

Towards a Working Grammar of Academic and Research Speech

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Prologue

At the beginning of the concluding chapter to the Longman Grammar (Biber et al., 1999), the claim is made that "the evidence of the analyses presented in earlier chapters is that the same 'grammar of English' can be applied to both the spoken and written language" (p.1038). One of the purposes of this paper is to question that claim, well sort of. Perhaps, in deference to my fellow plenary speaker, only to question that claim in terms of a grammar for NNS graduate students. Further, as Randi Reppen (personal communication) points out, a grammar of speech probably doesn't need a different constellation of the so-called "Parts of Speech", only a focus on their different connections, arrangements and distributions.

To begin, let us consider some of the things that we know grammatically about academic and research prose—the obvious registral counterpart to academic and research speech—and as consolidated in such works as Swales (1990), Grabe & Kaplan (1996) and Hyland (2000). This kind of writing largely consists of declarative sentences, typically of some complexity. These sentences average around 25 words in length, and, given this length, it is not surprising that most contain more than one clause. Complex noun phrases are common, as are more complex types of verb complementation. In addition to the ubiquitous comma and period, the colon and semi-colon are quite frequently employed. Passive constructions represent around 20% of the finite verb phrases. Much of the lexis is of Graeco-Latin or Romance derivation. On the other hand, progressive verb constructions, second person pronouns, auxiliary contractions and phrasal verbs are rare. Although exceptions to the declarative sentence do occur (Chang & Swales, 1999), direct questions and imperative forms are not at all common, and typically have specialized uses. Few sentences begin with the conjunctions "and" or "but", and sentence fragments are very unusual. Finally, the production of these sentences is typically a long drawn out and complex process, involving several parties, as drafts go through revisions in response to colleagues, reviewers, copy-editors and the like. The end result is a prose that is highly polished linguistically as well as conceptually.

It is this written register, along with those of fiction and print journalism, that has long shaped our perceptions of English grammar. (After all, the availability of adequate corpora of speech is comparatively recent phenomenon.) It is from prose that we have learnt to see grammar in terms of sentences. For English, these (declarative) sentences are assumed to have a basic Subject-Verb-Object or Subject-Predicate-Complement structure. Further, these elements are

assumed to be tightly linked, and these close linkages are reinforced by the formal syntactician's powerful metaphor of a sentence having an underlying tree structure, all starting from S equalling Sentence, and wherein each element or constituent is overtly linked by lines to various nodes, and wherein the whole is surrounded by empty white space. Indeed, this kind of representation of a sentence as an internally-connected isolate is, of course, an enduring legacy of the Chomskyan revolution.

It is at best uncertain whether this kind of complex structuration transfers so successfully and unequivocally to the spoken utterance (or to telegraphese for that matter), even to utterances produced in academic and research settings, such as lectures. To start with, the SVO elements may be either missing or may be repeated. As far as the S element is concerned, we find in the MICASE corpus not insignificant instances of Subject-initial ellipsis (SIE). For example, 14% of the occurrences of *depends* have no overt subjects, and other instances will come up later. In contrast, even though there are no known examples of speakers afflicted with a severe stutter in MICASE, 700 of the 16000 instances of "I" are repeats (4.3% of the total), up to a maximum of five:

1) i- i- i- i- i try to explain how, um, maybe other perspective because, i am from America

Such repeats also occur elsewhere, especially at the beginning of utterances; for example over 2% of the occurrences of "if" are repeated at least once, with a maximum of four, as in:

2) okay if a if if if if a mental picture or a m- mental image is a thing

There may also be missing verbs or predicates, as in:

3a) okay, how about notes?

3b) okay how about page one thirty-seven?

3c) well what about the color? what does the color mean to you?

3d) what about the number of women working in your area?

Finally, there may be missing complements. Take the case of the common phrase "I don't know". Of the 1519 examples in MICASE, around 600—or around 40%—have no complements.

Further, the concept of the complement clause *as a subordinate object* in spoken English data is itself under attack. Sandra Thompson quotes Langacker as saying " 'I know **she left**' designates the process of knowing, not leaving." (1991:131). However, she goes on to argue that, despite its purely grammatical subordination, in conversation, the leaving is likely to be the salient argument in the great majority of cases, with the "I know" merely being a marker of epistemic certainty. (As indeed, Thompson and Mulac (1991) have

convincingly argued for "I think" and "I guess"^[1].) Of course there are occasions where the knowing may be salient, but they are probably rare. Here is a

constructed example from a witness being questioned in a court of law:

4) I know she left because I saw her driving away from her house at about 3.30 p.m.

Thompson (2002: 134) concludes this part of her argument with this important statement:

In sum, then, the data show that what conversationalists are engaged in doing with their talk crucially involves the complement; in the majority of cases, the complement "overrides the "main clause", and "the main clause" is there to provide speaker stance towards the assessments, claims, counterclaims, and proposals.

Also deleterious for a bound sentence structure in academic speech is the occurrence of breaks in the utterance flow caused by the very frequent filled pauses and the easily attested phenomenon of what are sometimes called "false starts", or switches in the direction of utterances in (as it were) mid-stream. In addition, there are a host of elements, such as vocatives, discourse markers, disjuncts, and other kinds of particle that are very loosely attached, if at all, to the other utterance constituents. These are called in the Longman Grammar, "inserts". Finally, there is evidence for a looser structure for the utterance than for the written sentence which comes from the phenomenon of code-mixing, whereby bilinguals or near bilinguals can use different languages for different parts of an utterance, subject only to relatively low level constraints. Overall then, it would seem that the academic utterance is marked by types of freedom and flexibility—and by a kind of bittiness—that would appear to differ in kind rather than degree to what might be permissible in academic prose.

The Case of 'Remember'^[2]

I will first use the verb *remember* in the MICASE corpus to try and underscore the general points made in the previous section. The standard treatments of this verb in prose-based grammars focus on its complex verb complementation, with a particular emphasis on the semantic differences between the first two of the following sentences:

- 5a) Rita remembered to feed Fiver.
- 5b) Rita remembered feeding Fiver.
- 5c) Rita remembered that she had fed Fiver.

Remember is a relatively common verb in MICASE with 939 tokens in 1.7 million words^[3]. However, few occur in any of the structures illustrated in 5) above. In fact, there are only four instances of the *remember to* structure (excluding two instances of "i can't remember to be completely honest"). Here is the full list:

- 6a) please remember to turn in your sheets up front

6b) and remember to get the original, or denormalized, simple command, travel time

6c) you have to remember to try to put yourself into the context

6d) could you remember to keep a species list

As for the *remember verb-ing* (or the 5b) structure, there are only 28 tokens, or just 3% of the total occurrences of this verb, seven being *remember seeing* and five *remember reading*. Here are a few others:

7a) i remember asking Levinson, the midlife crisis guy

7b) i don't remember it being so shallow

7c) i don't know if you guys remember Stanley writing innatism up there

(and here let me digress a moment. It turns out that this Verb+verb-ing structure (the so-called present participial form) is generally quite rare, especially in speech. Take TRY and its two structures:

try to talk to mike McCarthy about this (attempt to talk to Mike)

try talking to Mike about this (experiment, and see what happens).

So, of the first there are 170 examples; of the second just six! In fact, if you are a non-native speaker you only really need this structure if you want to talk about either *starting doing* something, *keeping on doing* it or *stopping doing* it).

Digression over.

There are considerably more instances of the *remember that* complementation, with around a hundred having an overt that-clause. Beyond this, however, matters get a little complicated, and probably an exact count of instances where the *that* complementizer is not actually present would be very difficult. This is because there are about 370 instances of null (or imperative) *remember* in utterance-initial position, as in:

8a) remember all votings at Rome took place on...

8b) remember this is gonna be the position that, ...

8c) remember this is a malignancy of pigmented...

Of course two alternatives are possible here, certainly in the absence of intonational evidence. We might read 8a) as "remember that all votings at Rome" with a deleted *that*; on the other hand, we could read the first word as an imperative, "remember (,) all votings at Rome...". Overall, a rough approximation might be that something of the order of 200-300 of the instances of *remember* initiate a that-clause. However we resolve the last conundrum, it looks as though the three patterns of complex verb complementation cumulatively constitute only a relatively small minority of the uses of this verb.

In order to better understand what is happening with this verb in MICASE, it is now necessary to bring in some other facts and, in so doing, make some comparisons with Tao's data, which is based on three American speech corpora (the academic committee meeting data from Barlow, and the Santa Barbara and

CUP-Cornell conversational data). In these three corpora, the average frequency of *remember* was 3.3 per 10,000 words, while in MICASE it is 5.5, a difference probably ascribable to the greater didacticity of many of the MICASE speech events.

Consider first the case of tense. In the MICASE data, 96% of the occurrences of *remember* are in the present tense or are bare imperatives; in Tao's data this rises to an astonishing 99%. Clearly then *remember* is not functioning as the example sentences about Rita feeding her dog Fiver might suggest—essentially as reports or accounts of past memory states. How it is actually functioning becomes clearer when we examine the subjects of *remember* in the spoken corpora:

Percentages for subject slots for "remember"

	<i>Tao</i>	<i>MICASE</i>
First Person	55%	34%
Second Person	14%	19%
Null	24%	40%
Other	7%	7%
Totals	100%	100%

If we assume that the null imperatives are also functioning as second person forms, then in both sets of data, first and second person subjects are used with *remember* a remarkable 93% of the time, and this percentage would be even higher if addressee-oriented indefinite pronouns were included, such as "Does anyone remember?"

In effect, the verb *remember* is deeply embedded within addresser-addressee interactivity. However, as can be seen from the table, there is a considerable difference in the percentages of first and second person usages in Tao and MICASE. In the conversational and committee data from Tao's study, the first person predominates over the second (in the proportion of 55-38%), while in MICASE the predomination is reversed (34-59%). We can fairly confidently ascribe this difference to the higher occurrence of instructor/presenter roles in the Michigan data, where the primary speakers are not so much reminiscing about their own experiences or confessing to lapses of memory, or trying to hold or conceding the floor, but using *remember* to move previously-delivered or previously-acquired information into the foregrounds of their listeners' attention.

As Tao also notes, *remember* structures also tend to be small and flexible in position, an observation confirmed by the MICASE data. This is particularly the case with MICASE second person forms (including null ones). There are 65

instances of *remember* in the two speech events with the highest frequency of this verb (one a large lecture, the other a small lecture). Forty-two of these occur initially, 18 medially and five finally. Here are a few examples:

- 9a) now *remember* we're gonna look at our signal as a function of delta
- 9b) also *remember* for tomorrow's discussion that i gave you kind of a thought exercise
- 9c) perhaps I should remind you that the definition of cancer *remember* was, the tumor that had the capability of invading and metastasizing
- 9d) how do you deal with this Hamiltonian do you *remember* what you did, in quantum mechanics?
- 9e) how did you do the raising and lowering you *remember*?
- 9f) I wanna remind you of this if you don't *remember* it

Tao also makes some interesting claims based on his data that there are some placement-function correlations operating here, such as that initial instances of addressee-directed *remember* are attention-getting, medial ones involve the tying of topics to other speaker propositions, while final uses (especially with question/appeal intonation) are either soliciting responses or a means of relinquishing the floor. Unfortunately, the data in 9)—and other data not given here—suggests that these distinctions do not really operate when we have primary speakers operating in pedagogic mode. Both the imperatives and the question-tags (as in 9e), in whatever position, are concomitantly attention-getting and attention-gaining devices as well as earnestness on the part of the speakers that they are sensitive to the kinds of knowledge that their audiences might or might not possess.

One further lesson here for a grammar of academic speech would be that we might do well to be cautious about categorizing the six utterances in 9) in such a way that the first two (with *remember* in initial position) are somehow more salient or more profiled than the latter four, and thus deserving of a different kind of grammatical analysis. Indeed, this discussion of *remember* ties in well with the extract from Sandra Thompson wherein she stresses the salience of complements in conversation. A third lesson is that the deployment of a verb like *remember* in academic speech is most likely to take place in structurally simple—and often very simple—linguistic environments.

Finally, it is worth noting, as have many previous scholars, such as Bybee, Hopper and Thompson, that it is the higher frequency elements that carry innovation and flexibility forward as the language changes. It is not surprising then that *remember* shows greater pragmatic and positional flexibility than do its less common alternates, such as *recall*, *don't forget* and *remind*

The Case of "know"

Secondly and more briefly, I will say something about a much commoner

verb than *remember*—the verb *know*. This occurs over 12,000 times in the MICASE corpus, again predominantly in the present or base form, uncommonly in the past and almost never in the perfective (for some reason). Here is some more data (rounded numbers):

you know	7000
i don't know	1500
i know	900
you don't know	140

We can see here that the second person affirmative form is much the most frequent, and that it is rare in the negative (and where the "you" is typically generic in any case). We can also see that this polarity is reversed with the first person, the preference for "I don't know" either indicating the level of ignorance at my university or indicating that much vaunted modesty of the American Midwest!

At this juncture, you might expect that I would focus on the discourse marker, *you know*. Well, I am not quite ready to do that, but I have no doubt that the very high numbers for *you know* can largely be attributed to its discourse-marker function. In a spot check of *you know* in the four dissertation defenses, a rough estimate would show that around 75% of the 190 occurrences would appear to be sufficiently detached from the surrounding syntactic structures to be discourse-marking inserts. The functions of *you know* have been massively but rather inconclusively discussed in places like *The Journal of Pragmatics*; all I will note here is that analysts have characterized "you know" as being, variously, "verbal garbage", as a holding device for keeping the floor, as indicating the arrival of new information (derived from the basic semantics of "you know" but now generally discredited), as asking addressees to share the unspoken inferences and implications of what has just been said (generally accepted), and on to Ronald Macauley's intriguing argument that the iambic rhythm of *you know*, the iamb being the basic foot of English speech, probably contributes to its very common occurrence, as it does, he argues, for phrases such as *I mean, you see, of course*.

The frequency data is also very conflicted, with, for example, no clear patterns of whether it is more common in narratives or in conversations (some find the former, some the latter). So I will leave all this for another day, and instead look at three interesting and slightly more expanded phrases:

- 10a) you know what i mean
- 10b) you know what I'm saying
- 10c) you know what ?/.

There are about 130 examples of "you know what I mean", about 20 of them preceded by "do", but with only a couple with the "you" omitted. There are about 45 examples of "you know what I am saying", with only five prefaced by "do". Other forms with "know" are rare with single examples of:

- 11) do you know what i'm talking about?
11a) do you know what i'm getting at?

There are also smaller numbers of "you see what I mean" (19) and "you see what I'm saying" (29). There are no examples of "you get" preceding these phrases or of "you get my meaning?". All these phrases are, of course, elaborate comprehension checks that typically follow an utterance or part of an utterance. Here are three examples, each by the undergrad peer-tutor leading a biochemistry study-group:

- 12a) and like this viral still hasn't, like done what it's supposed to do yet. **do you know what i mean?** like it's still in the genome.
12b) so like, this virus, is being replicated along with the rest of the genome as it, **you know what i mean** like when the cell divides, and forms two...
12c) but maybe he like wrote the wrong word, like maybe he just wanted to say gene therapy not gene therapy in human cells. **you know what i'm saying?**

The rarity of "do" in these contexts, and of alternate variants, thus suggests we are looking at phraseological fragments that fulfil fixed functions. Whether there are subtle differences between the two, either sociolinguistic or pragmatic, is a topic (as Rita Simpson knows) I have long and carefully pondered, but to no avail.

The third phrase, *you know what*, is perhaps more interesting. In contrast to the previous two, it is typically either an utterance-launcher or indicates a sudden cognitive switch in the utterance, or marks a key moment of some sort in a narrative. There are about 60 of these phrases, only one with a preceding "do". Sometimes, they are clearly functioning as an attention-getting device, rather like the New Episode Flags discussed by Bonnie Malckewski and myself a few years ago. Here are two clear examples:

- 13a) S2. yeah I ha- **you know what?** we here in academic advising have not gotten those so, <S5 LAUGH> that's why I'm like you know this is from the fall and I have no computer here my computer died. <S5: oh> actually it never worked.
13b) S1: **you know what** I think I'm gonna go home and do some calculus, that'll be fun.

In both these cases, the speakers use the phrase to pre-announce something odd or unexpected.

Now consider this longer utterance, by a senior graduate student in a discussion section:

13c)

S1: ...this i- you run across some evidence that let's say a pill that your company makes, you know um, i- can possibly be lethal, in the long run or something. um you know i think that there would be a s- some temptation, I would feel some temptation, to think, **you know what?** perhaps, you know you really can't be sure, or you can't, uh, you cannot come to be certain of something. you know for instance, that this pill is lethal, maybe maybe knowledge is, you know can always be questioned so, i could look at this and say **you know what** this is evidence but you know who could be sure, and then i could say well i could just, hold my promotion you know this job a- this great job i supposedly just got. you know i think there would be a temptation. you know, where, then you'd have to remind yourself **that you know what?** we can you know we do have the ability to know things to be aware of reality.

Although these three instances of "you know what" are syntactically disjunct, they are also doubly embedded: embedded in the unfolding ethical narrative, but also embedded in this ventriloquised interior monologue. The first two bring the listeners up short by saying "yes, there is a potentially lethal pill, but how can be really sure it's going to turn out to be lethal in the long run", while the third reverses the cognitive direction by prefacing the opposite conclusion that after all "we do have the ability to know things".

This has been a brief excursion into a small part of the exceedingly complex story of the role of the verb "know" in academic speech. First, the frequency data regarding tense and subject persons is weirdly skewed, as it was in the case of "remember", and in ways that are very very different from what we find in academic prose. Second, and not unconnectedly, we see once again a prevailing pattern of fragments. Of the 450-odd instances of the lexical bundle *you know what* over 60% are used in the disjunct fixed phrases you know what I mean/you know what I'm saying/you know what/. And finally, these phrases have definable pragmatic inter-locutor roles in ways that I have tried to indicate.

Utterance Types

My final segment looks more broadly at an utterance type. As we all know, in traditional grammar, there are four functional classes of utterances or sentences.

- Declaratives
- Imperatives
- Interrogatives
- Exclamatives

Declaratives are the standard fare; interrogatives in MICASE are discussed at this very conference by our very own Rita Simpson; imperatives are also standard in

pedagogical situations; it is exclamatives (including interjections and indirect exclamations) that is the orphan category and it is on these that I will focus my remaining time.

Certainly, exclamatives hardly figure in academic and research writing. Here are some figures from Chang & Swales, based on 30 research articles, ten each from Statistics, Linguistics and Philosophy:

	total	# of articles occurring in
Imperatives	639	30/30
Direct Questions	224	17/30
Exclamations	6	4/30

Of these six, there was one in Linguistics and five in Philosophy. Clearly, we might expect more in academic speech, but how many more and of what kind? First, I will leave aside those exclamations that are interjections (such as "wow!") or expletives (such as "shit!"). Rather, I will focus on exclamative expressions. Exclamatives, according to the rather sparse literature, have a number of defining features:

- a) they are factive, i.e. the speaker is committed to the truth of the underlying proposition. "how tall he is!" cannot be uttered by a speaker who is unsure of this.
- b) they are typically polarised in terms of scales ("how ridiculous" is more likely than "how average".)
- c) they typically express surprise or unexpectedness (This is why at times something like "how average" can be possible—when the averageness is surprising or unexpected, as in the case of being disappointed or disillusioned by some illustrious person)
- d) usually there is a strong affective stance that accompanies exclamatives (although this doesn't account for irony and sarcasm, as in "Swales states that exclamatives are used to make exclamatory remarks—how brilliant, Swales!", but then irony and sarcasm tend to make a nonsense of nearly all our analyses)
- e) Exclamatives can be embedded, perhaps most typically in structures like "It's amazing how much she writes!").
- f) In English, as in many languages, there are a small number of expressions that are particularly associated with exclamatives; it is these that are often illustrated in reference grammars. So which tend to occur in the MICASE corpus?

Some negative evidence first. One exclamative is ostensibly a past-tense interrogative, but with a different intonation:

So when I got to Belfast, I discovered I had left my overheads in London. Was my face red! None of these I could find.

Then there is the relative clause structure, with a vague superordinate noun at

outset ("The stuff she eats!"; "The junk he writes!". None of these I could find. In a 1996 article in *Language*, Michaelis and Lambrecht discuss a kind of embedded exclamative which they call "nominal extraposition":

- 14a) It's ridiculous the way decisions are made around here
- 15a) It's amazing the amount of time we spend on committees

As opposed to the perhaps more normal.

- 14b) It's ridiculous how decisions are made around here.
- 15b) It's amazing how much time we spend on committees.

Wow, I thought, this is interesting, especially when the authors announce (p.215) that, and I quote, "This type is widely attested in spoken English but has received little attention in either generative or functionally oriented frameworks". So I and a MICASE undergrad research assistant diligently searched MICASE for other examples: How many did we find? One:

- 16) it's kinda weird the way that works.

So let's look elsewhere—at the linguistic phrases that come to mind when we think of exclamatives—at "what a NP" or "how + adjective". There are around 25 instances of the "what a" and around 80 of the latter. But there is only time here to discuss the former. Interestingly, a solid minority of these 25 are cognitively embedded and are prevalently quotative. If quotative, they add drama and color to the argument being presented:

- 17a) ...and working on the hospital i- organizational concept, i realized, **wow what a huge job that is going to be.**
- 17b) twenty years later we still letters from people saying **oh, what a shame it is** that you don't have a department of geography...
- 17c) ...we wrote this piece of software and we were thrilled with the result. and we gave it to our first user community and they proved us wrong. it was anything but foolproof. they proved **what a mess you could make**, very quickly...
- 17d) ...but we've been deprived of the opportunity to make all this money, by those crooked politicians back in Rome, so why don't we go kill them? and the army of Sulla said **oh what a good idea.** and they marched on Rome.

Closing Comments

In this talk, I have argued for a concept of the basic utterance in academic and research speech that avoids the stricter forms of complementation and

subordination and the stricter constraints on deletion and insertion that have been the province of those working with either constructed sentences or those based on writing. This then is the fragment side of what might be called a Fragment-Phrase (or F-PH) grammar. The "PH" refers of course to phraseology or the phrasicon, the increasingly widespread recognition that largely impromptu speech, to a surprising extent, consists of various kinds of pre-fabricated, or semi-prefabricated stretches of two to five words. Since these have been much discussed, I will not say anything about this aspect of speech here.

I have read somewhere that somebody has calculated that only 29% of English utterances have a full clause structure, and this kind of finding much complicates the attempts of formal syntacticians, such as those in the Minimalist Program, to cope with the exigencies of what they tend to call "non-sentential speech". Indeed, Cati Fortin, a doctoral linguistics student at Michigan, is arguing that we may need different kinds of models to account for different kinds of deletion. As indeed does Ellen Barton, who, within formal syntax, argues that not all structures need to start with S, but can have non-sentential utterances starting within NP, VP, Adjective and Adverb as the top node—a position easily supportable by the data and the arguments I have been presenting.

Perhaps then it might be time to look elsewhere, and here I would like to invoke, instead of Noam Chomsky, another major thinker of the 20th century, the philosopher Ludwig Wittgenstein. There are some famous sections in his *Philosophical Investigations* where he talks about his two bricklayers passing instructions back and forth with single nouns like "Brick!" and "Slab!". He says--of course you can see this as a "degenerate" or "elliptical" version of "bring me a slab". But then he says, and I quote (p.8e) "But why should I not on the contrary have called the sentence "Bring me a slab!" a *lengthening* of the sentence "Slab!". And on the next page, he goes further: "But now it looks as if when someone says "Bring me a slab!" he could mean this expression as *one* long word corresponding to the single word "Slab!". Elaboration occurs when the communicative channels are either unclear (such as wind on the building site), when it is multi-party situation (Wittgenstein's game does not work so well with a third bricklayer), or when the interpersonal contexts, such as acquaintances trying to decide whether or not to promote their relationship are complex (Nessa Wolfsson's Bulge Theory). However, into this mix we need to add Levinson's discussion of activity types; when these are more physical than verbal (as with the bricklayers) matters can be simple. Consider the case of two friends who are regular double partners at tennis; there on court all they may say is things like "good shot" and, more tellingly, just simply "yours" and "mine". So, when things are simple, so the speech may be simple. As for Wittgenstein's bricklayers, remember them! Know what I mean! What a thought! How cool!

[1] Evidence for this partly comes from structures like "She left I think", or "She left I guess". While there is something odd about "She left I know", I cannot explain at present why it is odd.

[2] The inspiration for this section comes from "Discovering the Usual with Corpora: The Case of *Remember*" by Hongyin Tao in Simpson & Swales (eds.), 1999.

[3] It is, however, rare in the Hyland corpus with just 12 tokens spread across 80 research articles and close to half a million words.