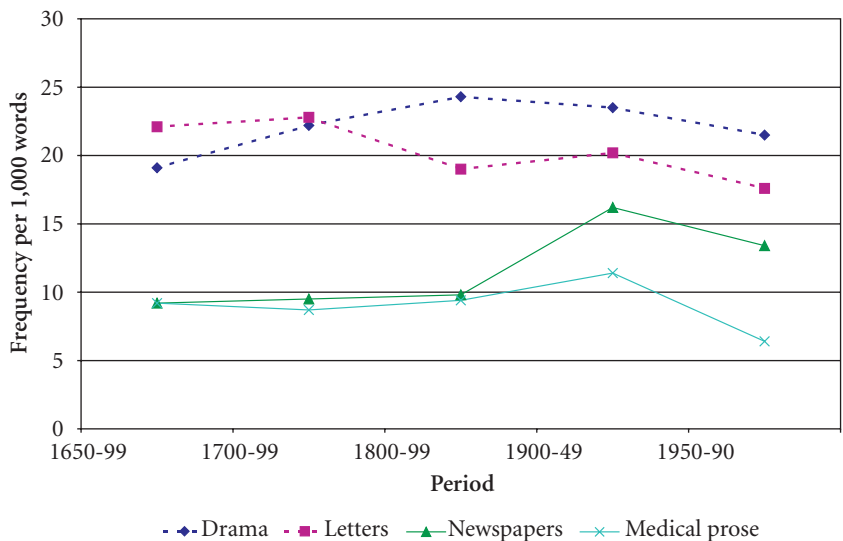| Register	Number of texts
drama (only 5 texts from eighteenth-century American)	95
letters (more than 10 texts per period; most texts shorter than 1,000 words)	275
newspaper reportage	100
medical prose (no eighteenth-century American)	90

Figure 4. Distribution of modal verbs in BrE

In contrast to the decline for modal verbs, Figures 5 and 6 show that there has been a marked increase in the use of semi-modal verbs. This increase is stronger in American English than British English, but it has been restricted primarily to drama and letters in both dialects. Thus, the decline in modal use for newspaper and academic prose shown in Figure 4 is not offset by a corresponding increase in semi-modal use in those registers, suggesting that the two trends (decreasing modal use vs increasing semi-modal use) are at least partially independent.

In addition, it is important to note that semi-modals are still considerably less common than core modal verbs. (Note that Figures 5 and 6 have a 0–10 scale, while Figure 4 has a 0–30 scale.) For example, semi-modals occur only about three times per 1,000 words in British English drama from the most recent period (Figure 5), while modal verbs are used about 22 times per 1,000 words in the same register and period (Figure 4).

These shifts in frequency are in many cases accompanied by shifts in meaning and use. For example, Biber (to appear) compares the use of the semi-modal *have to* and the modal *must*. In personal letters, *have to* has been en-croaching on the semantic domain of *must*, being used more frequently to express meanings of personal obligation. At the same time, *must* has increased in its use with logical necessity meanings, and as a result, this core modal has remained relatively constant in its frequency of use in that register.
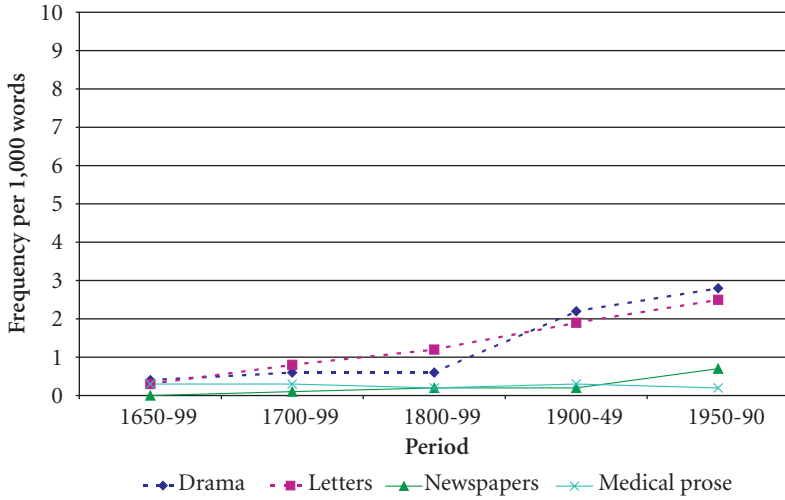
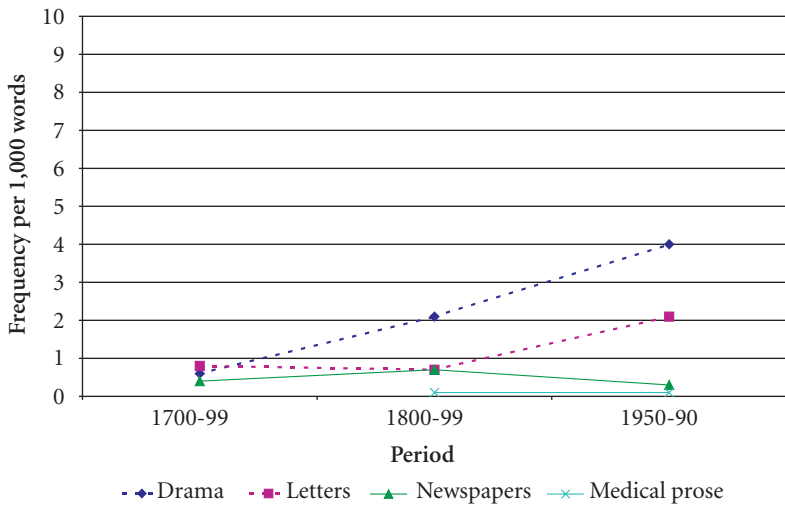**Figure 5**. Distribution of semi-modal verbs in BrE

Figure 6. Distribution of semi-modal verbs in AmE

Text sample 1 illustrates the heavy reliance on modal verbs in eighteenth-century personal letters, while Sample 2 illustrates the mixing of modal and semi-modal verbs in present-day drama:

Text Sample 1:   eighteenth c. personal letter. (Addison to Swift, 1710.)

[modal verbs are marked in bold]

I have run so much in debt with you that I don't know how to excuse my self and therefore **shall** throw my self wholly upon your good nature and promise if you **will** pardon what is passed to be more punctual with you for the future. […] I **shall** not trouble you with any occurrences here because I hope to have the pleasure of talking over all affaires with you very suddenly. We hope to be at Holy-Head by the 30th Instant. Lady Wharton stays in England. I suppose you know that I have obeyed yours and the Bishop of Clogher's commands in relation to Mr Smith, for I desired Mr Dawson to acquaint you with it. I **must** beg my most Humble Duty to the Bishop of Clogher. I heartily long to eat a dish of Bacon and Beans in the best company in the world. Mr Steele and I often drink your Health. I am forced to give myself Airs of a punctual Correspondce with you in discourse with your friends at St James's Coffee-house, who are always asking me Questions about you when they have a mind to pay their Court to me, if I **may** use so magnificent a Phrase. […]

Text Sample 2:   twentieth c. drama. <Parker, Dorothy and d'Usseau, Arnaud. 1954. Ladies of the corridor. (contextual information has not been included in the linguistic analysis)>

[modal verbs and semi-modal verbs are marked in bold; stance verbs controlling complement clauses are marked in BOLD CAPS]

MRS. GORDON: Wait a second. I **WANT** to see this.
LULU: Good evening.
MRS. LAUTERBACH: Good evening.
LULU: Does there happen to be a small poodle back here, Harry?
HARRY: Just a minute, Mrs. Ames. <He disappears.>
MRS. GORDON: <(in a whisper to Mrs. Lauterbach):> Be talking, **can**'t you?
MRS. LAUTERBACH: <a trifle too loud> I don't **THINK** the coffee at that theater is as good as the coffee at the Esquire. Do you, Mrs. Gordon? <Harry reappears with Sassy.>

LULU: There she is. <She picks up Sassy; Paul pats the dog's head.> Was she a good girl, Harry? Did she cry?

HARRY: Not a peep out of her, Mrs. Ames. And I had her out.

LULU: Thank you. <Lulu and Paul go in the direction of the elevators. >

PAUL: <as they pass the ladies, patting Sassy> Aren't you **going to** say hello to your uncle?

MRS. GORDON: <when they are out> Now watch this! What do you **BET** he goes up?

MRS. LAUTERBACH: Oh, I don't **THINK** so.

MRS. GORDON: Well, you've got a sweeter mind than I have. After what I **TOLD** you I heard last night at two a.m. this morning. Heard them talking in her room. Heard his voice just as plain.

MRS. LAUTERBACH: If they were talking it **could**n't be anything bad.

MRS. GORDON: Oh, no? They **can** talk afterwards, **can**'t they?

MRS. LAUTERBACH: I didn't **THINK** she was that kind.

MRS. GORDON: Well, still waters run dirty, you know.

[…]

HARRY: Rain started, huh? You called the turn all right.

CHARLES: I **GUESS** I did.

HARRY: I **HOPE** your mother has a good night.

CHARLES: Thank you.

HARRY: Well, I **GUESS** I'll knock off.

CASEY: Hey, listen to that rain!

HARRY: Yeah, I **HATE** to go out in it. The one night in the week I pick to go home, and it's **got to** come down in buckets.

CASEY: A big week, huh?

HARRY: One of the biggest. The town's full of it. The way the dames are handing it to you, all you **have to** do is reach out and take it. Well, if they **WANT** to offer it to you on a platter with parsley around it, what are you **going to** do?

Similar to semi-modals, stance adverbials have steadily increased in use across these periods. Figure 7 shows a steady increase in frequency for stance adverbials in drama and (to a lesser extent) personal letters. As a result, stance adverbials are especially common in modern-day drama (and conversation — see Figure 1 above). Following are some examples from 1950–1990 drama:

(3) You **never** can be **really** sure what's going on in their heads.

(4) So she **actually** talks of me as a drip, does she?

(5) No. **Matter of fact** … speaking as a professional politician … I **kind of** admire what he's doing.

(6) WOOD: It's a **sort of** code, is it?
     SIMON: **No doubt** it seems a rather squalid one, to you.
     […]
     SIMON: I also realized that I couldn't **possibly** do her any harm.

In the nineteenth century, newspaper and medical prose participated in the increasing use of stance adverbials, in a similar way to drama and letters. However, Figure 7 shows that stance adverbials have come to be disfavored in these two registers in the most recent period, resulting in a split at present between the personal, colloquial registers (drama and letters) and the informational written registers (news and medical prose).

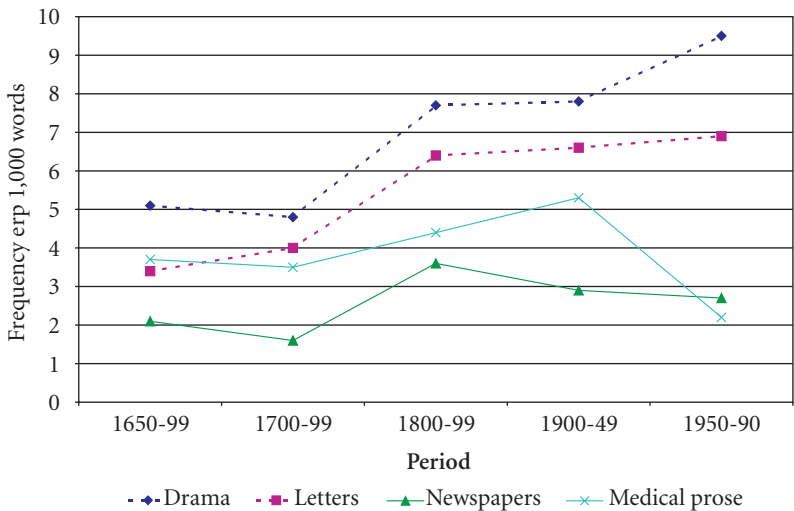The sampling procedures for medical prose in ARCHER differ from those

Figure 7. Distribution of stance adverbials in BrE

for other registers, in that all texts for a given period were taken from a single year of the academic journal. For the period 1900–1949, all medical prose texts were selected from the 1905 volume of the Edinburgh Medical Journal. Thus, the frequent use of stance adverbials in this sub-sample shown on Figure 7 can be seen as a reflection of the patterns of use at the end of the nineteenth century, rather than generally representative of the first half of the twentieth century. The following examples illustrate the dense use of stance adverbials in medical prose from 1905:

(7)   It is **certainly** not clear that the recovery was due to collargol.

(8)   Even the microscope, as I have already shown, is not **always absolutely** reliable.

(9)   …the result being, **of course**, an endless source of annoyance, because pregnancy was to her an important matter, and her menopause had **apparently** been induced by this interference.

(10) Though in the wealth of organisms associated in these cases, and **possibly** pathogenic, it could not be **certainly** stated which was the *fons et origo mali*, yet in some of the cases we were enabled to conjecture which organism was most **probably** responsible.

Given the increases in semi-modals and stance adverbials across these historical periods, it might be expected that stance complement clause constructions would have been decreasing in use. However, Figures 8 and 9 show that these constructions also underwent a steady increase in frequency across these periods. Both stance verb+*that*-clauses and stance verb+*to*-clauses have increased in use, being especially common in drama and personal letters. Text Sample 2 above illustrates the dense use of these features in a modern-day drama text.

   Perhaps the most dramatic shift shown on these figures is for the use of stance verb+*that*-clause constructions in newspaper prose. Figure 10 shows that these are mostly communication verbs (like *say*), which introduce the content of someone's speech. However, many of these verbs are also used to present a particular stance, commenting on how information was said and the implications of that speech act. For example, contrast the stance of the communication verbs in the following sentences from twentieth-century newspaper prose:

(11) Some newspapers *announced* that Baron Tanaka had tendered his resignation

(12) A ZANU spokesman *alleged* that the move was an attempt by the incoming government to intimidate the party.

(13)   He *suggested* that Berlin should become a "place of co-operation not confrontation".

(14)   Bishop Muzorewa *claimed* that thousands of black supporters of the transitional Government were being held in camps in Zambia and Mozambique.

By the dense use of communication verb + complement clause constructions, newspaper stories can present controversial information while avoiding direct responsibility for those claims.

Figure 10 also shows that newspaper reportage has been innovative in the increasing use of other stance features: a recent increase in the use of stance adjective + *to* complement clauses, and to a lesser extent an increase in the use of stance noun + *to* clause constructions. Examples from the most recent period of newspaper prose are:

(15)   We have a reputation for being *able* to solve these intricate, difficult, long-term investigations.

(16)   The independence date is not *likely* to be postponed beyond early spring.

(17)   Ministers are *reluctant* to use emergency powers and troops to move essential fuel supplies.

(18)   The President's message also urged the public to support the *plan* to limit the vaccine to children 5 to 9 years old.

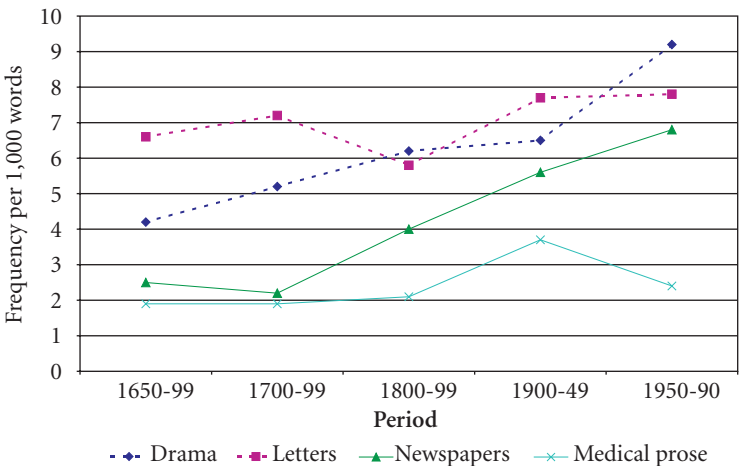Stance adjectives and nouns controlling complement clauses have also increased

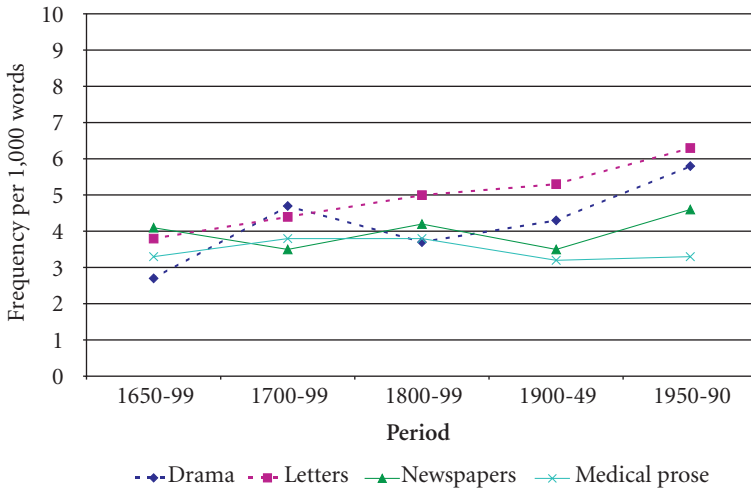**Figure 8**. Distribution of stance verb + *that*-clause in BrE

Figure 9. Distribution of stance verb + *to*-clause in BrE

recently in medical prose, although to a lesser extent than in newspaper prose; for example:

(19)   It is *clear* that omeprazole is a potent long acting inhibitor of gastric secretion …

(20)   It is *likely* that this reflects lack of inhibitory feedback of vagally induced gastrin release …

(21)   The *fact* that such a high proportion of those having cystoscopy had features consistent with tuberculosis may have suggested or hastened the diagnosis.

The increase in the use of stance adjective/noun + complement clause parallels the stronger increases in semi-modals, stance adverbials, and stance verb+complement clause constructions. However, these developments have been register-stratified: shifts towards greater use of semi-modals, stance adverbials, and stance verb+complements are especially characteristic of drama and letters; the smaller shifts towards greater use of stance adjective/noun + complements are especially characteristic of newspapers and to a lesser extent medical prose.

Medical prose differs from the other three registers in that it shows a recent decline in the use of most of these stance features. A closer inspection of these medical research articles suggests that there is instead a reliance on unmodified statements of "fact", such as:
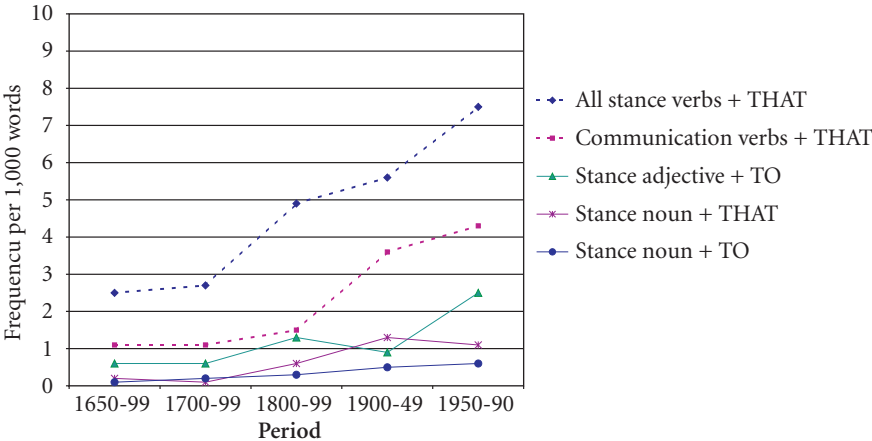
Figure 10. Innovative trends in news reportage

(22)   Omeprazole produced no adverse side effects and there were no drug related effects on the laboratory screen.

(23)   Deliberate self poisoning was commonest in the 20 to 29 years age group and was twice as common in women.

When stance is marked in medical prose, it tends to be integrated into noun phrase structures, rather than having a framing function relative to other propositions. Thus, these devices can occur as attributive adjectives or adverbs modifying attributive adjectives, such as:

(24)   The G. P. has an *important* role especially when prescribing…

(25)   Prior to the Raskind balloon septostomy … the outlook for babies with TGA was *extremely* poor…

The general patterns of change described here are surprising: it is *not* the case that one grammatical system of stance is being replaced by another grammatical system. Of the stance systems considered here, only modal verbs have been declining in use. In contrast, all other major stance systems have increased in use, either generally or in specific registers. These findings suggest that stance meanings have come to be expressed to an increasing extent across these historical periods. I return to a discussion of these patterns in the conclusion.

4.2 Lexico-grammatical associations

More detailed analyses are needed to further explain the general patterns of change documented in 4.1. Two specific research questions are briefly considered here: (1) What kinds of stance meanings are most important for these historical shifts? and (2) Are there specific lexico-grammatical combinations that hve been especially important in these shifts, perhaps indicating grammaticalization of a form with a stance function. The present section summarizes analyses of this type for stance adverbials, stance verbs + *that*-clauses, and stance verbs + *to*-clauses.

Four major semantic classes of stance adverbials were considered in the analysis (see Appendix): non-factive, attitudinal, factive, and likelihood. Of these, only factive adverbials have shown a dramatic increase in use across these historical periods. In fact, Figure 11 shows that most of the general increase in the use of stance adverbials in drama can be attributed to factive adverbials. Likelihood adverbials also showed sustained but much smaller increases in several registers.

The most common of these factive adverbial forms is the adverb *really*. However, Figure 11 also shows that this individual form contributes little to the overall increase in factive adverbials. Rather, this historical shift represents a broad based development towards greater use of the range of factive adverbials.
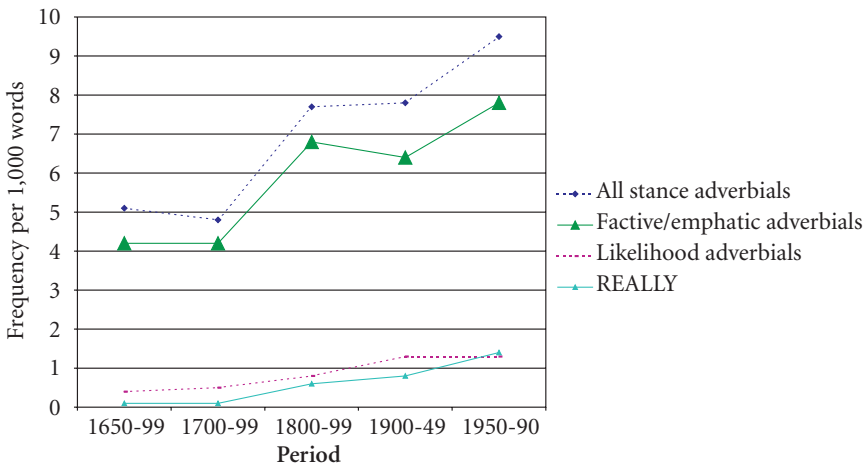

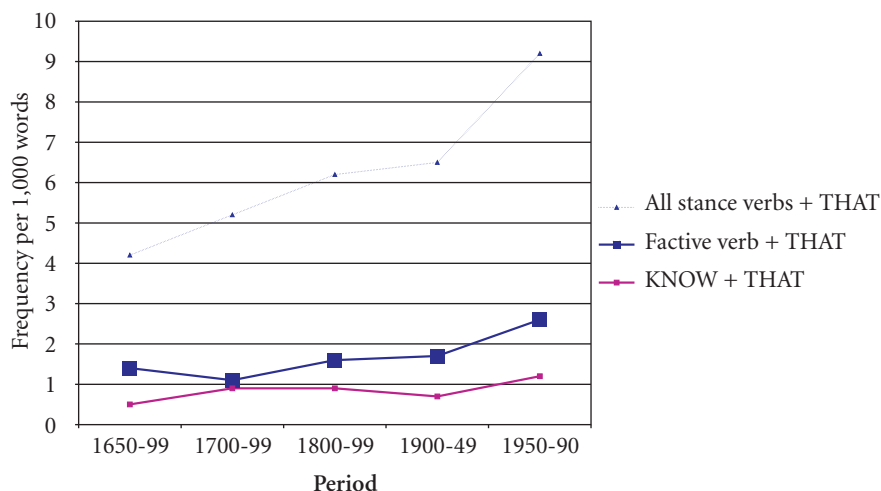**Figure 11.** Stance adverbial categories and the influence of individual adverbs - BrE drama

Figure 12. The influence of individual verbs on Factive verb + *that*-clause – BrE drama

The same four semantic categories were used to classify the stance verbs controlling *that*-clauses (see Appendix), and similar to adverbials, only the factive and likelihood categories showed sustained increases in use across the periods. Figure 12 plots the increase in factive verbs controlling *that*-clauses (in drama) together with the frequency of the most common controlling verb from this category: *know*. Similar to the pattern with stance adverbials, it is clear that this single form is not the primary factor influencing the increase in this category. In contrast, Figure 13 shows that the increase in likelihood verbs controlling *that*-clauses in drama is almost entirely due to the increase in a single stance verb: *think*.

Interestingly, stance verbs with *to*-clauses are more likely to express affective meanings than epistemic meanings. As Figure 14 shows, verbs of desire have been the only semantic category here that shows a sustained increase in use, although mental verbs and verbs of effort have shown less marked increases across the periods. The stance verb *want* is the most common desire verb controlling a *to*-clause, and the combination *want to* is sometimes analyzed as a grammaticalized form functioning as a semi-modal. However, Figure 14 shows that the general increase in desire verbs is only partly due to the increase in this combination. Interestingly, the increase in the early twentieth century in drama seemed to favor the single form *want to*, while the pattern for 1950–90 suggests a more diversified reliance on a range of desire verbs.

In addition, mental verbs + *to*-clause shows a smaller but sustained increase in news reportage. These are mostly passive verbs, such as:

(26)   Mrs Thatcher *is believed* to have said that the "virility" of Ministers depended on how much they could save rather than spend.

(27)   Mr Kosygin, in his speech, *is expected* to press hard for the adoption of a Russian resolution condemning Israel as an aggressor.

5.   Conclusion

The present study has documented major shifts in the use of stance features across several grammatical categories. Of these, only modal verbs have undergone a decrease in use. In contrast, semi-modals, stance adverbials, and stance complement clause constructions have all increased in use across the historical periods in this study.

These patterns argue against the explanation of a simple grammatical reorganization. For example, it does not seem to be the case that modal verbs are simply being replaced by semi-modals. Rather, the findings here suggest that stance meanings are being expressed more commonly overall, with the most notable increases occurring in the present century. These developments indicate
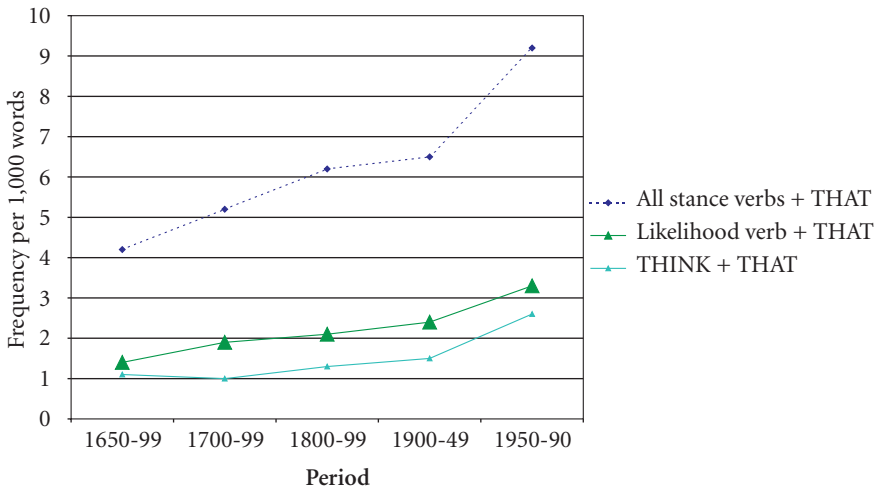

Figure 13. The influence of individual verbs on Likelihood verbs + *that*-clause - BrE drama
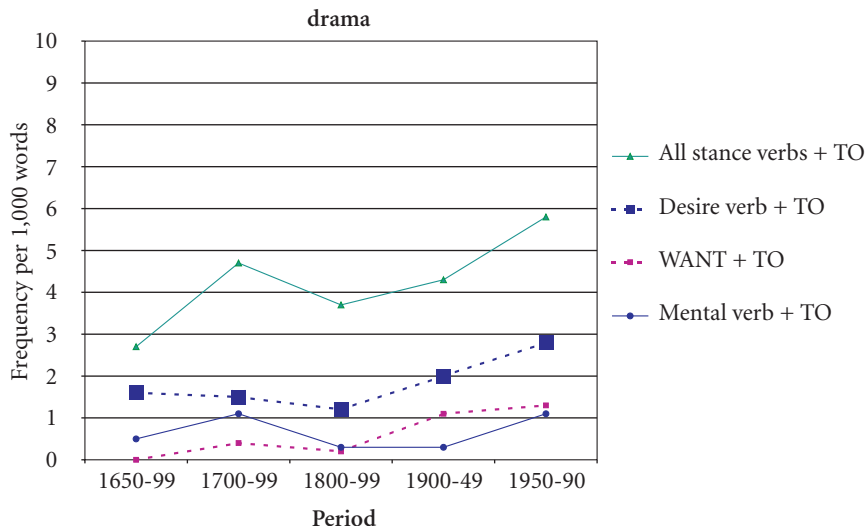
Figure 14. Stance verb + *to*-clause categories and the influence of individual verbs – BrE drama

a general shift in cultural norms: speakers and writers are simply more willing to express stance in recent periods than in earlier historical periods. It would be interesting to correlate these developments with the attitudes expressed in style guides, editorial policies, and other overt discussions of proper speech and writing. However, whether these changes reflect the deliberate policies of schools and publishers, or the popular attitudes of speakers and writers, there seems to have been a broad-based change in use.

The findings here also seem to show increasing register diversification in the marking of stance. First, the popular registers included in this study — drama and personal letters — are clearly leading the way in the increased use of stance markers. News reportage uses these stance devices to a lesser extent, while medical prose infrequently uses most of these devices. Beyond those general patterns, though, there is evidence that particular devices are becoming increasingly favored in particular registers. For example, semi-modals and stance adverbials are found primarily in drama and letters, while complement clauses controlled by stance adjectives and nouns are found primarily in newspaper reportage (and medical prose to a lesser extent).

Finally, the findings here suggest increasing semantic specialization. In particular, epistemic stance seems to have been the primary focus of the increased use over these periods, while the expression of affect and attitudinal

stance has remained more constant. There are exceptions to this generalization, like the increased use of desire verbs+*to*-clauses in drama; or the increased use of communication verbs+*that*-clauses in newspaper prose. However, the increased use of epistemic stance markers has a much broader base across grammatical categories and across registers.

The study here is obviously just a first step: more detailed investigations are required to confirm and interpret these patterns. It would be useful to study the use of these features in larger, more specialized historical corpora. In addition, there are likely other stance features that should be added to the set of features studied here. The semantic domains used here could also be refined and extended, and the study of individual lexico-grammatical combinations requires much more detailed investigation. What the present study has accomplished, though, is to show the importance of studying stance as a complex system: consisting of several interacting grammatical and semantic types, and functioning in register-specific ways. Detailed studies of particular stance markers (like modal verbs) are important, but they do not provide the basis for overall generalizations about shifts in the kinds and extent to which stance is marked. Broader-based corpus studies, like the present one, can give us descriptions of this type, providing the basis for complementary detailed investigations of particular stance types.

Note

1. The verbs *need* and *dare* have marginal modal status; for example, they can pattern like other modal verbs in interrogative and negative clauses. However, this use is rare and restricted to British English; see Biber et al 1999: 163–4, 217–8.

References

Barton, E. 1993. Evidentials, argumentation, and epistemological stance. *College English* 55, 745–769.

Beach, R., and C. M. Anson. 1992. Stance and intertextuality in written discourse. *Linguistics and Education* 4, 335–357.

Besnier, Niko. 1989. Literacy and feelings: The encoding of affect in Nukulaelae letters. *Text* 9, 69–91.

Biber, Douglas. To appear. Modal use across registers and time. In: Anne Curzan and Kimberly Emmons (eds.), *Studies in the History of the English Language II: Unfolding Conversations*. Berlin: Mouton de Gruyter.

Biber, Douglas, Susan Conrad, and Randi Reppen. 1998. *Corpus Linguistics: Investigating Language Structure and Use.* Cambridge: Cambridge University Press.

Biber, Douglas, Susan Conrad, Randi Reppen, Patricia H. Byrd, Marie Helt, Victoria Clark, Viviana Cortes, Eniko Csomay, and Alfredo Urzua. In press. *Representing Language Use in the University: Analysis of the TOEFL 2000 Spoken and Written Academic Language Corpus.* (TOEFL Monograph Series). Princeton, NJ: Educational Testing Service.

Biber, Douglas, and Edward Finegan. 1988. Adverbial stance types in English. *Discourse Processes* 11, 1–34.

Biber, Douglas, and Edward Finegan. 1989. Styles of stance in English: Lexical and grammatical marking of evidentiality and affect. *Text* 9, 93–124.

Biber, Douglas, Edward Finegan, and Dwight Atkinson. 1994. ARCHER and its challenges: Compiling and exploring a representative corpus of historical English registers. In: Udo Fries, Gunnel Tottie and Peter Schneider (eds.). *Creating and Using English Language Corpora.* Amsterdam: Rodopi, 1–14.

Biber, Douglas, Stig Johansson, Geoffrey Leech, Susan Conrad, and Edward Finegan. 1999. *The Longman Grammar of Spoken and Written English.* London: Longman.

Chafe, Wallace L. 1986. Evidentiality in English conversation and academic writing. In: Wallace L. Chafe and Johanna Nichols (eds.). *Evidentiality: The Linguistic Coding of Epistemology.* Norwood, N.J.: Ablex, 261–72.

Chafe, Wallace L., and Johanna Nichols (eds.). 1986. *Evidentiality: The Linguistic Coding of Epistemology.* Norwood, N.J.: Ablex.

Conrad, Susan, and Douglas Biber. 2000. Adverbial marking of stance in speech and writing. In: Susan Hunston and Geoff Thompson (eds.). 2000. *Evaluation in Text.* Oxford: Oxford University Press, 56–73.

Fitzmaurice, Susan. 2002. Politeness and modal meaning in the construction of humiliative discourse in an early eighteenth-century network of patron-client relationships. *English Language and Linguistics* 6, 239–66.

Fitzmaurice, Susan. 2003. The grammar of stance in early eighteenth-century English epistolary language. In: Charles Meyer and Pepi Leistyna (eds.). *Corpus Analysis: Language Structure and Language Use.* Amsterdam: Rodopi, 107–132.

Holmes, Janet. 1988. Doubt and certainty in ESL textbooks. *Applied Linguistics* 9, 20–44.

Hunston, Susan. 1994. Evaluation and organization in a sample of written academic discourse. In: Malcolm Coulthard (ed.). *Advances in Written Text Analysis.* London: Routledge, 191–218.

Hunston, Susan, and Geoff Thompson (eds.). 2000. *Evaluation in Text.* Oxford: Oxford University Press.

Hyland, Ken. 1996. Talking to the academy: Forms of hedging in scientific research articles. *Written Communication* 13, 251–281.

Hyland, Ken. 2000. *Disciplinary Discourses: Social Interactions in Academic Writing.* London: Longman.

Krug, Manfred G. 2000. *Emerging English Modals: A Corpus-based Study of Grammaticalization.* Berlin: Mouton de Gruyter.

Kytö, Merja. 1991. *Variation and Diachrony, with Early American English in Focus.* Frankfurt am Main: Peter Lang.

Labov, William. 1984. Intensity. In: Deborah Schiffrin (ed.). *Meaning, Form, and Use in Context: Linguistic Applications*. Washington, D.C.: Georgetown University Press, 43–70

Leech, Geoffrey. To appear. The English modal auxiliaries 1961–1991: Modality on the move. In: Roberta Facchinetti, Manfred Krug, and Frank Palmer (eds.), *Modality in Contemporary English*. Berlin: Mouton de Gruyter.

Myhill, John. 1995. Change and continuity in the functions of the American English modals. *Linguistics* 33, 157–211.

Myhill, John. 1997. *Should* and *ought*: The rise of individually oriented modality in American English. *English Language and Linguistics* 1, 3–23.

Ochs, Elinor (ed.). 1989. *The Pragmatics of Affect*. Special issue of *Text*, Vol 9.

Precht, Kristen. 2000. *Patterns of Stance in English*. Ph.D. dissertation, Northern Arizona University.

Appendix: Complete list of forms included in the analyses of stance

Semantic categories of stance adverb(ial)s

– non-factive adverb(ial)s
accordingly, according to, confidentially, figuratively speaking, frankly, generally, honestly, mainly, strictly, technically speaking, truthfully, typically, reportedly

– attitudinal adverb(ial)s
amazingly, astonishingly, conveniently, curiously, disturbingly, hopefully, even worse, fortunately, importantly, ironically, regrettably, rightly, sadly, sensibly, surprisingly, unbelievably, unfortunately, wisely

– factive adverb(ial)s
actually, always, certainly, definitely, indeed, inevitably, in fact, never, of course, obviously, really, undoubtedly, without doubt, no doubt

– likelihood adverb(ial)s
apparently, evidently, kind of, most cases, most instances, perhaps, possibly, predictably, probably, roughly, sort of

That complement clauses

a. *That* clauses controlled by a verb (e.g., *we predict that the water is here*)

– non-factive verb
{commenting on how information is said / communicated }
add, announce, advise, answer, argue, allege, ask, assert, assure, charge, claim, confide, confess, contend, convey, convince, declare, demand, deny, emphasize, explain, express, forewarn, grant, hear, hint, hold, imply, inform, insist, maintain, mention, mutter, notify, order, persuade, petition, phone, pray, proclaim, promise, propose, protest, reassure, recommend, remark, remind, reply, report, respond, reveal, say, shout, state, stress, suggest, swear, teach, telephone, tell, urge, vow, warn, whisper, wire, write

– attitudinal verb
accept, admit, agree, anticipate, boast, complain, concede, cry, dream, ensure, expect, fancy, fear, feel, forget, forsee, guarantee, hope, mind, prefer, pretend, reflect, require, resolve, trust, wish, worry

- factive verb
  acknowledge, affirm, ascertain, calculate, certify, check, conclude, confirm, decide, deem, demonstrate, determine, discover, find, know, learn, mean, note, notice, observe, prove, realize, recall, recognize, recollect, record, remember, see, show, signify, submit, testify, understand
- likelihood verb
  appear, assume, believe, bet, conceive, consider, deduce, detect, doubt, estimate, figure, gather, guess, hypothesize, imagine, indicate, intend, perceive, postulate, predict, presuppose, presume, reckon, seem, sense, speculate, suppose, suspect, think, wager

b. *That* clauses controlled by an adjective (e.g., *it is strange that he went there*)

- attitudinal adjectives (e.g., *good, advisable, paradoxical*)
  acceptable, adamant, advisable, afraid, alarmed, amazed, amazing, amused, angry, annoyed, annoying, anomalous, appropriate, ashtonished, ashtonishing, aware, awful, careful, concerned, conceivable, critical, crucial, curious, depressed, desirable, disappointed, disappointing, dissatisfied, distressed, disturbed, dreadful, embarrasing, encouraged, essential, extraordinary, fitting, fortunate, frightened, frightening, funny, glad, good, grateful, great, happy, hopeful, horrible, hurt, imperative, incidental, inconceivable, incredible, indisputable, interesting, ironic, irritated, irritating, lucky, mad, natural, neat, necessary, nice, notable, noteworthy, noticeable, obligatory, odd, okay, paradoxical, peculiar, pleased, preferable, reassured, relieved, ridiculous, sad, satisfied, sensible, shocked, shocking, silly, sorry, strange, stupid, sufficient, surprised, surprising, thankful, tragic, typical, unacceptable, unaware, uncomfortable, understandable, unfair, unfortunate, unhappy, unlucky, unthinkable, untypical, unusual, upset, upsetting, vital, wonderful, worried
- likelihood adjectives
  doubtful, likely, possible, probable, unlikely, accepted, apparent, certain, clear, confident, convinced, correct, evident, false, impossible, inevitable, obvious, positive, proved, plain, right, sure, true, well-known

c. *That* clauses controlled by a noun (e.g., *the proposal that he put forward was accepted*)

- non-factive/communication noun
  comment, news, proposal, proposition, remark, report, requirement
- attitudinal noun
  fear, ground, hope, reason, view, thought
- factive noun
  assertion, conclusion, conviction, discover, doubt, fact, knowledge, observation, principle, realisation, realization, result, statement
- likelihood noun
  assumption, belief, claim, contention, expectation, feeling, hypothesis, idea, implication, impression, indication, notion, opinion, perception, possibility, presumption, probability, rumor, sense, sign, suggestion, suspicion, thesis

To-clauses

a. *To*-clauses controlled by a verb (e.g., *He offered to stay*)

- speech act verb
  ask, advise, beg, beseech, call, challenge, command, convince, decline, hear, invite, offer, pray, promise, prove, remind, report, request, say, show, teach, tell, urge, warn

- mental/cognition verb
  assume, believe, consider, estimate, expect, be felt, find/be found, forget, hear, imagine, judge, know, learn, presume, pretend, remember, see, suppose, take, be thought, trust, understand, watch
- desire/intent/decision verb
  aim, agree, bear, care, choose, consent, dare, decide, design, desire, dread, hate, hesitate, hope, intend, like, look, love, long, mean, need, plan, prefer, prepare, refuse, regret, resolve, schedule, stand, threaten, volunteer, (can't) wait, want, wish
- modality/cause/effort verb
  afford, allow, appoint, arrange, assist, attempt, authorize, bother, cause, counsel, compel, defy, deserve, drive, elect, enable, encourage, endeavor, entitle, fail, forbid, force, get, help, inspire, instruct, lead, leave, made/be made, manage, oblige, order, permit, persuade, prompt, require, raise, seek, strive, struggle, summon, tempt, try, venture
- probability/simple fact verb
  appear, come, came, happen, seem, tend

b. *To*-clauses controlled by an adjective

- certainty adjectives
  apt, certain, due, guaranteed, liable, likely, prone, unlikely, sure
- ability/willingness adjectives
  able, anxious, bound, careful, competent, determined, disposed, doomed, eager, eligible, fit, greedy, hesitant, inclined, insufficient, keen, loath, obliged, prepared, quick, ready, reluctant, (all) set, slow, sufficient, unable, unwilling, welcome, willing
- personal affect adjectives
  afraid, amazed, angry, annoyed, ashamed, astonished, concerned, content, curious, delighted, disappointed, disgusted, embarrased, free, furious, glad, grateful, happy, impatient, indignant, nervous, perturbed, pleased, proud, puzzled, relieved, sorry, surprised, worried
- ease/difficulty adjectives
  difficult, easier, easy, hard, impossible, pleasant, possible, tough
- evaluative adjectives (e.g., *convenient, smart*)
  awkward, appropriate, bad, best, better, brave, careless, convenient, crazy, criminal, cumbersome, desirable, dreadful, essential, expensive, foolhardy, fruitless, good, important, improper, inappropriate, interesting, logical, lucky, mad, necessary, nice, reasonable, right, safe, sick, silly, smart, stupid, surprising, useful, useless, unpleasant, unreasonable, unseemly, unwise, vital, wise, wonderful, worse, wrong

c. *To*-clauses controlled by a noun

  agreement, authority, commitment, confidence, decision, desire, determination, duty, failure, inclination, intention, obligation, opportunity, plan, potential, promise, proposal, readiness, reluctance, responsibility, right, scheme, temptation, tendency, threat, wish, willingness

About the author

Douglas Biber is Regents' Professor of English (Applied Linguistics) at Northern Arizona University. His research efforts have focused on corpus linguistics, English grammar and discourse, and register variation (in English and cross-linguistic; synchronic and diachronic). His publications include books on these topics published with Cambridge University Press (1988, 1995, 1998), Oxford University Press (1994), and Longman (1999, 2001, 2002).