ASPECT AND TENSE AS INFORMATION STRUCTURE

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0. INTRODUCTION

Traditional analyses of tense and aspect generally focus on temporal properties, such as deictic reference and situation “viewpoint”. Traditional pragmatics studies tend to focus on sentence-level implicatures; and traditional notions of information structure often take a sentence-based, syntactic approach. In the past few decades, however, more attention has been given to the non-temporal contributions of tense and aspect marking, such as indicating discourse relevance or personal distance. These roles show signs of being as common – and as cross-linguistically generalizable – as the temporal functions themselves. Both temporal and non-temporal roles of tense and aspect markers are often best analyzed within an information-structure based framework, in which information structure is understood not simply as focus or topic marking, but as strategic manipulation of language to fulfill communicative purposes, with attention to speaker beliefs and attitudes, as well as speaker assumptions about their addressee’s beliefs and attitudes. This paper aims to give a broad overview of the pragmatic, information-structuring functions of tense and aspect marking, with particular emphasis on the relevance of an information-structure based framework in the analysis of Bantu tense/aspect systems.

0.1. STRUCTURE OF PAPER

In the first section, I give a basic overview of pragmatics and various approaches to pragmatics studies, including their treatment of tense, aspect, and mood (section 1.1.3). I give particular attention to information structure, both in its traditional conception (section 1.2) and from the perspective described above (section 1.3). I then turn to a discussion of tense and aspect, outlining some major temporal-relation based theories (section 2.1), and then discussing some facts about actual language that are problematic for them (section 2.2). Section 3 outlines an alternative view of tense and aspect, based on an information-structural model. I present several views concerning the role and primacy of pragmatics/information structure in tense and aspect expression. I do not explicitly align myself with any particular theory, but will observe that the more information-structure based theories seem in most cases to have more descriptive and explanatory adequacy. Still, a synchronic system cannot be fully understood without a look to its development; I therefore devote section 4 to a general discussion of grammaticalization processes (section 4.1) and to grammaticalization as it relates to tense, aspect, and mood, in particular (section 4.2). Section 5 brings together the discussions from the preceding sections and applies them to the analysis of tense and aspect within Bantu. I present three specific examples of information-structuring functions of Bantu TAM markers, one based on my own work with Totela, the language that will be the focus of my dissertation research (section 5.1.1). The second example (section 5.1.2) comes from Yeyi (Namibia and Botswana) and is based on information-structure and narrative-based work by Seidel (2008). The final example (section 5.1.3) comes from Fleisch’s (2000) grammar of Lucazi (Angola, Namibia, and Zambia). I conclude in section 6 with a summary of the need for an information-structure based approach to the analysis of tense and aspect, and with notes about developing an appropriate methodology to do so (section 6.1). Throughout the paper, I illustrate with examples from a variety of Bantu languages, as well as from English and several other non-Bantu languages.

0.2. TERMINOLOGY AND ABBREVIATIONS

Throughout the paper, the abbreviations TA or TAM will be used for TENSE, ASPECT / TENSE, ASPECT, AND MOOD.
IS is used as shorthand for INFORMATION STRUCTURE.

A # symbol indicates pragmatic infelicity (as opposed to *ungrammaticality).

Bantu languages are given along with their classification numbers, based on the system introduced by Malcolm Guthrie in the late 1960s and early 1970s. GUTHRIE NUMBERS consist of a letter indicating the larger zone, followed by a number specifying the particular language or language group. I use the Guthrie numbers as they are given in Nurse (2008).

Finally, I use the terms PERFECT and ANTERIOR somewhat interchangeably throughout the paper, to describe the aspect (or tense) that indicates (roughly speaking) past action with current relevance. In my own discussions, I prefer the term anterior, following Rose et al.’s (2002) recommendation for Bantu linguistics; otherwise, I generally use the term employed by the author of the work under discussion.

1. BACKGROUND

1.1. PRAGMATICS

Pragmatics, loosely speaking, is the study of what is communicated beyond the denotative meaning provided by semantics, and how it is communicated. Pragmatic inferencing is involved in any communicative content requiring context for its interpretation, from simple pronoun deixis (e.g. I and you) to complex conversational implicatures. Some of the main issues focused on in pragmatics studies are presupposition, implicature (and its mechanisms), deixis, definiteness (and indefiniteness), reference, and speech acts. Pragmatics also deals with discourse-structuring phenomena such as foregrounding and backgrounding, and the use of narrative structure markers. For a general overview of pragmatics, its “hot issues”, and theoretical approaches see e.g. Levinson (1983), Horn and Ward (2004), Kadmon (2001), and Burton-Roberts (2007).

1.1.1. TRADITIONAL PRAGMATICS

Pragmatics became the object of formal study with Morris’s 1938 theory of the relation of signs. SEMANTICS relates signs to their meaning; SYNTAX involves the formal relation of signs to other signs. PRAGMATICS, then, is the relationship between signs and their “users and interpreters” that completes the triad responsible for the communication of meaning (Morris 1938, discussed in Horn and Ward 2006).

In 1967 and 1968, Grice gave a series of lectures on the mechanisms of pragmatics, including the famous paper “Logic and conversation” which was widely circulated but not published until 1975. The paper deals with the notion of IMPLICATURE – what is implied, or meant, by what is said. There are two major kinds of implicature: CONVENTIONAL, which are grammaticalized or lexicalized (e.g. idiom); and CONVERSATIONAL, which are generated live in discourse. The CONVERSATIONAL MAXIMS that make interpretation of implicatures possible are based on a supermaxim known as the COOPERATIVE PRINCIPLE: “make your conversation contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged” (1974:45). The specific maxims fall into four categories:

(a) QUANTITY: your contributions should be as informative as necessary, but not more than necessary
(b) QUALITY: be truthful: don’t make statements you know are untrue, or make stronger claims than you have evidence for

(c) RELATION: “be relevant”

(d) MANNER: do not be ambiguous or difficult to understand; do be “brief” and “orderly” (1975:46)

These maxims, of course, are often violated. Having accepted that the overriding cooperative principle is being honored, hearers of overt violations assume that the speaker is, in fact, attempting to communicate with them, and attempt to reconcile the situation and understand how the maxim is being EXPLOITED (i.e. deliberately flaunted to some communicative purpose) by the speaker. (Grice 1975:49). Additionally, maxims may sometimes appear to violate the maxim of relations; in these cases hearers are expected to infer the link to the discourse. The working-out of speaker meaning is the hallmark of conversational implicature.

For example, an answer to the question in (1) might be (1a). The cooperative principle assumes that the speaker is offering a (best possible) answer to the question, so the addressee would be led to infer that John’s desire for a picture of a former Beatles’ member is related to his fan status and that he is, in fact, a fan.

(1) Is John a Beatles fan?

(1a) Well, he’s been trying for years to get an autographed photo of Ringo Starr.

Metaphor involves a violation of the quality maxim: a speaker uttering (2) is not speaking the literal truth. Hearers, however, are expected to be able to infer the actual meaning, and do not consider the utterance a lie.

(2) You’re putting lipstick on a pig.

Grice also distinguishes between GENERALIZED CONVERSATIONAL IMPLICATURE, in which an implicature comes to be “normally” used for the expression of a particular meaning; and PARTICULARIZED CONVERSATIONAL IMPLICATURE, created by speakers during discourse (1975:56).

Grice’s ideas sparked a plethora of further pragmatics-based studies of meaning. Still, mainstream linguistics (for example, generative schools) continued to describe grammatical restrictions in terms of syntax and semantics (for examples, see Green 2004:421-423). Such attempts led Bar-Hillel (1971) to write his famous response to four 1970 papers in Linguistic Inquiry, in which, he claimed, unsatisfactory semantic solutions were proposed for essentially pragmatic problems (in this case, the meanings of ‘remind’ and ‘similar’). Bar-Hillel ended his argument in what became a clarion call for more rigorous pragmatic studies:

Be more careful with forcing bits and pieces you find in the pragmatic wastebasket into your favorite syntactico-semantic theory. It would perhaps be preferable to first bring some order into the contents of this wastebasket as is, to clarify somewhat better the explicandum -- to use Carnap’s undeservedly neglected slogan -- before embarking on the explication (Bar-Hillel 1971:405).

Despite an increase in rigor, most pragmaticists concerned themselves with the utterance and its interpretations. As late as 1999, Peccci stated in her introductory textbook that “the focus of pragmatic analysis is on the meaning of speakers’ utterances rather than on the meaning of words or
sentences” (Peccei 1999:5). Green (2006) noted that it “was (and in some quarters still is) socially or tactically unwise to refer to speakers’ mental states in describing syntactic knowledge” (407).

Still, as intimated in Bar-Hillel’s (1971) comments, it gradually came to be more widely accepted that not just entire utterances, but also things like the choice of syntactic structure, intonation, and word choice itself, were intimately related to pragmatics. Green puts the case strongly:

Many or most of the constraints that have been proposed by generative grammarians […] must either be stated in ultimately pragmatic terms or describe constructions whose use conveys pragmatic information about the beliefs of the speaker -- beliefs about the world (presuppositions), about the propositional attitudes of the addressee, or about the structure of the ongoing discourse (2004:407).

Thus, Green claims, many sentences marked as ungrammatical by syntacticians are actually pragmatically infelicitous. For example, sentences like (3) with question-like subject/verb inversion in sluicing are grammatical in some varieties of English. Example (4), however, while syntactically parallel, is not acceptable.

(3) He wants to know who did she kiss.

(4) #He already knows who did she kiss.

Green claims that SV inversion in sluicing carries the implication that the subject, for whom the information is relevant, does not already possess the information. Thus, the sentence in (4) is infelicitous because the assertion (‘he already knows…) contradicts the implication (he does not know). (4), then, is not ungrammatical, but “inappropriate…ineffective…or, in plain language, dumb” (Green 2004:423).

Another major issue in the study of pragmatics is the determination of the line between pragmatics and semantics. This problem is illustrated extensively in the first chapter of Levinson’s (1983) textbook on pragmatics, in which he shows that devising an entirely satisfactory definition of pragmatics is virtually impossible.

The reason for this difficulty, according to Levinson, is that pragmatics may be most usefully defined as “meaning minus semantics” (1983:32), but pragmatics does not merely take over where semantics leaves off. Pragmatics is necessarily “logically prior” to semantics in that contextual factors contribute to truth conditions, but it also operates beyond semantics. This observation is motivated by sentences like (5), in which truth-conditional semantics appear to require contextual information:

(5) Tiff and Justin got engaged.

Someone hearing this sentence is likely to automatically add {to each other} to its content. However, while cancelable, and hence not semantic, this addition is not implicated in the Gricean sense. For one thing, it appears to be truth-conditionally relevant. Such examples, called IMPLICITURES (Bach 1994, cited in Bach 2007), led many to argue for PRAGMATIC INTRUSION in semantics, claiming that pragmatics and semantics cannot be viewed as separate processes, and that “the content/context distinction is a philosophical myth” (Atlas 2004:51; see also e.g. Levinson 2003 and Horn 2004 for further discussion).

Bach (2007), in contrast, reasserts the need for a sharp dividing line between semantics and pragmatics. In the article, “Regressions in pragmatics (and semantics)”, he argues against nine
approaches that, he claims, conflate pragmatics and semantics in a theoretically unhelpful way. Bach contends that such approaches unnecessarily complicate the picture. Semantics concerns strictly what is said in a sentence, and many sentences do not express complete propositions, or express only very weak propositions. Implicit content, then, is not part of what is said (semantics), although it is part of what is meant (pragmatics). It is only the former that can be truth-conditionally evaluated, although speaker-hearers are competent enough to understand implicit content and treat is as though it were explicit. If Tiff is actually engaged to Grant, and Justin to Liz, a sentence such as (5) may be deceptive, but it is not false. Thus, the semantics/pragmatics divide can and must be maintained; pragmatics concerns both implicit and implicated content. Pragmatics does not “[take] over when semantics leaves off” (2007: 28); both semantics and pragmatics operate throughout communication.

Pragmatic forces, whatever their status vis-à-vis semantics, are active in language far beyond sentence-level implicatures. This insight led to the development of fields such as LEXICAL PRAGMATICS (see e.g. Blutner 2004), as well as attempts to situate pragmatics in a formalism similar to that used for semantics (e.g. Kadmon 2001). FORMAL PRAGMATICS focuses on issues “on the borderline of the semantics and pragmatics of natural language” (Kadmon 2001:1). These include, for example, problems related to presupposition / accommodation, (in)definite NPs, and focus.

Another approach to pragmatics, couched in ideas about human cognition in general, is known as RELEVANCE THEORY. Relevance theory was developed mainly by Wilson and Sperber beginning in 1985 (discussed in Wilson and Sperber 2004). According to relevance theory, pragmatics are responsible for understanding explicit, and not just implicit, content. The optimization of RELEVANCE is sufficient to account for the ability of addressee’s to understand what is being communicated. Statements are relevant, and produce a “positive cognitive effect”, if a speaker can connect them to previous information and thereby “yield conclusions that matter” including question resolution, information expansion, and doubt removal. Hearers presume relevance and attempt to understand utterances following a “path of least effort” in which possible interpretations are tested “in order of accessibility”, stopping when the presumption of relevance is fulfilled or discarded. (Wilson and Sperber 2004:613). A precise understanding of relevance optimization, Wilson and Sperber argue, allows for an explanatory theory of communication without the need for Grice’s entire set of maxims, which are viewed as inadequate for explaining many phenomena, such as irony and metaphor. Also, Gricean theory does not account for the fact that cooperation in conversation is “common” but not “essential” (Wilson and Sperber 2004:613). A major goal of relevance theory is to provide an empirically testable account for the understanding of language.

Thus, the study of pragmatics has been approached from a number of directions. Most recent approaches take into account (to at least some degree) the notion that pragmatic effects cannot be studied merely in terms of the utterance as a whole, and that even morphemes carry a pragmatic load and can sometimes only be understood under a pragmatic analysis. Several form-level pragmatic analyses are discussed below, including the recently developed field of morphopragmatics, and the pragmatics of tense, aspect, and mood marking.

1.1.2. PRAGMATICS AND MORPHOLOGY

Verscheueren (1978:3) observes that both derivational and inflectional morphology are subject to pragmatic constraints; for example, only positive terms seem to be able to be negated by un-, e.g.
unhappy but #unsad, unusual but #unstrange, and so forth. Green (2004:408-409) cites numerous studies showing that “so-called ‘meaningless’ discourse particles” like um and well have pragmatic functions.

The field of morphopragmatics was developed by Dressler and Merlino Barbarese (Dressler and Merlino Barbarese 1986, 1987, 1991, 1994; discussed in Merlino Barbarese 2006), to account for interpretations of “semantically empty” Italian interfixes that are nevertheless productive and have pragmatic effects. Morphopragmatics deals mainly with “evaluative suffixes” such as diminutives (and augmentatives), “personal pronouns of address”, and honorifics (332). All of these are semantically “elusive” and contribute meaning based on context. For example, Italian diminutives are characterizable as being “fictive”. Fictives depart “from conventionally accepted standards of meaning” and generate “a frame of personalized values where such standards glide according to the speaker’s evaluation”. Specifically, Italian diminutives imply that the noun to which they attach is in some way “nonserious”. There is no place, or need, in this system for semantic meaning ‘small’, or indeed, any semantic meaning at all. As an example, Merlino Barbarase gives the following sentence, in which the diminutive of firma ‘signature’ serves to mitigate a “face-threatening directive act” (2006:334):

(6) ho bisogno di una sua firm-etta, per favore
    I have need of your signature DIM here, please
    ‘well now, could you just sign here, please’ (Merlino Barbarese 2006:334, ex 7)

Merlino Barbarese notes that even pragmaticists have tended to overlook morphopragmatics effects in their overriding concern for pragmatics of larger speech units such as words and sentences (2006:332).

1.1.3. PRAGMATICS AND TAM

Pragmatics also plays a major role in the use of tense, aspect, and mood, at the very least within particular languages. Levinson describes tense, the deictic encoding of time with respect to the time of utterance, as having two senses: M-TENSE (metalinguistic tense) is the purely deictic, temporal relation of utterance time to other times, and is language independent and universal. L-TENSES (the tenses of a language) are a language’s mechanism for systematically marking time distinctions in a language. While M-tense is “strictly temporal” (77), L-tenses “nearly always encode aspectual and modal features” as well, and may not be easily correlated with M-tenses. M-tense distinctions encoded as L-tenses are language specific and likely culturally dependent.

The interpretation of tense and aspect is also dependent on surrounding discourse. Portner (2003) develops a TEMPORAL SEQUENCING PRINCIPLE (TSP) to help explain temporal construal of various uses of the English Present Perfect (see section 2.2.3 for more detail on issues in the analysis of the perfect). According to the TSP, with the perfect, non-stative events are situated prior to reference time (as in (7)), while stative predicates may either be true at or before reference time (as in (8)). Temporal interpretations may be enriched by temporal adverbials.

(7) I have practiced the melodian (today). situation in past

(8) I have been joyful (recently). situation in past, possibly continuing to present

Portner proposes that the TSP might be expanded to account for discourse phenomena: sentences express the relationship between two times: INPUT REFERENCE TIME (from prior
discourse) and OUTPUT REFERENCE TIME (passed on to discourse coming after the utterance) (2003:485). Added to pragmatic factors like point of view, knowledge of discourse conventions, and context, the difference between statives and non-statitives helps to explain the communication of event sequentiality. Simple cases are illustrated in (9) and (10). In (9), the default interpretation is that the events happened sequentially, while in (10) there may be overlap between the state of being hungry and the events of lighting a fire and cooking porridge.

(9) Mboshela came home. She lit a fire and cooked porridge.

(10) Mboshela was hungry. She lit a fire and cooked porridge.

The overlap reading of (10) is not merely the result of knowledge about the relationship between hunger and food preparation. The same reading obtains if ‘furious’ is substituted for ‘hungry’. (Specific uses of perfective and other aspects in discourse are discussed in detail in section 3 below.)

Such examples imply that tense and aspect choice is somehow linked to discourse strategy and structure. That is, tense – and especially aspect – appear to play an information-structuring role. In section 3, I explore the pragmatic, information-structuring functions of tense and aspect, and discuss whether these functions should be considered primary. First, however, I give a more explicit introduction to the field of information structure.

1.2. INFORMATION STRUCTURE

The term INFORMATION STRUCTURE was coined by Halliday (1967) to describe the division and organization of discourse in “information units” – which are not the same as syntactic units – optionally chosen by the speaker (Halliday 1967:200). Generally speaking, information structure refers to speakers’ methods of organizing their speech in order to effectively transfer information. According to Roberts, it is “literally a structure on information - on the inquiry pursued in discourse and the information which that inquiry yields, and not on the utterances used to present it” (Roberts 1998: 1). That is, information structuring is a communicative strategy carried out by language and discourse organization, and not the organization – or the information – itself. Prince (1981:224, cited in Zerbian 2006) describes information structure (or “packaging”) as having two components: the speaker’s intention, and the grammatical forms used to convey it. IS is pragmatic in that as they structure their intended communicative content, speakers take into account context, prior discourse (e.g. whether the information is discourse new or not new), and hearer knowledge and beliefs.

By and large, studies of information structure have dealt with sentence-level phenomena such as focus, presupposition, topic/comment structure, and information newness (or givenness). These and other topics typically treated under the rubric of information structure are briefly discussed below, along with some information about their instantiation in Bantu languages; I then discuss a broader construal of information structure as communicative strategy, which may account both for the phenomena discussed below and many other pragmatic interpretive effects.

1.2.1. FOCUS

The linguistic literature on focus is vast, and an in-depth discussion is beyond the scope of this paper. In much descriptive literature, it is used for anything in which “special prominence [is] given to some element […] to mark it as expressing the most important new information or to contrast it
to something else (Trask 1997:87, quoted in Rose et al. 2002:43). Rooth (1992, 1996, discussed in Zerbian 2006) gives a more precise definition of focus, in which the focused constituents are those that introduce alternatives.

In discourse, focused information is assumed to be unknown to the hearer. Note that focused content does not need to be new to the discourse per se; it merely must be assumed by the speaker not to belong to the common ground of propositions accepted to be true by all interlocutors. Non-focused constituents are BACKGROUNDED.

Focus is found in answers to questions:

(11) Where will the band Lake play next week?

(11a) Lake will play in Oakland next week.

as well as in contrastive statements:

(12) Lake will play in Olympia next week.

(12a) No, Lake will play in Oakland next week.

Focus may be realized prosodically (e.g. English contrastive stress), syntactically (e.g. through word order changes), or morphologically (e.g. focus marking particles and auxiliaries). Tendencies for focus marking in Bantu languages are described by Nurse (2006), who adopts the more traditional definition of focus as new or emphasized information, and discusses two kinds of focus in Bantu: VERBAL FOCUS (including both the lexical content of the verb and any TAM modifiers); and POST-VERBAL/CLAUSE-FINAL FOCUS, which usually focuses a constituent immediately following the verb. Post-verbal focus is generally unmarked in Bantu, while verbal focus is marked morphologically and/or prosodically. Further, focus marking usually occurs contrastively only in certain TAMs, in particular, positive main-clause verbs in certain types of speech acts (e.g. declarative). Nurse notes that focus has only been studied in “under a third” of Bantu languages, and that much further work is needed to gain “an adequate picture” of how focus works in Bantu (2006:191).

Hyman and Watters (1984) note that auxiliary focus marking may be grammatically controlled and obligatory in some contexts; in others, it is pragmatically controlled and used by the speaker to structure information. When focus is pragmatically controlled, there will be both focused and non-focused variants. In their cross-linguistic study of auxiliary-marked focus, dealing mostly with African languages, Hyman and Watters found a hierarchy in the possibility of focus expression within a language: focus auxiliary forms can contrastively mark focus of the truth value (mood), the tense or aspect, or the lexical content of the verb itself, in that order – no language will have a focus form for lexical content without also being able to focus truth value and tense/aspect. Further, focus contrasts are more common on certain TAMs, construed by Hyman and Watters as having less “inherent” focus. TAMs likely to have intrinsic focus (and no corresponding unfocused form) include, in order of likelihood, negative polarity (negative forms are postulated to presuppose the “affirmative counterpart”), imperative mood, subjunctive mood, conditional mood, progressive (and incompletive) aspect, and, finally tense. The perfect (anterior), treated by Hyman and Watters as a tense, is also very likely to have intrinsic focus: it “insist[s] on a relationship between” the past situation and the present time. The corollary to this is that more tense/aspect distinctions can be found in forms marked for focus, and inherently non-focus contexts, such as relative clauses, cannot have focus forms and therefore have fewer tense/aspect contrasts.
Oshikwanyama (R.21), a Bantu language of Namibia and Zambia, focuses elements by preposing them with the /o-/ predicative marker, followed by a relative clause:

(13)

(13a) Shaalu okwa telek-a oshifima
SHAALU 3SG.PST COOK-FV 7.PORRIDGE
‘Shaalu cooked the porridge / (As for) Shaalu, he cooked the porridge’

(13b) O-Shaalu a telek-a oshifima
PRED-SHAALU 3SG.PST.RC COOK-FV 7.PORRIDGE
‘Shaalu cooked the porridge / it’s Shaalu who cooked the porridge’

(14)

(14a) Ova dam-a Nanghelo
3PL.PST BEAT-FV NANGHELO
‘They beat Nanghelo’

(14b) O-Nanghelo va dam-a
PRED-NANGHELO 3SG.PST.RC BEAT-FV
‘They beat Nanghelo / it’s Nanghelo (who) they beat’

1.2.2. PRESUPPOSITION

In information structural terms, presupposition is the counterpart to focus. It consists of the information in an utterance construed as being part of the common ground, so that (15) presupposes (15a):

(15) Is Lake playing in Oakland next week?
(15a) Lake is playing somewhere next week.

Stalnaker (1974:200, quoted in Atlas 2006:33) gives a basic pragmatic definition for presupposition:

A proposition P is a pragmatic presupposition of a speaker in a given context just in case the speaker assumes or believes that P, assumes or believes that his addressee assumes or believes that P, and assumes or believes that his addressee recognizes that he is making these assumptions, or has these beliefs.

Kadmon (2001:12-14) notes that presuppositions are “requirements on the context”, such that a proposition may be considered a presupposition of an utterance if, and only if, that sentence is only felicitous in contexts that already entail or contain that proposition. This is responsible for the difference between (16), and (17), only the former of which contains the presupposition ‘Kerstin is working somewhere’:

(16) Where Kerstin is working is CERN.
(17) Kerstin, who is working at CERN, plans to create a black hole and destroy the universe.

Presuppositions are often existential in nature. For example, (18) presupposes that Tiff’s cockroaches exist.
(18) Tiff’s cockroaches are starring in another film.

Presuppositions, at least in some contexts, are not as freely cancelable as implicatures:

(19) #Tiff’s cockroaches are starring in another film, and Tiff never had any cockroaches.

In many cases, however – for example, with negation – seeming presuppositions may be cancelled:

(20) Tiff’s cockroaches aren’t starring in another film, because Tiff never had any cockroaches.

The cancelability of presuppositions has been a much-discussed topic in semantics and pragmatics.

Many authors (as discussed in e.g. Atlas 2006) have noted that Stalnaker’s definition does not account for sentences such as (21), if spoken to a new acquaintance who has introduced herself as coming from Halifax:

(21) My brother lives in Halifax!

The NP my brother in (21) seems to presuppose that the speaker has a brother; however, it cannot be assumed to be shared knowledge of both hearer and speaker. This observation led to the proposal (as in Atlas 2006) that such examples can be understood as ACCOMMODATION, in which all interlocutors behave as if such non-asserted content already belonged to the common ground, effectively “taking the speaker at his word” (Atlas 2006:50). Presuppositions are a special case of accommodation, in which the accommodated content already belongs to the common ground.

1.2.3. TOPIC/COMMENT

The topic of an utterance is the entity being talked about; the comment is the proposition being made about that entity. Topic and comment were originally conceived as the difference between “psychological subject” and “predicate” (e.g. in von der Gabelentz 1891, quoted in Zerbian 2006:6). It has also been referred to as the THEME/RHEME distinction.

In Oshiwambo, and many other Bantu languages, the subject is obligatorily marked on the verb, and an overt preverbal subject functions as the topic:

(22) Shaalu okwa telek-a oshifima
SHAALU 3SG.PST COOK-FV 7.PORRIDGE

‘Shaalu cooked the porridge / (As for) Shaalu, he cooked the porridge’

1.2.4. GIVEN/NEW INFORMATION

Presentation of information is often structured around what material is new to the discourse, and what is considered by the speaker to be discourse old, or already “in the consciousness of the addressee at the time of utterance”, whether by virtue of having been explicitly mentioned, or simply implied (Chafe 1976:30, quoted in Zerbian 2006:8).1

1 Zerbian notes that because topics generally represent given information, and comments new, the concepts of topic/comment and given/new are sometimes conflated. However, they are not always completely parallel. For examples see Zerbian 2006.
Given information tends to precede new information, and syntax is sometimes manipulated to achieve this goal. For example, normally post-verbal constituents may be preposed if there exists “a discourse-old anaphoric link to the preceding discourse”, so that the preposed information does not constitute completely new content (Ward and Birner 2004:159):

(23) They said they would eat all the peanut butter, and eat it they did. – PROPOSITION AFFIRMATION (Ward and Birner 2004:160)

(24) Then he took out another crazy instrument – an omnichord, I think he called it – and started the next song’ – FOCUS PREPOSING; omnichord is part of the “contextually licensed” partially ordered set of instruments (Ward and Birner 2004:160)

(25) Velvet Elvises, I like. Velvet unicorns, I love. – TOPICALIZATION: something other than focus is preposed (Ward and Birner 2004:161)

Similarly, discourse new information may be postposed, and that hearer new information must be postposed (Ward and Birner 2004:167).

(26) Suddenly, there came a sharp hammering sound from downstairs.

(27) John seems like an upstanding young man.

(27a) Yes, it’s surprising that he keeps a life-sized Bozo the Clown doll in his closet.

(27b) #That he keeps a life-sized Bozo the Clown doll in his closet is surprising. (see also Ward and Birner 2004:167)

Syntactic manipulation related to given/new information sometimes results in language change such as new word orders. See Hopper (1979b) for further discussion.

1.2.5. DISCOURSE/NARRATIVE STRUCTURE

Longer stretches of discourse, such as narratives, are also strategically structured for optimal communication; Longacre (1996, in Seidel 2008)\(^2\) categorizes “surface” (style) and “notional” (plot) stages in narrative structures. Discourse markers such as indeed and after all are also important in expressing “the discourse relationship intended by the speaker between two utterances” (Traugott 2004:555).\(^3\)

Narrative organization and TA marking are deeply related; narrative uses are crucial both in defining tense and aspect markers, and in tracing their development. The relationship between TA meaning and discourse functions such as foregrounding and backgrounding will be discussed in greater detail in section 3.

1.3. INFORMATION STRUCTURE AND PRAGMATICS

What all of the above issues have in common is that they involve speaker manipulation of language to fulfill certain goals. This broader approach to information structure is taken by Roberts (1996, rev. 1998), who furthers the idea that IS is basically about communicative strategy, rather than

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\(^2\) Future reading will include a more in-depth study of narrative structure.

\(^3\) See e.g. Kotschi 2006 for further background and references.
about units of communication. Roberts proposes that information structuring can be viewed as a “game” in which interlocutors work together (in cooperative communication) to answer what she calls THE BIG QUESTION, i.e. ‘what is the way things are?’ (1998:4). Particular conversations have more constrained DOMAIN GOALS that make up specific parts of this ultimate goal. Domain goals involve the evaluation of a set of propositions that constitute the “immediate question under discussion”, that is, the DISCOURSE TOPIC. Each utterance can be understood as a “move” aimed at coming closer to achieving a domain goal, answering a question raised by the discourse and thereby reducing the CONTEXT SET, or the set of worlds for which the COMMON GROUND – the set of propositions accepted by all interlocutors – holds. An utterance is relevant if it provides a complete or partial answer to a question that is salient in the current discourse, reducing the context set.

Roberts uses her question-based framework to analyze English prosodic focus, and proposes that this view of information structure can be used to deal with many other issues in pragmatics, such as implicature, anaphora, and topic. As noted by Green choices between “truth-conditionally equivalent” alternatives – be they syntactic configurations, lexical items, aspectual viewpoints, or even “meaningless” discourse particles – are pragmatically based and made in the service of strategically fulfilling conversational goals (Green 2004:408).

In the following discussion, I take this latter, more comprehensive and philosophical – and arguably more explanatory – view of information structure. Under this view, everything from word choice to syntax may contribute to information structure. Even so, aspect marking is especially closely related to communication strategies. This makes sense on an intuitive level: speakers make aspectual (“viewpoint” choices based on how they want to portray events. Also, as already noted in section 1.1.3 above, units of discourse are related to the ones occurring before and after them through aspectual choice. The necessity and usefulness of an explicitly IS-based analysis for tense and aspect distinctions is discussed below (in section 3); first, I will review traditional (read: temporal) approaches to tense and aspect.

2. TENSE AND ASPECT (AND MOOD) (TA(M))

2.1. TRADITIONAL APPROACHES

Tense and aspect have been objects of philosophical discussion for millennia (see Binnick 1971), but it is only more recently that precise cross-linguistic delineations have been attempted. Aspect, in particular, was late in gaining the attention of “mainstream linguistics” as a separate phenomenon worthy of study (Hopper 1982:3). Among the first major publications dedicated to aspect were Anderson (1973) and Comrie (1976).

Despite the fact that tense and aspect categories are both “pervasive” and “universal” (Hopper 1982:3), they remain remarkably difficult to characterize. The majority of early approaches attempted to describe the phenomena in mainly temporal terms, though noting that discourse context also has a role in creating aspectual meaning. Below, I discuss a few major works taking a temporal approach in order to give a sense of the basic direction of traditional tense/aspect research and theory.

2.1.1. REICHENBACH

Hans Reichenbach revolutionized the view of time in language with his proposal of a three-component theory of tense, involving the relationship between three points:
E: EVENT POINT
R: REFERENCE POINT, and
S: SPEECH POINT

These points, arranged on a linear representation of time, correspond to the temporal configurations expressed in tense. For example, for the present tense, E, R, and S are equivalent. For the present perfect, which Reichenbach renames “anterior”, E is prior to S and R, which share a point. In the past perfect, E precedes R, which precedes S. Imperfective aspects (“tenses”) are represented with an extended segment, rather than a point, for E. These ideas are schematized in (28)-(32) below (all adapted from Reichenbach 1947:290):

(28) Present tense: E, R, S

(29) Simple past tense: E, R < S

(30) Present perfect (anterior): E < R, S

(31) Past perfect (“anterior past”): E < R < S

(32) Past progressive (“simple past, extended”): E < R < S

Even at this early stage of tense theory, it was apparent that time relations in real language cannot be fully accounted for in purely temporal terms. As Reichenbach notes, natural languages “do not always keep to the schemas given in our tables” (1947:292). An example offered by Reichenbach is the English present perfect, which does not always convey the an event point that comes before concurrent reference and speech times: in some cases use of the perfect conveys that the E segment of the timeline extends to S and R (Reichenbach 1947:292):

(33) Present perfect ‘I have heard his voice’ (cf. Comrie’s “experiential perfect” in section 2.2.3)

Reichenbach explains this non-correspondence of actual tense to philosophical, logical tense relations by referencing their “historical origin” (298): because languages develop tense functions slowly over time, “we should ... not be astonished if actual language does not always fit the schema which we try to construct in symbolic logic” (298).
2.1.2. COMRIE (1976; 1985)

Similarly to Reichenbach, Comrie (1985) argues that a universally valid characterization of time as linear, with a deictically determined “now” (0) point, can be considered universally valid. Where languages differ is in whether and how they grammatically encode location in time (=tense). Tense is deictic, usually related to a speaker-determined “now”. Comrie argues that tenses can be assigned primary, basic meanings (e.g. English past tense as ‘past time reference’), and that deviations from these (e.g. English past tense for increased politeness in ‘I wanted to ask you...’) constitute secondary meanings that must be analyzed as such.

In Comrie’s model, present tense refers to a situation true at the moment of utterance (and possibly before or after); habitual uses, which refer to currently true characteristics of the subject, are no exception. Past tense functions similarly, and though it often carries an implicature that the situation no longer holds, the corresponding assertion is very rarely grammatically encoded in tense. Future tense is more complex due to the inevitable uncertainty involved in describing future events. Languages with grammatical forms that clearly refer to future time only (rather than future reference being “a special use of a grammatical category with basically non-tense [modal] meaning” (1985:46)) are less common, but do exist. For example, there are languages with several degrees-of-future distinction such as the Bantu language Haya (E.22). (See section 2.2.4 below for continued discussion of the future and its general meaning.)

Aspect, unlike tense, is not deictic, but encodes “different ways of viewing the internal temporal constituency of a situation” (Comrie 1976:3). The major aspectual opposition of interest to by Comrie is PERFECTIVE vs. IMPERFECTIVE, in which perfective aspect views a situation “as a single whole” (1976:16), while imperfectives “present part of a situation, with no information about its endpoints” (1997:73).

2.1.3. SMITH (1997; REVISION OF SMITH 1992)

Smith’s most important contribution to studies of aspect was the introduction of a two-component system, in which VERB CONSTELLATIONS (i.e. verbs and their arguments) have inherent SITUATION ASPECT. Smith refines the Vendlerian verb classes to include the following situation types: ACTIVITY, ACCOMPLISHMENT, SEMELFACTIVE, ACHIEVEMENT, and STATIVE, each with its own defining characteristics. The situation types combine with grammatical VIEWPOINT ASPECT to produce temporal meaning in an utterance. For example, perfective viewpoint “present[s] a situation as a whole” (1997:62), while imperfectives “present part of a situation, with no information about its endpoints” (1997:73).

2.1.4. KLEIN (1994)

Klein’s TA theory is also based strictly on time relations. Klein argues that all traditional models of tense, aspect, and Aktionsart are problematic and cannot sufficiently account for language data.

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4 To qualify as tense, such encodings need not be bound morphemes, but they should be obligatory and not lexical.
For example, tense is often construed as the relation of the situation time to the moment of utterance. However, even a simple utterance such as

(34) “They found [Xavier] in the bathtub. He was dead” (from Klein 1994:22)

shows that this cannot be the case: it is immensely probable that the situation of Xavier’s being dead is not located completely in the past with respect to utterance time. Similarly, characterizations of aspect based on viewpoint are “imprecise”, “metaphorical”, and ultimately “unsatisfactory” (1994:27-30), and Aktionsart distinctions deny verbs “temporal features which [they] clearly should have”. For example, sleeping, though not telic, generally has both a beginning point and an endpoint (1994:30-35).

To make the fuzzy theories more precise, Klein proposes a neo-Reichenbachian framework that includes the concepts of Topic Time (TT: the time span referred to in the utterance, roughly corresponding to Reichenbach’s R), Time of Utterance (TU: the time of the speech act, Reichenbach’s S), and Time of Situation (TSit: the time for which the situation referred to holds, Reichenbach’s E). Tense is the relationship between TU and TT, while aspect situates TT with respect to TSit. So-called “relative tenses” such as the English perfect are analyzed as combinations of tense and aspect.5

Situations themselves can be characterized – with a few refinements – as 0-State (there is no reasonable TT for which the negation of the situation would hold, as in (35)), 1-State (no change of state is involved, as in (36)), and 2-State (involving a change of state, as in (37)). Tense and aspect relations map onto these structures, resulting in the interpretations noted for various Aktionsarten.

(35) Michael is Veronica’s son. (0-State Content)
(36) Michael played soccer. (1-State Content)
(37) Michael built a house. (2-State Content)

2.2. Difficulties for a Semantic, Temporal View of TA

Having discussed several temporal approaches to tense and aspect, I will now argue that attempting a strictly temporal view of tense and aspect is problematic. First, it is widely accepted that tense, aspect, and mood are not separate systems, but overlap and interact in significant ways. Second, it is difficult, if not impossible, to separate “basic meanings” of tense and aspect from their discourse uses. Even the mainly temporal characterizations of tense and aspect discussed above frequently note the pragmatic, modal, and discourse organization features fundamentally intertwined with tense and aspect. For example, Comrie (1985) analyzes the Bantu ‘still’ and ‘not yet’ tenses as combinations of tense presuppositions (for ‘still’: the situation held in the past) and assertions (for ‘still’: the situation holds at present). Tense itself, which seems to be somewhat more straightforwardly temporal than aspect, must be understood deictically, adding an inherently pragmatic component. Additionally, in narration, tense morphology is often “pressed into service for other, notably pragmatic purposes” (Fleischman 1991:26). A few particular problems in

5 Klein claims that this characterization goes a long way towards explaining the “present perfect paradox (discussed below); the present perfect involves a Topic Time including the Time of Utterance.
characterizing tenses and aspects are discussed below, in sections 2.2.1 to 2.2.5. Discussions are not meant to be exhaustive, but merely to give a glimpse of the difficulties involved.

2.2.1. **Perfective/Imperfective**

Even the distinction between imperfective and perfective – seemingly the most basic of aspectual oppositions – turns out to be difficult to define, or to characterize cross-linguistically, though numerous attempts have been made. Comrie points to the perfective’s tendency to describe situations in their totality, while imperfectives focus on a situation’s “internal structure” (1976:16). Rather than define perfectivity in terms of “totality”, Dahl characterizes it as denoting a single, “unanalysed whole”, often depicting “a single transition from one state to its opposite” without regard for the duration of the transition (1985:78). Like Comrie, Smith (1997) defines perfective aspect as being “closed” with respect to narrative time (65-66).

Klein, in contrast, argues that all of these definitions – in their reference to ways of viewing a situation – are too vague and subjective to be of explanatory value (Klein 1994). For him, perfective aspect involves a Topic Time that is “partly included” in the posttime of a situation (as in (38)); the imperfective places Topic Time completely within the time of the situation (as in (39)):

(38) **Perfective:**  
Source State: story not written  
Target State: story written  
Michael wrote a story

(39) **Imperfective:**  
Source State: story not written  
Target State: story written  
Michael was writing a story

Another issue is the markedness status of perfectivity in aspectual systems. For Comrie, the opposition is unary with regard to particular languages: in a language, one of the two categories will be semantically and/or morphologically “marked”. However, even within the languages considered by Comrie, the marked category varies: in (for example) French, Ancient Greek, Georgian, and Bulgarian, the perfective is unmarked, while the perfective is the marked category in Slavic languages, with the imperfective being able to subsume both situation-internal and external viewpoints (1985:21). Because of the lack of a “very clear” markedness tendency cross-linguistically, Dahl treats the distinction as “equipollent”, although, as noted, the categories are not equally marked within particular languages (1985:69-72). The absence of a cross-linguistically characterizable markedness relation makes perfectivity different from other aspectual oppositions.

Also contentious are the sources upon which perfectivity definitions are based: Dahl (1985) argues that Russian, though often cited as the prototypical example of the imperfective/perfective aspectual opposition, differs significantly from the opposition generally found cross-linguistically.

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6 Note that Comrie refers to the opposition itself as “binary”; it is in particular languages that a marked/unmarked distinction emerges (1985:21).
First, the Russian system “has a much more ‘derivational’ character than the average aspectual opposition” (Dahl 1985:85): Russian bare verb stems, with some Aktionsart-based exceptions, have an imperfective reading; perfective readings are usually obtained with the addition of prefixes, some of which have lexical value, others being apparently semantically “empty” perfectivizers. Derived perfective forms can then be derivationally imperfectivized, through the addition of a suffix (usually -va- or -yva-).

Also, Slavic aspect “is much more independent of tense and time reference” than similar categories in cross-linguistically (Dahl 1985:85). There is a strong tendency across languages to use the perfective only for past situations; in Slavic languages the perfective can combine past or non-past tense. In Russian, for example, imperfectives have a three-way past/present/future opposition, while perfectives are somewhat more restricted in their two-way past/non-past distinction, in which non-past perfectives receive a future reading.

Thus, Dahl claims, Slavic aspectual systems, rather than being the norm, are typologically “rather idiosyncratic” (1985:69). So while the Slavic imperfective/perfective distinction shares enough similarities (i.e. is used in similar enough contexts) with other languages to be analyzed as such, it should not be the standard against which other systems are judged (Dahl 1985).

However defined, the imperfective and perfective aspects cannot be described in purely temporal terms. In their inherent encoding of point of view, they naturally have discourse-structuring functions. They may also have modal semantics, as shown for Badiaranke in Cover (2007). In Badiaranke, perfective and imperfective aspect have the expected completion semantics; however, “[c]ompletion is defined with respect to worlds as well as times” (Cover 2007a:2). Completion in the actual world is the crucial feature of the perfective. Complete states hold; complete activities are terminated; complete telics have undergone the change of state. With the perfective, this state of affairs is not expected to change in all probable worlds. The imperfective, in contrast, is used with situations that have not reached completion in the actual world with respect to Topic Time, but are complete in probable worlds. This leads to the use of stative verbs with perfective aspect to depict a continuing state; the imperfective is used for the future, “consequents of conditionals and counterfactuals”, and epistemic modals (assertions that something is “probably true”) (2007a: 5).

2.2.2. Characterizing the English Progressive

Attempts to nail down the functions of the English progressive have long been made and found wanting. As early as Hatcher (1951), it was noted that the traditional representation of the progressive as expressing durative aspect cannot account for its full range of uses. Hatcher argues that subsequent attempts to supplant this with other monosemous semantics also failed. Hatcher notes the interaction of the present progressive with lexical aspect: in unmarked cases, every verb takes either the simple or the progressive form, and use of the other form has special pragmatic effects. Activity verbs and verbs describing “development by degrees” (e.g. ‘getting a cold’) normally take the progressive, while statives and performatives generally do not (1951:267-268). Use of the simple present with the former two indicates “loss of the idea of overt activity”, and use of the progressive with the latter “makes for an emphasis on development by degrees” (I’m remembering it)

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7 Dahl finds the restriction of the perfective to past tense to be relaxed or inoperative in a few other languages, including Zulu, Sotho, Modern Greek, and Japanese (1985:80).
Thera Crane
Prospectus

now) (1951:269) or show that (a) “the subject is affected” by the activity (I’m loving this veggie dog), (b) “the subject is busy or engrossed in” the activity (I’m listening to the new Welcome Wagon album), or (c) “the subject is accomplishing something” through the activity (“I’m holding out for more money’) (1951:271); all of these emphasize the involvement of the subject, which is natural for activity verbs.

Dowty (1975) also noted several problems the claim that statives cannot be used with progressive aspect. For example, some statives can felicitously be used in the progressive if they refer to non-permanent states ((40) vs. (41)):

(40) Your nose harmonica is lying on the bed.
(41) #Likemwa Village is lying along the Kwemba River.

However, temporariness is also not enough to account for felicity contrasts in the progressive. The possibility of the progressive in such contexts also depends upon viewpoint, as is evident (42), which seems perfectly felicitous.

(42) You’ll know you’ve found my street because an elementary school will be lying to your left.

Dowty argues that an adequate account of the progressive requires attention to “at least” three factors: “agency, movement/change, and temporariness” (1975:584-585).

Among the many later analyses of the progressive are Landman (1992) and Portner (1998), both of whom offer modal explanations based on possible worlds. A major issue motivating their investigations is the so-called IMPERFECTIVE PARADOX: progressive activity predicates entail their perfective counterparts, but progressive telic predicates do not, i.e. (43) entails (43a), but (44) does not entail (44a):

(43) John was playing his trombone.
(43a) John played his trombone.
(44) John was recording a trombone album.
(44a) John recorded a trombone album.

Portner argues that a modal analysis can best account for the progressive, and that more attention needs to be paid to the relationship between aspect and modality in general, particularly for periphrastic expressions such as the English progressive and perfect. Portner suggests that these may need to be regarded as separate phenomena from morphologically-expressed aspects such as the perfective and imperfective in Romance languages. Work such as Portner’s demonstrates that aspect and modality cannot be given entirely separate treatment. In section 3, I show that even aspects expressed through derivational and inflectional marking may involve more than temporal relations.

2.2.3. Perfect Problems

The perfect is another aspect that has been the source of much debate in linguistics, largely because its meaning seems to have a pragmatic “relevance” component of built in. Comrie (1976:56ff) lists several uses of the English present perfect: PERFECT OF RESULT, EXPERIENTIAL PERFECT, PERFECT OF PERSISTENT SITUATION, and PERFECT OF RECENT PAST; the issue is whether these uses can all be explained under a monosemous semantics.
Nishiyama and Koenig (2004a, 2004b) claim, based on theoretical and corpus-based studies, that the perfect is monosemous and semantically-underspecified: it introduces a semantically-empty PERFECT STATE, and hearers fill in the contextually appropriate perfect reading via informativeness-based pragmatic implicatures, using a few simple inference patterns.

Portner offers a modal account that also incorporates the notion of relevance as defined by e.g. Roberts (1998; see also the discussion in section 1.3). Recall Roberts’ analysis of cooperative cooperation as a mutual effort to answer “the Big Question”, what is the way things are? In practice, this involves the evaluation of a set of propositions constituting the IMMEDIATE QUESTION UNDER DISCUSSION, i.e., the discourse topic. An utterance is RELEVANT if it leads to the evaluation of some or all of these propositions. (1998:4) Portner (2003) argues that use of the perfect presupposes the relevance of the utterance to the question under discussion (as opposed to other aspects, which may of course be used in relevant utterances, but do not presuppose it).

Another problem for analysis of the perfect is how to explain the so-called “lifetime effect”. It is felicitous to say (45) but not (46)

(45) Princeton has been visited by Einstein.
(46) #Einstein has visited Princeton.

Many explanations of the effect have been proposed in the literature; one of the more compelling is Portner’s (2003). Portner offers a slightly modified version of McCoard’s EXTENDED NOW theory (McCoard 1978, cited in Portner 2003), claiming that the present tense – the component of the present perfect responsible for the lifetime effect – carries a presupposition that the situation described falls within an interval of which the time of utterance “is a final subinterval”; that is, it must be used for something within a time interval of which the literal present time is plausibly a part (2003:496).

Yet another issue is what Klein (1994) terms the “present perfect puzzle”: use of the English present perfect is infelicitous (on a non-habitual reading) with specified temporal adverbials:

(47) Marian has already made a batch of nutritional peanut butter.
(48) Marian has just made a batch of nutritional peanut butter.
(49) # Marian has made a batch of nutritional peanut butter two minutes ago.
(50) # Marian has made a batch of nutritional peanut butter at 1:30 pm today.

Attempts to account for this have been both non-modal (e.g. Reichenbach 1947; Klein 1992, 1994) and modal (e.g. Katz 2003, Portner 2003). A satisfactory explanation, however, must make at least some reference to pragmatics.

Portner’s explanation for lifetime effects also makes use of the idea of Extended Now: explicitly stating a past time precludes an event’s inclusion in an interval including the present time. The interval included in the Extended Now is contextually determined based on the speaker’s desire to communicate nearness to the event (Portner 2003:496-497).

Klein claims that the present perfect’s use of a present tense auxiliary accounts for its current relevance, but even his strictly temporal analysis refers to a pragmatic requirement of “reasonable contrast”. The perfect, in Klein’s theory, involves a topic time including the time of utterance, and fully after the situation time. Because the perfect refers to a time fully after the situation time, “there
is no point in singling out one such interval from this posttime and asserting that [at that time the subject] is in the posttime" (Klein 1994:208; for more detailed discussion, see also Klein 1992, cited in Klein 1994).

The perfect, then, has a clear pragmatic element and may best be analyzed an information-structuring device prompting the hearer to seek the relevance in the speaker’s utterance. In section 3, I discuss other examples of the crucial interrelations between tense, aspect, and mood marking, and information structure in discourse.

2.2.4. The Future

The analysis of future tense is complicated by its inherent uncertainty: it indicates situations that have not yet been realized in the actual world. As noted by Comrie, it is uncommon to find grammatical forms that clearly refer to future time only, and are not merely a particular function of a more general modal category (Comrie 1985; see the discussion in section 2.1.2). Levinson notes that attempts to claim that the English future has the purely deictic, temporal function of its metalinguistic counterpart will be met with example “catalogues of insuperable odds” that contradict this view (Levinson 1983:78). Comrie also admits modal functions of will, but argues, in contrast, that there is evidence of pure future tense – distinct from modal – use of will in English. As evidence, he takes the temporal behavior of conditional clauses. In conditional protases, future time cannot be expressed with will; instead, the present tense is used as in (51). However, will is perfectly acceptable in the same context if it has a modal (present or habitual) reading as in (52). This contrast, says Comrie, shows that will has two separate readings in English, and suggests that English in fact has a distinct grammatical future tense category (Comrie 1985:48).

(51) If Marian gets (#will get) a grant, she will return to Goma.

(52) If John will drink a chocolate milkshake with dinner, he will stay up all night. (modal reading of conditional clause)\(^8\)

\(^8\) Responses to this argument, and the modality of future tense in general, are an area for further literature review (in works by e.g. Fauconnier, Sweetser, and Fillmore). It is my intuition that future tense always has a modal element. While example (51) is infelicitous on a sequential reading, (1) below is felicitous if the time of receiving a grant is after the time of going to Goma. This construal of event sequentiality is even more evident in the perfectly natural sentence in (2), in which the sequentiality of dessert and dinner is part of real-world knowledge. The question, then, is whether ‘will’ in these cases can obtain a strictly temporal reading. It seems to me that there is a sense of prediction or knowledge about the future (unlike in the apodosis of example (6) in this footnote), suggesting to me that future time reference is generally (or always) modal, while present tense is used in conditional protases because they represent certainties in possible worlds. Similarly, the present form can be used in main clauses to express scheduled, relatively certain future events, as in (3) (see also Comrie 1985: 47-48).

(1) If Marian will get a grant, she will return to Goma. (cf. (51))

(2) If we’ll drink chocolate milkshakes for dessert, we’ll eat less during dinner (to save room).

(3) Half-handed Cloud plays in Oakland next week.

Also note that Portner’s TSP (discussed in section 1.1.3) seemingly has some role to play here, as well, as explored in sentences (4)-(7).
The English future with going to has been variously analyzed as indicating temporal proximity; a “localized” future in which the “precise temporal location has been established” (Flydal 1943, in Fleischman 1983:189); illocutionary force (statement vs. prediction; Boyd and Thorne 1969); or “imminence”, “intentionality”, “premeditation”, or “inceptive” or “inchoative” aspect. Fleischman (1983) claims that all of these are descriptively inadequate. Rather, Fleischman argues, the English go-future, like the English present perfect, must be analyzed under a pragmatic account of present relevance.

2.2.5. BASIC TENSE DISTINCTIONS

Even the most basic time distinctions – i.e. now vs. not-now – are challenged when actual uses of tense are examined. It is a common cross-linguistic tendency to use the present tense to describe past or future actions. Klein (1994) lists a number of discourse types in which this use is likely to arise (e.g. “narrative present” and “pictured past”). Klein explains such uses by saying that they relate Topic Time (which is related to situation time to produce tense distinctions) “to the time at which the situation described by the lexical content is imagined” (Klein 1994:139).

The picture is even more complicated in Bantu languages, which often have multiple degrees of past and future reference, for example, TODAY PAST, YESTERDAY PAST, FAR PAST, and so forth. Some Bantu languages are rigid with regard to time-tense correspondence. That is, a yesterday past can only be used with a situation that occurred yesterday. In other languages, however, tense and actual time have a more flexible relationship, and an “inappropriate” tense may be used for pragmatic connections to show subjective distance of the situation from the speaker’s current reality (Fleischman 1989:21). For example, so-called HESTERNAL (YESTERDAY) PASTS may refer to events of yesterday, or, with cyclical events that repeat over longer periods of time, to more distant pasts, such as last month or last year (especially with regard to annual sowing and cultivating). Likewise, the different pasts “could well refer differently” for events involved in “the life span of huge trees as opposed to small plants, or divine versus human events” (Nurse 2008:93). Nurse further notes that “the way the speaker sees events or wants to depict events is also relevant”.

For example, Southern Sotho (S.33) has a “recent past” marker that speakers may also use to describe events that happened long ago, if they wish to express that those events still have current relevance:

(4) If she is happy, she will sing. (sequential or concurrent)

(5) [When you go and see her] If she is happy, she will be singing. (concurrent)

(6) [When you go and see her] If she is singing, she is (?will be) happy.

(7) He will drink a chocolate milkshake. He will eat sweet potato fries. (Sequential or concurrent)

Again, this is an area for further reading.

Klein also briefly mentions a context of past tense used for a present situation, which he calls BACKCHECKING. (Klein 1994:136) Backchecking occurs, for example, in sentences like, “Whose pet cockroaches were these again?”
(53) Morena Moshoeshoe ofalletse [RECENT PAST] Thaba-Bosiu ka-1824

‘Chief Moshoeshoe moved [RECENT PAST] to Thaba-Bosiu in 1824’ (and) his legacy or contribution to the cultural patrimony was and still is highly significant (Machobane 1985:18, ex 29 cited and explicated as Morolong 1978 in Fleischman 1989:21, ex 29)\(^\text{10}\)

The information-structuring use of tense and aspect, evident in cases like example (53), is further explored in the next section.

3. TA(M) AS INFORMATION STRUCTURE

Puzzles such as the ones discussed in the preceding sections, along with observations of regularities in TA choice in narrative and discourse contexts, have led to the development of a school of thought based on the idea that discourse function may be a crucial – or even the primary – factor in understanding TA distinctions. There is thus an increasing view among many that the function of aspect, and even of tense, is primarily one of information structure.\(^\text{11}\) The development and motivations of this view are discussed in the next sections.

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\(^{10}\) The temporal interpretations and pragmatic uses of the Sotho recent past are complex and fascinating; see Machobane 1985, chapter one, for a detailed picture. The -ile suffix may convey present relevance, but it does not imply persistent result (cf. the Yeyi H-anterior, discussed below in section 5.1.2). This is evident in the following example:

(8) Johanne o-fihl-ile ka-labobele atsoha atsamaea ka-laboraro

JOHN ARRIVE-RECENT.PAST ON-TUESDAY HE.WAKES HE.WALKS ON-WEDNESDAY

‘John arrived [RECENT PAST] on Tuesday and left on Wednesday’ (from Machobane 1985:22, ex 45)

\(^{11}\) Many modern, semantically based theories of tense and aspect are also situated in frameworks that recognize the crucial role of discourse in TA interpretation, contra traditional Reichenbach-style views, which focus mainly on sentence-level functions. Such views, which include Smith (1997), refer to the anaphoric nature of tense, which often receives its specific interpretation based on discourse context as modeled by (e.g.) Discourse Representation Theory (Kamp 1981, cited in Smith 1997). For a detailed overview of the theory of tense as “referential/anaphoric”, see Cover 2007c (12-14). Referential tense theories, while acknowledging discourse’s role in interpretation, do not assign tp tense (aspect) primarily pragmatic/information-structuring roles. In fact, as Cover notes (2007c:14), investigations of tense anaphora tend to lead rather to syntactic analyses, effectively forcing scraps from Bar-Hillel’s “pragmatic wastebasket” (1971:405) into an ill-fitting domain.

MENTAL SPACES THEORY (Fauconnier 1985, 1997; Cutrer 1994; cited in Botne and Kershner 2008:156) construes TAM as “keeping track of the time and reality status […] of a configuration of mental spaces built up in discourse” (156). Botne and Kershner (2008) cite MST as a complement to their model, in that MST deals with discourse organizing facets of TA, while Botne and Kershner’s framework focuses on “the organizing principles of the tense-aspect system itself” (2008:158). MST is an area for future reading.

22 October 2008
3.1. A BASIC VIEW: UNDERSPECIFIED TEMPORAL SEMANTICS, PRAGMATIC ENRICHMENT

Portner’s (2003) analysis of the present perfect, outlined in 2.2.3 above, argues for a limited temporal semantics along with (modal) pragmatic presuppositions like discourse relevance (as defined by e.g. Roberts 1998). Nishiyama and Koenig (2004a, 2004b) also take a pragmatic enrichment approach, although their analysis involves not presupposed relevance, but a “perfect state”, characterized as a semantically free variable, the value of which is pragmatically inferred by the hearer via (neo-) Gricean rules.

Similarly, Portner’s (1998) modal analysis of the progressive (also discussed above, in section 2.2.2) involves a semantics that relies crucially on contextual knowledge (here, the “modal base”) for its felicity: a progressive sentence with a telic predicate cannot be truthfully uttered if the context seems to preclude the event described being carried to conclusion. A corollary of this seems to be that in using the progressive, a speaker informs addressees that the modal base – the relevant part of the real world – is such that the completion of the action described as in progress really is possible.

Such views of aspect are similar to other theories involving semantic underspecification and pragmatic enrichment, such as Blutner’s theory of lexical pragmatics (e.g. Blutner 2004) and Wilson and Sperber’s Relevance Theory (e.g. Wilson and Sperber 2004).

The interactions of semantics and pragmatics outlined in the theories discussed here raise the question of whether it is possible and necessary to distinguish tense and aspect meanings from pragmatic implicatures generated through their use in context. Comrie argues that the discourse functions of tense, at least, are cancelable implicatures and thus not part of basic semantic meanings; indeed, to consider discourse functions as basic would “destroy the homogeneity of the concept and therefore the possibility of a general theory of tense (1985:35). Similarly, Klein writes that views of discourse function as primary to TA meaning are “attractive and gaining in popularity” but not part of the “conventional picture”; he opts for an analysis of tense and aspect defined strictly in terms of temporal relations (Klein 1994:17; see also the discussion in section 2.1.4 above). Theories such as Portner’s and Nishiyama and Koenig’s seem to be a first step in the direction of analyzing TA in terms of discourse function: they acknowledge the necessity of context-based pragmatic inference in the interpretation of aspectual forms. However, even more directly information-structural analyses of tense and aspect have been developed over the past decades. In such theories, discussed in the following sections, the structuring of discourse is viewed as a basic function of TA forms.

3.2. A MODERATE VIEW: INTERDEPENDENT TENSE SEMANTICS AND DISCOURSE USE

Fleischman acknowledges temporal determination as a basic function of tense marking, but notes that it also has “expressive” (social, attitudinal) and discourse pragmatic functions, and that in narrative contexts, “tense contrasts may be pressed into pragmatic service” as discourse organizers (Fleischman 1985:851). For example, in Old French texts, the simple past and (narrative) present seem to alternate freely from sentence to sentence. Both are used to describe “temporally ordered, punctual, past events in the narrative foreground” (Fleischman 1985:870). However, closer investigation shows that when a simple past interrupts a series of sentences given in narrative

12 This accounts for the oddness of sentences like ‘John is jumping over the Campanile’, or ‘Joe the Plumber is buying out the Trump empire’, where success is unlikely for John and Joe even with their best efforts.
present, there is also an interruption of the temporally sequential narrative flow to give or repeat background information (Fleischman 1985). Thus, tenses in narrative serve GROUNDING functions, marking information as more or less salient – i.e. unpredictable – within the narrative. Fleischman stresses that grounding contrasts do not involve a simple binary distinction between foreground and background, but operate on a “continuum” (1985:851).

Fleischman also notes the close connection between narrative grounding and expressive functions of tense and aspect, in which speakers convey their attitudes and beliefs. In particular, the expression of temporal distance is often metaphorically expanded to include “more abstract conceptual and cognitive” distances (Fleischman 1989:2). This occurs, Fleischman argues, because tenses that describe a time other than now have an inherent non-reality that naturally lends itself to other expressions of irrealis situations and attitudinal or epistemological distancing from the situation under discussion.

Fleischman (1989) gives examples from multiple language families that show the expressive functions of tense and aspect. In Spanish, for example, a past tense subjunctive form can convey greater speaker uncertainty:

(54)

(54a) ¡ojalá lleguen!

‘would that they would come!’ (Gili and Gaya 1971:177-178, quoted in Fleischman 1989:7)

(54b) ¡ojalá llegaran!

‘if only they were coming!’ (Gili and Gaya 1971:177-178, quoted in Fleischman 1989:7)

Markers of temporal distance (e.g. past or future) also have politeness functions, as demonstrated for English in example.

(54c) Hello! I just want to ask you a question.

(54d) Hello! I just wanted to ask you a question.

In Spanish, tense and mood markers combine to distance the requester from the request. In example (55), sentences – all of which convey the speaker’s desire (querer ‘to want’) to talk to the addressee – are given in increasing order of politeness. Again, the present tense version represents the most direct, least mitigated request.

(55)

(55a) Quiero hablar con usted (present)

(55b) Quería hablar con usted (imperfect)

(55c) Querría hablar con usted (conditional/future-of-past)

(55d) Quisiera hablar con usted (imperfect subjunctive) (adapted from Fleischman 1989:9)

---

13 These basic interlinear glosses are my own; translations are as in Fleischman 1989)
The converse is also true: markers of less remote time can be used to express personal connection to the situation under discussion, much as the Old French narrative present is used to convey salience within the discourse structure. For example, the present perfect, generally used in Castilian only with events in the recent past, also appears with long-ago events if the speaker is still affected:

(56) Fíjate que mi padre ha muerto [PERF] hace diez años.
You know, my father died [PERF] ten years ago (and his death is still very much with me)" (Fleischman 1989:21, ex 30)

Fleischman (1989) gives many additional examples of cases in which expressions of temporal distance are used to convey non-reality and personal distance, arguing that expressions of temporal distance naturally extend to convey metaphorical distance in expressions of epistemic certainty and deontic strength, “assertiveness”, “interpersonal distance” (e.g. politeness and hypocoristics), “evidentiality”, and “speaker subjectivity”. (Fleischman 1989:38). Such extensions, however, must not be viewed as the primary meaning of tense, which remains strictly temporal in Fleischman’s view (1989:17).

3.3. A MORE RADICAL VIEW: TENSE AND ASPECT AS DISCOURSE PHENOMENA

While Fleischman claims that tense forms have temporal meaning, and that inherent distancing (or lack thereof) naturally leads to pragmatic expansion to non-temporal function, Hopper (1979a, 1979b, 1980, etc) and others argue that tense and aspect categories only become “intelligible” when examined from a discourse perspective. For example, the distinction between perfective and imperfective aspect in many languages may be characterized as an opposition between foregrounding (perfective) and backgrounding (imperfective). Temporal indicators are then “superimposed” on these primary functions (Hopper 1979a:239).

Hopper illustrates his proposal in a number of languages. In Russian, he claims, the perfective is used for “foregrounded event lines” and the imperfective is used for “backgrounded scene settings and descriptions” (Hopper 1982:9). This basic meaning leads to additive meanings of Russian aspect like a ‘try to’ sense of the imperfective, which “must be inferred from the context given the discourse meaning ‘no Next Event asserted or implied’” (Hopper 1982:11).

Similarly, French foregrounded events are expressed using perfective (“passé historique”/ “preterite” / “aorist” / “simple past”) aspect, which is fully grammaticalized and obligatory on foregrounded predicates (Hopper 1979b). Hopper argues that the idea of a completed event conveyed by imperfective aspect derives from the form’s narrative function of depicting consecutive taxis. Taken out of context, they may be interpreted as tense or aspect, and eventually grammaticalize as such. (Hopper 1979b, 1982; see Heine et al. 1991:240-241 for further discussion).

Thus, according to Hopper, TA markers originate in discourse, rather than being “ready-made devices ‘deployed’ [there] because they happen already to exist” (Hopper 1979a:217). Sentence-level interpretations of tense and aspect – the units traditionally taken into account in (neo-) Reichenbachian theories – are mere “correlates” of discourse functions (Hopper 1972:16).

---

14 Fleischman (1985) gives principled reasons for seeing fore- and backgrounding as a continuum rather than a binary opposition, but this refinement does not strongly affect Hopper’s primary argument.
3.4. AN EVEN MORE RADICAL VIEW: EVERYTHING IS IS

There have been several proposals counter to Fleischman’s view of tense semantics as strictly temporal. Under such views, tense is construed not in terms of time at all, but as a specific case of “a more broadly understood distance from present reality” (e.g. Steele 1975, Langacker 1978, and Hutchinson 1985; cited in Fleischman 1989:16). Heine et al. note that in some views (e.g. García 1975, cited in Heine et al. 1991) “syntax per se does not exist at all, and language can be described ‘exhaustively’ by reference to some communicative principles that underlie the structure of discourse (1991:240-241).

Botne and Kershner (2008) propose a similarly radical framework, in which time-based tense and aspect distinctions are just one facet of their respective forms’ functions within discourse. They put forward a model of tense and aspect that involves a non-linear representation of time and takes into account three possible perspectives, all of which may be employed by a language: time as a “path” with the ego moving along it, time as a “stream” that moves the ego (“conceptualizer”) along past the events that occur, and time as a stream that floats events past the ego (Botne and Kershner 2008:148).

These time perspectives can operate both within and between temporal domains based on cognitive mental spaces, or COGNITIVE WORLDS. Botne and Kershner’s conception of cognitive worlds is “comparable, but not identical to … Klein’s topic time” (Botne and Kershner 2008:152). The P-domain is the cognitive world included in the time of speech, “denot[ing] a primary, prevailing experiential past and future perspective”. In contrast to this, the D-domain is dissociative, marking “relations of non-inclusion” (2008:153).

There are several possible oppositions represented in the two domains, some or all of which may have distinct grammatical marking; which oppositions are marked, and how, varies from language to language. The P-domain can involve situations and things that are real, here, and temporally coincident, while the D-domain involves the not real, the not here, and the not now. Botne and Kershner note that in many languages, marking of these oppositions is formally similar or identical within a domain; this generalization motivates their analysis.

(57)

<table>
<thead>
<tr>
<th>REALITY</th>
<th>P-DOMAIN: ASSOCIATION (=INCLUSION)</th>
<th>D-DOMAIN: DISSOCIATION (=EXCLUSION)</th>
</tr>
</thead>
<tbody>
<tr>
<td>real</td>
<td></td>
<td>not real</td>
</tr>
<tr>
<td>TIME</td>
<td>now</td>
<td>not now (i.e. the cognitive domain is prior to or later than the speech locus)</td>
</tr>
<tr>
<td>LOCATION IN SPACE</td>
<td>here</td>
<td>not here</td>
</tr>
</tbody>
</table>

(adapted from Botne and Kershner 2008:159)

In this model, TENSE marks the deictic relationship between the speech time and the cognitive domain involved in the event’s depiction. If the cognitive domain is the D-domain (excluding the speech time) it will be marked as (e.g.) past or future. There may be time distinctions within the P-domain; Botne and Kershner call these TENORS rather than tenses.
An example of a tenor belonging to the P-domain is the English ø-marked present. This associative sense explains its use with (e.g. planned) future and (historical present) past meanings. The -ED suffix, in contrast, belongs to the D-domain, and can mark either past or irrealis (Botne and Kershner 2008:153-154).

In Botne and Kershner’s framework, ASPECT picks out a phase of a situation “as the focal frame for viewing the event” (2008:171), and interacts with Aktionsart in predictable ways.

Botne and Kershner argue that their model allows for a unified view of tense, aspect, and mood marking in all of its functions; they then apply it to explaining “curiosities” in Bantu languages, as well as a few non-African languages. Two of these I summarize here.

Ekoti (P.30, Mozambique) has two simple pasts, RECENT PAST and REMOTE PAST. Both pasts are perfective, but the recent past – though “neither a perfect...nor fully resultative” – connotes current relevance, and is thus assigned by Botne and Kershner to the P-domain (2008:183). In contrast, the remote past has no such flavor, although it may even be used for situations that occurred a mere day before the time of utterance. Botne and Kershner assign it to the D-domain. The domain distinction has ramifications in Ekoti syntax. If an active sentence describes an event that happened long ago and has enduring consequences that are not necessarily of relevance for the agent, it receives remote past (P2) marking. If the same sentence, however, is passivized, so that the enduring object is the salient entity, the recent past (P1) is used. (Recall that P1 is perfective and does not have “fully resultative” semantics (2008:183).)

(58)

(58a) azúkú (a-)aa-cek-iyé fortalééza
PORTUGUESE 3P-r2-BUILD-r2 FORTRESS
‘the Portuguese built [P2] the fortress’

(58b) fortalééza y-a-cek-íw-a n’azúku
FORTRESS 3S-P1-BUILD-PASS-FV BY-PORTUGUESE
‘the fortress was built by [P1] the Portuguese.’(Schadeberg and Mucanheia 2000:116, quoted in Botne and Kershner 2008:185, ex 23)

According to Botne and Kershner, the activity of the Portuguese is in the distant past and is dissociated, but the fortress “still exists in the contemporal world of the speaker”, hence the domain markings seen in (58) (Botne and Kershner 183-185).

In Chisukwa (M.20, Malawi), there are four future-marking forms (F1-F4), which have somewhat overlapping temporal domains. The four possibilities are shown in (59).
As is evident from the example, the futures seem to differ both in temporal distance and speaker certainty from the probable near future in (59a) to the “deeply remote” future in (59d) (2008:199). Botne and Kershner characterize the -ka- marker as situating the event under discussion in the D-domain; this accounts for the differences between (59a) and (59c), and (59b) and (59d), respectively. The tiise marker, labeled the CONTINGENT FUTURE, is used when the future event’s occurrence is dependent on the occurrence of a temporally anterior event; in Botne and Kershner’s framework, it “establishes a…reference locus” within the domain, accounting for the contingent nature of (59b) and (59d). Botne and Kershner argue that a linear, purely temporal model of time and tense/aspect cannot account for the “epistemic certainty and contingency” effects that fall out nicely under their own system (2008:198-200).

While Botne and Kershner’s proposal “do[es] not dispute” patterns of historical developments noted by grammaticalization theorists, it deals with them all on a synchronic level, focusing on explaining and organizing the correlations between tense and “related verbal deictic phenomena” (2008:160). Botne and Kershner’s “organizing principle” (2008:160) thus brings important insights to TA studies, and provides a valuable framework within which to conduct research, but it does not take into account the grammaticalization patterns repeatedly observed for TAM marking. These are discussed in section 4, after a general introduction to grammaticalization theory and its claims.

4. GRAMMATICALIZATION

4.1. INTRODUCTION

Under the simplest definition, grammaticalization involves the change, over time, of a free lexical item to a “grammatical unit”, or grammatical unit to an even “more grammatical” unit in function (Heine et al. 1991:2).
For example, words specifying body parts are often metaphorically extended to become prepositions, as in Ewe (Niger-Congo; Ghana, Togo, Benin), in which tā-me (< *'head-in') is used for ‘on’:

\[(60) \text{ë-le } \text{bu-á } \text{tá-me}\]
\[3\text{SG-BE CAR-DEF ON}\]

‘it is on top of the car’ (Heine et al. 1991:129, ex 2)

Similarly, in Kwanyama (R.21), the word ombinga means ‘side’; together with the class 17 locative prefix (kombinga, literally ‘at the side’) it is a preposition meaning ‘about’ or ‘regarding’.

Heine et al. claim that grammaticalization processes are universal, and can involve any type of grammatical function. It occurs in a chain, in which new, more grammatical uses are gained, and older, less grammatical uses may eventually (but not necessarily) drop out. \((A\rightarrow A,B \rightarrow B)\) (Heine 2003:579). Grammaticalization is generally understood to involve the following four processes (see e.g. Heine 2003):

\[(61) \text{Processes of grammaticalization (from Heine 2003:579-580)}\]

<table>
<thead>
<tr>
<th>MECHANISM</th>
<th>PROCESS TYPE</th>
<th>DEFINITION</th>
<th>PROCESS INVOLVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DESEMANTICIZATION ((\text{SEMANTIC &quot;BLEACHING&quot;}))</td>
<td>SEMANTIC</td>
<td>loss of (specific, referential) meaning</td>
</tr>
<tr>
<td>2</td>
<td>EXTENSION</td>
<td>PRAGMATIC</td>
<td>“use in new contexts”</td>
</tr>
<tr>
<td>3</td>
<td>DECATEGORIALIZATION ((\text{MORPHOSYNTACTIC}))</td>
<td>MORPHOSYNTACTIC</td>
<td>loss of source’s “morphosyntactic properties” including “independent word status”</td>
</tr>
<tr>
<td>4</td>
<td>EROSION</td>
<td>PHONETIC</td>
<td>“phonetic reduction”</td>
</tr>
</tbody>
</table>

Traugott (2003) notes that not all of these processes may take place in every instance of grammaticalization – for example, the development of discourse markers from lexical items does not necessarily involve phonological erosion – and that failing to fulfill one of the above criteria should not preclude a change process from being given a grammaticalization-based analysis: the changes still occur in predictable ways. This thinking leads Traugott to propose a new definition for grammaticalization:

[Grammaticalization is] the process whereby lexical material in highly constrained pragmatic and morphosyntactic contexts is assigned grammatical function, and once grammatical, is assigned increasingly grammatical, operator-like function. (Traugott 2003:635)

A key observation in studies of grammaticalization processes is that it is largely UNIDIRECTIONAL: it is quite common for lexical items to become grammatical items, but
(apparently) extremely rare for the reverse to occur. For example, verbs meaning ‘finish’ often become anterior and perfective markers, as shown in (62).

(62) Grammaticalization of ‘finish’

\[
\begin{array}{c}
\text{‘finish’} \\
\longrightarrow \\
\text{completive} \\
\text{derivative perfective} \\
\longrightarrow \\
\text{anterior} \\
\text{perfective} \\
\text{simple past}
\end{array}
\]

(adapted from Bybee et al. 1994:105)

However, it would be odd if a perfective marker – usually a bound morpheme (Bybee and Dahl 1989:56) – were, over time, to break off from the lexical item to which it is attached, and develop the meaning of a lexical verb such as ‘finish’.

The status of grammaticalization as an independent process worthy of study as such has been hotly contested. For example, Campbell (2001) argues that the idea of “grammaticalization”, though a useful heuristic for understanding trends in language change, is not an independent phenomenon. Rather, it can be fully explained by well-known linguistic processes including sound change (in particular, phonological reduction), semantic change (in particular, bleaching), and reanalysis. Further, the notion of “unidirectionality” is either definitional for grammaticalization – and therefore not empirically testable – or an empirical property, and therefore false, due to the existence of numerous examples of morphemes becoming “less grammatical”, e.g. suffixes becoming clitics becoming independent words. Campbell acknowledges that such “counterexamples” are far less common, but claims that this fact may be explained by “the intersection of other sorts of linguistic change [reanalysis, extension, and, to some extent, borrowing] which are operative in language” (Campbell 2001:140).

Heine (2003) counters that such objections are “irrelevant”. First of all, the mechanisms involved in grammaticalization, regardless of whether they are independent processes, are closely interwoven. In particular, desemanticization leads to the other processes. More important, grammaticalization has predictive power: strong cross-linguistic patterns can be found for sources and results of grammaticalization.

4.2. GRAMMATICALIZATION AND TAM

Bybee and Dahl propose that a tense or aspect marker (GRAMMATICAL MORPHEME, or GRAM) should not be understood as belonging to a TA “supercategory” that operates identically regardless of the marker’s source. Rather, it is “an instantiation of a range on a path of development” – likely to be similar in function to other grams from sources like its own and “at similar stages of development” – and therefore “must be viewed as having inherent semantic substance reflecting the history of its development as much as the place it occupies in a synchronic system” (Bybee and Dahl 1989:97). That is, TAM markers can only be understood within their historical context. A number of cross-linguistically robust generalizations have been drawn about the source and directionality of grammaticalization processes involving TAM (e.g. the pattern schematized in (62)) A few other important patterns are noted below. Some involve shifts from lexical items to TAM markers; others
show common shifts between TAM categories.\textsuperscript{17} Examples are given for Bantu languages and, occasionally, for English as well. Bantu examples are followed by the language name and Guthrie classification code.

Some TAM grammaticalization processes are often based on seemingly universal metaphorical extensions, such as the \textsc{space} $>$ \textsc{time} metaphor (discussed by Traugott 2004 and many others). Typical \textsc{space} $>$ \textsc{time} extensions are shown in 4.2.1 and 4.2.2.

### 4.2.1. \textsc{Locative expression} $>$ \textsc{progressive}

Progressive markers commonly develop from copula forms that are themselves grammaticalizations of lexical verbs indicating location in some way, e.g. ‘sit’, ‘stand’, or ‘live’. Bybee and Dahl propose a motivation for the use of locatives and positionals for progressive purposes: It adds meaning to say “X is in or at an activity” if the activity is at “a concrete, physical location”, X is a mobile entity that could be somewhere else, and X “perhaps” even has volition and sometimes chooses to engage in other activities (cf. the discussion of the meaning of the progressive in section 2.2.2 above). The expansion from location in space to location in time occurs naturally – “to be located spatially in an activity is also to be located temporally in an activity” – and the locative meaning weakens over time (Bybee and Dahl 1989). The use of locative markers is common in Bantu languages:

- (63) \begin{align*}
  \text{tu-ri-ko tu-ra-gura (ri-ko < ri-ku) (-ri = -li \text{ ‘be’, -ko 17 LOC)}
  \\
  \text{‘we’re buying’} \quad \text{(Ha (D.66) in Nurse 2008:140, ex 13)}
\end{align*}

- (64) \begin{align*}
  \text{ti-keé-kabá (kee < -kala ‘sit, remain’)}
  \\
  \text{‘we are hitting’} \quad \text{(Meru (E.61) in Nurse 2008:141, ex 13)}
\end{align*}

### 4.2.2. \textsc{Distal marker} $>$ \textsc{remote tense}

This expansion follows naturally from Botne and Kershner’s associative/dissociative framework. Still, it is crucial to note that the development involves a shift from marking distance in space to distance in time, and not the reverse.

The distal (\textsc{itive}) -\textit{ka}- marker in Bantu often indicates that a situation is spatially distanced from the place of speech. The -\textit{ka}- marker is fairly ubiquitous across Bantu and has many uses, and is therefore hard to reliably trace. Still, it may be significant that it occurs in numerous distant pasts (as in (65)) and futures (as in (66)):

- (65) \begin{align*}
  \text{tu-ka-imba}
  \\
  \text{‘we will [F2] sing’} \quad \text{(Lucazi (K.13) in Nurse 2008:243, ex 4)}
\end{align*}

- (66) \begin{align*}
  \text{ti-ka-himba}
  \\
  \text{‘we struck [P3]’} \quad \text{(Tumbuka (N.21) in Nurse 2008:243, ex 5)}
\end{align*}

\textsuperscript{17} See e.g. Bybee et. al (1994) and Heine et al. (1991) for extensive and detailed discussions of tense, aspect, and mood in grammaticalization processes.
4.2.3. RESULTATIVE > ANTERIOR (PERFECT)

The shift from resultative (e.g. ‘it is broken’) to anterior/perfect (e.g. ‘it has broken’) represents a “change in emphasis”. Both forms depict an event and an ensuing state; the resultative focuses on the state itself, while the anterior emphasizes the event. This shift allows for extension of the anterior to cases where the present relevance is not directly linked to a result state, as is the case with the English present perfect (‘John has asked for some Pepto-Bismol’) (Bybee and Dahl 1989:67-70).

4.2.4. ANTERIOR > PERFECTIVE

When anteriors, which under the most common analysis involve a preceding situation with subsequently relevant results, lose the requirement of present relevance, they may be used as perfectives or simple pasts (see e.g. Nurse 2008 for a discussion of this process in Bantu).

Sometimes the “lost” relevance requirements have lingering effects. Bybee and Dahl stress the fact that grammaticalization does not occur in discrete steps. Therefore, it is not surprising when grams retain some of the functions of their previous category, and that perfectives grammaticalized from perfects may in some context retain their flavor of present relevance. This is the case for what Fleisch (2000) characterizes as the “past perfective” in Lucazi, discussed briefly in section 5.1.3 below.

The few examples discussed in this section are merely meant to give a flavor of the kinds of shifts that occur. In the next section, I discuss the relationship between TAM grammaticalization processes and pragmatics.

4.3. GRAMMATICALIZATION AND PRAGMATICS

The primary interest in this paper’s treatment of grammaticalization is its interaction with pragmatics, specifically, with information structure. Specifically, as tense and aspect forms grammaticalize, do they gain or lose pragmatic, information-structuring force?

The traditional view within grammaticalization theory has been that proposed by Givón, who made the famous claim that “today’s morphology is yesterday’s syntax” (1971b:413, quoted from Heine et al. 1994:13). According to Givón, the grammaticalization process involves a shift from pragmatic function to semantic meaning, to morphological expression, and, eventually, to nothing. This process is schematized in (67):

(67)  **DISCOURSE > SYNTAX > MORPHOLOGY > MORPHONEMICS > ZERO** (Givón 1979a:208-209, summarized in Heine et al. 1991:13).

This is also the view taken by Hopper, who argues that tense and aspect semantics grammaticalize from discourse uses. For example, Malay *lah*, because of its sequential requirement, is often translatable as a simple past or even a pluperfect. This feature has led grammar writers to assign it a “preterit” function unrelated to its “focus” function. Hopper, in contrast, argues that the anterior and past interpretations are natural extensions of *lah*’s foregrounding role. While *lah* occurs in a strict narrative framework, its development may be evidence that tense and aspect markers “may
be derived from narrative focus particles” (Hopper 1979b:62) and, more generally, that aspect “may be regarded as a discourse phenomenon” (Hopper 1979b:37).

Nurse (2006) also judges this to be the case in his discussion of connections between morphological focus markers and non-past tense (and aspect) markers. Nurse expands on Güldemann (2003) to give a possible historical pathway:

(68) (PRAGMATIC) FOCUS > (ASPECTUAL) PROGRESSIVE > (TENSE) PRESENT > NON-PAST/FUTURE

For example, non-past /a/, which marks focus in a few languages and disjunctive (focus-marking) ra/la, which mark non-past tense in some languages, may all be related to a historical focus marker that may even be “pushed back” to Proto-Bantu. Likewise, in some languages, a ni- marker indicates focus. In a number of closely related languages, ni- marks progressive aspect. This morpheme, originally a copula, may be following a similar grammaticalization path (Nurse 2006:197).

In contrast, Traugott (1989, 1999, 2003, 2004, etc.; also Heine 2003, inter alia) argues that much grammaticalization actually involves PRAGMATICIZATION, rather than loss of pragmatic force. She notes that more recent cognitive- and metaphor-based studies have shown that grammaticalization involves predictable semantic changes (see e.g. Heine 1991:48) which, while losing semantic SPECIFICITY, do not lose semantic COMPLEXITY: for example, a deontic “sense of obligation” is not lost in the shift from deontic to epistemic modal meaning; rather it is “simply transferred to another world” (Traugott 2003:632). In addition, as Traugott has previously argued (e.g. Traugott 1982, cited in Traugott 2004), much grammaticalization actually involves pragmatic strengthening through SUBJECTIFICATION, i.e. a shift from propositional meaning to an expression of speaker attitude (Traugott 2003). Subjectification, claims Traugott, eventually leads to INTERSUBJECTIFICATION, which additionally takes into account the supposed beliefs and attitudes of the hearer (Traugott 2004).

Traugott claims that meanings tend to become more situation-internal, subjective, and evaluative – PROPOSITIONAL > (TEXTUAL / EXPRESSIVE) (Traugott 1989:31). Such changes cannot be accounted for simply by domain expansion, weakening (e.g. semantic bleaching), or metaphoric processes. Rather, there is a pragmatic strengthening process involving the conventionalization of conversational implicatures (Traugott 1989, etc.). While conventionalizing implicatures creates regular semantic meaning, it does not necessarily remove pragmatic force.

Traugott demonstrates her claims using English modal auxiliaries, speech act verbs, modal adverbs such as ‘possibly’ and ‘evidently’ (Traugott 1989), conditionals like ‘as’ / ‘so long as’, which developed from spatial/temporal measures (Traugott 1999), discourse markers like ‘indeed’ and anyway (NOMINAL COMPLEX > DISCOURSE MARKER), and clause connectives like ‘instead of’, also developed from a nominal complex (Traugott 2003).

Traugott’s claims about pragmatic strengthening are made primarily for “early stages” of grammaticalization (Traugott 2003:633). Heine et. al (1991) concur, proposing a “more comprehensive chain” of grammaticalization in which pragmatic meaning is gained and then lost. Example (69) shows this chain, using Flesichman’s (1989) work with “go-futures” as an illustration:

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18 Sweetser (1990, cited in Traugott 2003) also deals with this shift, and will be included in future reading.
However, Traugott’s observations do not preclude the possibility that pragmaticization operates at any stage, even – perhaps especially – with markers of aspect and tense. TA markers commonly develop uses beyond indicating temporal relations. Fleischman (1989), for example, cites numerous examples of the extension of temporal distance expression to more pragmatic, information-structuring functions. These are described in section 3.2 above.

Based on such examples, I will argue that while tense and aspect grammaticalization moves in the direction of DISCOURSE MARKER > ASPECT > TENSE, it seems safe to say that pragmatic functions that serve to structure information in its broader sense, as discussed in section 1.3, may develop at any stage. In the next section, after briefly describing motivations for the study of verbal pragmatics in Bantu languages, I discuss how tense and aspect markers relate to information structure in several Bantu languages, with attention to grammaticalization processes where possible.

5. INFORMATION STRUCTURE AND BANTU TAM

5.1. INTRODUCTION: TAM AND THE BANTU VERB

Bantu languages provide a near-ideal source for studies – both synchronic and historically based – of tense, aspect, and mood, their grammaticalization, and their pragmatics. They have extremely complex and nuanced systems for marking tense and aspect distinctions, leading Dahl to characterize them as having “the most complex TMA systems in general” (1985:185). Some of the complexity is evident in examples throughout this paper, which show, for example, multiple degrees of past and future reference. Nurse lists other Bantu “innovations”, such as the itive (see section 4.2.2), multiple negative patterns, a disjunctive/conjunctive focus opposition, a persistive (‘still’) aspect, and narrative tense (2008:20-25).

Also, the approximately 550 Bantu varieties spoken today (Maho 2003 in Nurse 2008:2) are both sufficiently similar and sufficiently different to make comparison valuable. For example, most have approximately the same aspect “set”, including “perfective, imperfective, progressive, habitual, persistive, and anterior (perfect)” (Nurse 2008:24), but they are often marked quite differently. At the same time, Bantu languages are changing and diverging rapidly: according to Nurse, “Romance changes pale in comparison with the changes within Bantu” (2008:25).

Despite their great potential, Bantu TAM systems remain grossly understudied within linguists. With a few notable examples (two of which are discussed below), grammars of Bantu languages give very little information on the actual semantics of tense, aspect, and mood markers, and their contextual uses, instead offering vague labels and imprecise English translations. In the next section, I give several examples of Bantu tense and aspect forms with uses that clearly demand more careful and nuanced study than basic sentence elicitation and translation. These examples demonstrate the crucial connection between information structure and TAM marking.

I first summarize some results from my work with Totela (K.41), a highly endangered language of Zambia and Namibia. Totela provides striking evidence for the strengthening of information-structuring roles in the diachronic development of tense and aspect.
Second, I discuss Seidel’s (2008) presentation of the anterior (tense/)aspects in Yeyi (R.41), which it provides a compelling argument for the primacy of information structuring in TAM functions. The role of Yeyi anteriors differs significantly from that of the Totela -ite anterior, but both can best be analyzed in terms of their information-structural effects.

Third, I review Fleisch’s (2000) presentation of “present perfective” aspectual marking in Lucazi (K.31), which seems to call for an analysis as an “associative” marker in the sense of Botne and Kershner (2008).

For the most part, I follow the authors with regard to glossing, translations, and statements of the pragmatic and semantic values of the TAM markers under examination. Occasionally, when I feel confident enough to do so, I slightly modify glosses for the sake of consistency or clarity, without changing the authors’ meaning.

5.1.1. Relevance and the -ite Marker in Totela (Crane 2008)\(^\text{19}\)

In Crane (2008), I discuss the seemingly peculiar temporal behavior of Totela’s -ite marker, a suffix that likely developed from a Proto-Bantu anterior marker (PB *-ide, -ile or similar reflex in most languages; see e.g. Nurse 2008). Verbs with -ite in Totela can have past, resultative, or progressive interpretations, and the temporal construal cannot be completely explained by situation type. I argue that -ite carries a relevance presupposition. Use of -ite introduces a state that is associated with the grammatical subject, contingent upon the situation described by the -ite-suffixed verb, and relevant to the discourse topic in general. Hearers are expected to work out the relation contextually.\(^\text{20}\)

Temporal interpretations follow from -ite’s primarily information-structuring role, based on the verb’s event structure and meaning: whether the situation is judged to be prior to or concurrent with Topic Time is predictable according to the speaker’s judgment of the relevance of “subintervals” of the verb’s event structure.

Totela’s -ite marker thus seems to be a somewhat extreme case of pragmaticization, in which information-structuring functions supercede temporal requirements. Below, I give a brief introduction to -ite’s uses and interpretations, along with evidence for information structure as its primary function.

The -ite suffix has a stative or resultative reading with many predicates:

\[
\begin{align*}
(70) & \text{ ndi-li-bw-ene} & \text{stative} \\
& 1SG-BE-SEE-ITE & \text{‘I see’ (Crane 2008:2, ex 1)} \\
(71) & \text{ ndi-li-zim-ene} & \text{resultative (stative)} \\
& 1SG-BE-STAND.UP-ITE & \text{‘I am standing’ (Crane 2008:2, ex 2)}
\end{align*}
\]

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\(^{19}\) This section summarizes and expands on Crane 2008, an ongoing study; most examples appear in Crane 2008, which can be consulted for a more thorough exposition of -ite’s uses and possible historical development.

\(^{20}\) See also Portner’s 2003 analysis of relevance and the English Perfect.
With many predicates, however, -ite has progressive semantics:

(73) ndi-li-yend-ite
1SG-BE-WALK-ITE
'I am walking’ (Crane 2008:2, ex 4)

(74) ndi-li-neng-ite
1SG-BE-DANCE-ITE
'I am dancing’ (Crane 2008:2, ex 5)

Evidence for -ite’s relevance presupposition can be found in its distribution – it appears far less frequently with (atelic) activity verbs that are not generally associated with a relevant state, such as ‘write’. However, it is common with the passive of ‘write’, as in example (75), which was given in an interview to explain Totela’s low prestige in Zambia.

(75) ta-chi-n’ol-et-w-e mwimbuka
NEG-7-WRITE-ITE-PASS-ITE IN.BOOKS
‘it’s not written in books’ (Crane 2008:23, ex 30)

It also appears occasionally in activity predicates that do not generally have an associated state, if the state of being (or having been) engaged in that activity is of particular relevance within the discourse context. (76) was volunteered in response to the Dahl context, “What did your brother say when you asked him if he was busy?” (Dahl 1985, Q156). In this case, the activity is relevant to explaining the busy state of the subject. (77) shows the unmarked progressive construction that would be used in cases where no such context is given:

(76) na-ba-ti ye ka-ba-bez-ite zipula
PREHOD.PFV-3PL-SAY21 THAT IPFV.PST-3PL-CARVE-ITE 10.STOOL
‘he said that he was carving stools’ (Crane 2008:24, ex 31,based Dahl 1985 Q156)

(77) ka-ba-kwesi ba-bez-a zipula
IPFV.PST-3PL-HAVE(GRAB,ITE) 3PL-CARVE-FV 10.STOOL
‘he was carving stools’

Further evidence is seen in the contrast found with inchoative verbs (‘become angry’, ‘become tired’, etc), which have a stative reading with both -ite and the hodiernal past. When asked about the difference, speakers consistently introduced some kind of contextual importance for the verbs with -ite, such as ‘I am so tired that I am lying here on the ground and I won’t be able to get up and work for a long time’.

Finally, some predicates have more than one possible temporal interpretation. The sentence in (78), when presented without further context, was declared by some speakers to represent an action that is ongoing at the time of utterance. At least one speaker, however, offered a past tense

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21 3PL (Bantu noun class 2) is used with singular referents to indicate respect.
interpretation of the sentence, claiming that it could be uttered by a speaker who had been dancing hard all night long and was utterly exhausted by the experience.22

(78) ndi-li-neng-\textit{ete}
\textit{1SG-BE-DANCE-ITE}

‘I am dancing (progressive)/I (have / “am”) danced (resultative)’

Because \textit{-ite}’s temporal construal seems to be only derivable based on relevance, I argue that it is a case of an information-structuring function’s radical overtake of a temporal function. A possible pathway of \textit{-ite}’s pragmatic extension can be seen in its changing acceptance and uses by speakers with various levels of conservativeness. Older, Zambian Totela speakers are generally more conservative in their use of \textit{-ite}; the speakers who use and accept \textit{-ite} most freely appear to be young Namibians. It seems plausible that \textit{-ite} at one time had anterior semantics with non-stative verbs, and (resultative) meaning with statives, as is common in Bantu (see e.g. Nurse 2006). The general progressive use of \textit{-ite} may have subsequently developed after being introduced for the more constrained domain of motion verbs. This possible expansion of usage domains is schematized in the table in (79).

(79) Speaker use of \textit{-ite} with various meanings and situation types

<table>
<thead>
<tr>
<th></th>
<th>Zambian Speakers: Conservative</th>
<th>Zambian Speakers: Less Conservative</th>
<th>Namibian Speakers: Conservative</th>
<th>Namibian Speakers: Less Conservative</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textit{-ite} as resultative, esp. with inchoative verbs (e.g. become happy, hide, become fat)</td>
<td><img src="Symbol1" alt="Symbol" /></td>
<td><img src="Symbol2" alt="Symbol" /></td>
<td><img src="Symbol3" alt="Symbol" /></td>
<td><img src="Symbol4" alt="Symbol" /></td>
</tr>
<tr>
<td>\textit{-ite} as present with statives (e.g. bear, feel)</td>
<td><img src="Symbol5" alt="Symbol" /></td>
<td><img src="Symbol6" alt="Symbol" /></td>
<td><img src="Symbol7" alt="Symbol" /></td>
<td><img src="Symbol8" alt="Symbol" /></td>
</tr>
<tr>
<td>\textit{-ite} as progressive with motion/path verbs (e.g. walk, come)</td>
<td><img src="Symbol9" alt="Symbol" /></td>
<td><img src="Symbol10" alt="Symbol" /></td>
<td><img src="Symbol11" alt="Symbol" /></td>
<td><img src="Symbol12" alt="Symbol" /></td>
</tr>
<tr>
<td>\textit{-ite} as progressive with other verbs (e.g. dance, carve)</td>
<td><img src="Symbol13" alt="Symbol" /></td>
<td><img src="Symbol14" alt="Symbol" /></td>
<td><img src="Symbol15" alt="Symbol" /></td>
<td><img src="Symbol16" alt="Symbol" /></td>
</tr>
</tbody>
</table>

22 It is also worthy of note that many speakers do not accept the \textit{-ite} form in sentences like the one in (78) when presented with no context. The same speakers, however, may use such forms in everyday discourse. See Crane 2008 and the following discussion for impressions about synchronic grammaticalization and pragmatic extension of \textit{-ite}.

23 For example, \textit{-ite} occurs often in verbs describing path such as \textit{come} and \textit{pass} but less often with \textit{walk} (\textit{-yenda}, which also means simply ‘go’) and \textit{run} which imply not only a path but also a manner of motion.

24 The distribution appears to be similar to that described in footnote 23; use of \textit{-ite} for manner of motion verbs may be more common than in Zambia, but the corpora examined do not show this conclusively.
In its relative temporal freedom, the Totela -ite suffix provides a striking example of the possibility that pragmatic, information structuring functions can supercede strict temporal functions in aspectual markers.

5.1.2. YEI ANTERIORS (SEIDEL 2008)

Yeyi (Guthrie classification R.41), a Bantu language spoken in the Caprivi Strip in Namibia and Botswana’s Ngamiland District, has two anterior aspects. One is associated with HO DIERNAL situations (situations occurring within the most recent 24 hours); the other is a PRE-HODIERNAL aspect. Although they follow the expected grammaticalization pattern of ASPECT > TENSE (see e.g. Fleishman 1983, Bybee et al 1994, Heine et al 1991, and many others), each clearly has pragmatic, information-structuring roles. Specifically, the prehodiernal anterior has dissociative functions, while the hodiernal is associative in nature (cf. Botne and Kershner 2008). Seidel’s work demonstrates that anterior aspects – and others in Yeyi – can only be completely understood when their discourse functions are considered.

For each aspect, I give a brief introduction to its general functions and temporal effects, before discussing its information-structuring role, which I, like Seidel, will argue is primary to its meaning. Throughout this discussion, Yeyi examples are followed by the example number and page number as they are taken from Seidel (2008). Glosses have in some cases been slightly modified to conform to this paper’s conventions.

5.1.2.1. HO DIERNAL ANTERIOR

The Yeyi hodiernal anterior (henceforth also H-ANTERIOR) is marked by a null slot where the TAM marker usually appears, a subject marker ending in a, and final vowel harmony (glossed as FVH). Its use has developed beyond the canonical functions of anterior aspect, i.e. a past situation with current relevance (or relevance at the reference time). It is a “truly relative” tense in that it can be used to express anteriority to past, present, and future situations, including – in the most common case – the time of utterance (Seidel 2008: 298). As predicted by Bybee et al (1994:105), the H-anterior appears to be grammaticalizing to a simple (hodiernal) past; in many cases “leav[ing] the question of posterior relevance open for the context to differentiate” (291). Also, unlike the hodiernal imperfective, the H-anterior carries a clear implication of completion (298). Hodiernality overrides the expression of present relevance, so that situations that occurred more than 24 hours prior to utterance time, even if they have a clear resultant state, often cannot felicitously combine with this aspect, as shown in (80). The hodiernality is also seen in narratives, when topic time shifts to within 24 hours of the utterance time. Still, unlike the perfective, it cannot be used in consecutive taxis.

(80) #Ma-f-u ku-dzw-a ma-yiba aa-biri i=nga-man-a
3SG-[ANT]-DIE-FVH INF-COME.OUT.FV6-DAY 6-TWO SEL=6-[ANT]-FINISH-FV
(Intended) ‘He has been dead for two days’ (Seidel 2008:302, ex 844)

In some cases, however, information-structuring concerns supercede this constraint, as will be discussed below.

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25 Seidel’s research with Yeyi was completed before the full version of Botne and Kershner’s (2008) paper was available, but Seidel found its framework to be the best fit for his analysis.

26 A rarely used hodiernal past perfective “explicitly severs any posterior relevance”.

27 Yeyi, like many Bantu languages, has special “narrative tenses” that are generally employed for this function.
As do many Bantu anteriors, the H-anterior in Yeyi interacts with situation type in sometimes subtle ways, as detailed in table (81) below. Verb types are given as described by Seidel (2008:270-277) with approximately corresponding Smith-ian situation aspects following in parentheses, where appropriate; the correspondence is sometimes very rough, as Seidel's system is a refinement of traditional aspectual classes.

(81) Lexical aspect and anterior aspect in Yeyi

<table>
<thead>
<tr>
<th>SITUATION TYPE</th>
<th>YEYI INTERPRETATION</th>
<th>EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Durative: instantaneous</strong> (semelfactive) e.g. ‘clap’</td>
<td><strong>Past</strong></td>
<td>Ing’ombe yo’o ya-rah-a 9.CATTLE 9.DEMII 9-[ANT-]-KICK-FV ‘that cow <em>(just)</em> kicked’ (Seidel 2008:270, ex 730)</td>
</tr>
<tr>
<td><strong>Durative: extended</strong> (activity) e.g. ‘walk, weave’</td>
<td><strong>Past</strong></td>
<td>Umutu yo’o ma-ruk-u 1.PERSON 1.DEMII 3SG-[ANT-]WEAVE-FVH ‘that person wove’ (Seidel 2008:270, ex 729)</td>
</tr>
<tr>
<td><strong>Change-of-state:</strong> Punctive achievement (egressive?) e.g. ‘come’, ‘forget’</td>
<td><strong>Past</strong></td>
<td>Ma-y-a sha=ten minutes 3SG-[ANT-]COME-FV INST=10 MINUTES ‘he arrived in ten minutes’ (i.e. it took him ten minutes to arrive (Seidel 2008:273, ex 742)</td>
</tr>
<tr>
<td><strong>Change-of-state:</strong> Termination transitional e.g. ‘defeat’, ‘heal’</td>
<td><strong>Process completed and resultant state entered</strong></td>
<td>Ma-f-u… 3SG-[ANT-]DIE-FVH ‘he died…’ (Seidel 2008:302, ex 844)</td>
</tr>
<tr>
<td><strong>Change-of-state:</strong> Resultative e.g. ‘get wet’, ‘fall in love’</td>
<td><strong>Present</strong></td>
<td>Ma-mu-sun-a 3SG-[ANT-]3SG.Om-fall.in.love-FV ‘he loves her’ (Seidel 2008:275, ex 753)</td>
</tr>
<tr>
<td><strong>Change-of-state:</strong> Inceptive achievement e.g. ‘rot’</td>
<td><strong>Process started and ongoing</strong></td>
<td>Ma-nun-u i-viki yi-ni 3SG-[ANT-]GET.FAT-FVH 9A-WEEK 9.DEMI ‘he has started getting fat this week [and is still getting fat]’ (Seidel 2008:302, ex 839)</td>
</tr>
</tbody>
</table>

28 Or, with some punctual verbs, an iterative reading is possible (Seidel 2008:302-303). Seidel also notes that the implicature of continuing situation is cancelable in the case of durative verbs, but not for terminative transitionals, i.e. ‘He wove[ANT] a mat, but then it burned’ but ‘#He healed, but now he is sick again’ (Seidel 2008:304-305).

29 Anterior plus “inceptive achievement” verbs can also indicate “a process that has come to a halt and the person has entered a stative situation described by the verb” (Seidel 2008:302).
However, the communicative function of the Yeyi anterior is far more complex than the simple interaction between Aktionsart and grammatical aspect outlined in the above table. Despite its simple past tense function, information structure remains the key to analyzing the hodiernal anterior in Yeyi.

One piece of evidence for this is that for a small number of verbs, the resultative sense is still available, without hodiernality distinctions, as exemplified in (82).

(82) Ma-y-a i-viki ya-man-a
3SG-[ANT-]COME-FV 9A-WEEK 9-[ANT-]FINISH-FV
‘he came last week (and is still here)’ (Seidel 2008:304, ex 853)

Such uses have an epistemic modal assertion of certainty, which Seidel labels “residual”, although he notes his uncertainty as to whether it is a residual or a “newly associated connotation” (2008:305). That is, a person uttering (82) must be absolutely certain that the result state still obtains – in this case, that the person is still here, “preferably in sight at the point of utterance”. Similarly, the H-anterior plus ‘become fat’ could not be felicitously used with a new acquaintance, since the speaker has no basis for comparison with past states (Seidel 2008:306).

The H-anterior also has interesting, and somewhat unexpected, interactions with other TAMs. With the auxiliary -tikya (‘be about to’) and the subjunctive, it implies that the subject was about to do something, but that the event was not carried out; “context are expected to explain why an event did not come to pass” (Seidel 2008:354). This is shown in (83). It also has complex interactions with the future subjunctives, which are too complex to discuss here (but see Seidel 2008:355-356 for a few examples).

(83) Ma-tikya a-bberek-e mw-i-library, a-ма-ti-mashir-a.
3SG-[ANT-AUX] 3SG-WORK-FV.SUBJ 18.9A-LIBRARY CONS-3SGSM-PRES-GET.SICK-FV
‘he nearly worked in the library today, but he got sick’ (Seidel 2008:354, ex 1025)

Thus, even with the H-anterior’s apparent shift from aspect to tense in mind, it is difficult to categorize its function, which clearly has pragmatic, as well as temporal, components even as it seems to lose its “current relevance” requirement. It is only with a look to its occurrences in narratives and other discourse that the H-anterior’s “basic” function can be discovered.

In non-narrative uses, the H-anterior has the anterior/simple past interpretations – and (seeming) idiosyncrasies – detailed above. It is preferred to other TAs in everyday discourse, and – unlike narrative tenses – does not denote event sequentality in consecutive sentences, although the events may be given sequentially. In quoted speech in narratives, it has these functions, as well.

In hodiernal narratives, the H-anterior is used to introduce episodes, setting the “reference frame” as including the utterance time (“P-Domain” in Botne and Kershner 2008). After an episode has been opened by the H-anterior, other TAs are used, “latch[ing] on to the time frame introduced by the anterior, and only needing to specify time as relative to it and other events (Seidel 2008:377).

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30 Even recalling that ‘You are so fat!’ is often intended as a complement in this area
In prehodiernal narratives, H-anterior forms have at least three functions:

(a) “relate background events that happened during the current episode” (Seidel 2008:375)

The H-anterior can be used to depict an event that is temporally prior to the event most recently presented in the narrative, (probably) relevant to the current narrative, and new to the hearer (375). This function is similar to its uses in everyday non-narrative discourse.

(b) “indicate episode ends” (Seidel 2008:375)

This anterior can have “text demarcative functions”, marking the end of a “cohesive sequence of events” in a portion of the narrative (376). When occurring at the end of an episode, Seidel posits, it indicates that the ending episode and the subsequent one are belong to the same larger chunk of the story being told (379).

(c) “relate peak events of an episode” (Seidel 2008:375)

In this function, the H-anterior is a dramatizing “stylistic device”. For example, Seidel describes its repeated use in the climax of a story as creating a division of one narrative “into little units creating a staccato effect that slowly builds up to the final killing [of the matrimonially difficult woman]” (Seidel 2008:377).

These narrative structuring roles, along with its general discourse functions, lead Seidel to propose ” (following Botne and Kershner 2008) that the H-anterior involves “an associative tenor relationship. That is, the H-anterior associates the situation described – either temporally or in terms of continued relevance – with the time of utterance, or to the (prehodiernal) narrative time frame (Seidel 2008:378-379).

Further evidence for the H-anterior’s ASSOCIATIVE role is seen in its interaction with the “distal” -kar- infix. The distal marker dissociates, or severs, a situation from the here-and-now by indicating that the situation discussed took place in another place (with special narrative uses; see Seidel 2008:344-345). Recall that the use of the H-anterior sometimes has an epistemic modal/evidential component, requiring speaker certainty. When combined with -kar-, the H-anterior loses its final vowel harmony as well as this evidential requirement: the situation is no longer asserted to have come to its completion.

I hope that the discussion above shows that – though losing its relevance requirement, – the Yeyi H-anterior, in its associative role, still has strong (and perhaps strengthening) information structuring properties in narration and in conveying speaker attitude. This is characteristic of the grammatical pathway outlined in e.g. Traugott (1989) from REFERENTIAL > TEXTUAL/EXPRESSIVE, as discussed in section 4.3 above. The extension seems to be along the lines of TEMPORAL NEARNESS > PSYCHOLOGICAL NEARNESS.

I now turn to the Yeyi prehodiernal anterior, which also has information structure as a primary function. The discussion will be somewhat briefer, as much of the essential background has already been laid out in the discussion of the hodiernal anterior.
5.1.2.2. Prehodiernal anterior

Like the H-anterior, the prehodiernal anterior (henceforth also P-anterior) in Yeyi is grammaticalizing to a general prehodiernal past, though it has no implication of consecutiveness in series of sentences. It also interacts with lexical situation type, giving a stative-type meaning for change-of-state verbs. Unlike the H-anterior, it is not true relative tense, and cannot be used to mark anteriority to a future situation, even if the P-anterior-marked verb refers to a situation occurring more than 24 hours before the future reference point.

Its discourse functions, however, differ in many ways from those of the H-anterior, prompting Seidel to analyze it as a marker of dissociation. Seidel identifies four key roles of the P-anterior in narrative (2008:380-383).

(a) set the narrative time frame

Like the H-anterior does with narratives taking place within the 24-hour period including utterance time, the P-anterior sets the basic time frame of a narrative, within which other TAs mark relative time.

(b) recount events that occurred (and reached completion) before the events currently salient in the narrative

Seidel notes that these events, in many cases occurring earlier in the narrative, are “recounted as a topical reminder in resumptive fashion” (2008: 380). This use may have something to do with the relevance function of the anterior. Seidel posits that the use of the P-anterior also “dissociates the event from the current frame of reference” (2008:385).

(c) structure the text

The P-anterior, like the H-anterior, separates narrative chunks. It is used to delineate larger sections of the narrative than those marked by the H-anterior, indicating “major episodes or breaks” in the narrative, e.g. “primary protagonist change”. Seidel argues that this is dissociative in that “a new reference frame is opened for a new series of events that might only be loosely connected plotwise to the preceding major episode” (2008:385).

(d) introduce important episodes

This use relates both to (b) and (c) above. The resumptive use of the P-anterior may be found at the beginning of major episodes, as well, summarizing the action before it occurs. Seidel analyzes this as a stylistic device, breaking the episode from previous events and emphasizing its importance. This use often accompanies a “major shift in narrative style”, as well (Seidel 2008:382).

Thus, it appears that if the H-anterior indicates a kind of psychological nearness, the P-anterior creates psychological distance from the situation described. This is consonant with its temporal function of indicating more distant past.

5.1.3. Lucazi Perfectives (Fleisch 2000)

Fleisch’s (2000) grammar of Lucazi (K.13), a Bantu language of Angola, western Zambia, and northern Namibia, gives an extensive overview of the complex TAM system of the language, focusing on forms’ changing and overlapping uses in everyday discourse and in texts, and on their complicated interactions with situation types.
Lucazi has two PERFECTIVE forms, with similar (and sometimes identical) morphology. One represents a PAST PERFECTIVE, which has historical origins in a Bantu anterior/perfect and still retains, in some contexts, a sense of present relevance (Fleisch 2000:285). Its uses and text organizing functions are fascinating and instructive, but will not be repeated here in detail because of the heavy focus of the preceding discussion on synchronic reflexes of Proto-Bantu anteriors. Rather, I will briefly present its form so that it may be compared with the second kind of perfective (the present perfective). In its most basic use with activity verbs, the past perfective portrays an action completed in the past. (The “residual” connotations of posterior relevance are discussed in Fleisch 2000:160-161.)

(84) nj-à-lím-à
1SG-PFV-CULTIVATE-FV
‘I cultivated’ (Fleisch 2000:160)

The PRESENT PERFECTIVE is also interesting, and might be analyzed as having associative function; in this case, the situation is immediately associated to the moment of utterance. Formally, it is almost identical to the past perfective, except that it has final vowel harmony (which may be overridden for specific verbs or by the presence of other morphemes such as verbal extensions). It is used, as predicted by Dahl (1985:81) and Bybee (1994:236, both cited in Fleisch 2000:163), with performative verbs, as shown in (85), and as a “reportative present” (Fleisch 2000:163).

(85) nji-á-mu-luk-u ou mu-ana li-zina li-á-eni João
1SG-PRES.PFV-3SG.COM-NAME-FVH DEM. 1-CHILD 5-NAME 5-POS-3SG JOÃO
‘I name this child to the name John’ (Fleisch 2000:163, ex 138)

The associative function is seen clearly when the form is used in narratives. The following example is from the first sentence of a story, referencing back to a set of animal characters from a previous story:

(86) vi-ze vi-nzunda vi-mu-a-mon-ô va-li-kung-ulul-ÌLe
8-DEM 8-FROG 8-REL-2PL-PRES.PFV-SEE-FVH 2-REFL-MEET-REV/INTENS-PAST
‘these frogs that you (pl.) have just/already seen [=which are known to the audience from the foregoing story] gathered (once again)’

In this way, the speaker recalls to the audience their knowledge of the frogs and represents it as being of immediate relevance to the present discourse.

The present perfective is also sometimes used with non-performatives in non-narrative contexts “to describe an action as having taken place immediately prior to the statement although often, in fact, it may not even have actually taken place” (Fleisch 2000:256). Such uses (given in Fleisch without interlinear glosses) are illustrated in (87):

31 glossed as ‘TAM’ by Fleisch
(87)

(87a) njàyì
'I am gone, I am on my way’ (lit. ‘I go-PRES.PFV’ - TMC)
(Fleisch 2000:256, ex 232a)

(87b) njáhìlùkà
'I will be back immediately’ (lit. ‘I return(?)-PRES.PFV’ - TMC)
(Fleisch 2000:256, ex 232b)

Fleisch takes this as evidence that performatives such as the one in (85) would better be translated with the English present perfect, making its translation “(herewith) I have baptized him [=his baptism is completed]” (Fleisch 2000:257). Translation issues aside, the examples used with immediate past meaning in (87) fit nicely into the associative information structuring analysis, effectively informing the hearer that the action is so close to the present moment that it might as well be completed.32

6. Conclusion

The examples discussed in section 5 and throughout this paper illustrate the need for attention to pragmatic and information-structural properties in the analysis of tense and aspect. More strongly stated, tense and aspect often – if not always – cannot be understood apart from their information-structuring functions, which, as in the case of the -ite marker in Totela, may at times entirely trump temporal semantics. A framework such as Botne and Kershner’s (2008) is therefore useful for building a unified synchronic analysis. However, investigations of tense and aspect must also take grammaticalization processes into account, since the synchronic functions of a particular marker are only a snapshot from its development over time, and the nature and order of changes may provide insight into the synchronic system, as well as informing the study of language change in general. Grammaticalization does not involve a mere loss of meaning, but often means a gain in pragmatic, information-structuring force.

6.1. Towards a Methodology

The above conclusions must be kept in mind in studies of Bantu tense and aspect systems. The practical consequence is that traditional question-and-answer elicitation sessions are insufficient if an account is to approach descriptive – to say nothing of explanatory – adequacy.

Seidel outlines a “recursive” methodology involving elicitation, text collection and analysis, and further direct elicitation questioning based on insights and puzzles that arise in examination of the collected texts (Seidel 2008:365).

Seidel’s methodology may be enriched by full immersion in the language under study, which will allow for attention to uses of TAM forms in everyday discourse. Elicitation may yield deeper insights – if also more complexity – when conducted with a variety of speakers, especially if the

32 Botne and Kershner (2008:187-197), which I came across after writing this section (but after an introduction to their basic ideas, given in Seidel 2008), also deal with Fleisch’s data within their framework, developing a somewhat similar analysis that is component-based and concerns a larger set of TA markers) within their framework.
speakers are of different ages, which may give a picture of grammaticalization-in-progress. A broader perspective on grammaticalization should also be gained through examination of neighboring languages and Bantu historical and comparative studies in general.

Elicitation should involve, as Seidel suggests, more than basic translation. Examples can be discussed in their context, and also tested outside of context. Speakers judgments of context-free examples may be misleading: Totela speakers, for example, often rejected -ite constructions they themselves previously or subsequently used; this is also quite clearly the case with many English grammaticality judgments, including my own. At the same time, context-free judgments and corresponding explanations can provide crucial insights as speakers attempt to fit information-structuring functions into an unnatural, context-free discourse situation. This was the case with -ite: speakers consistently invented contexts that would make the use of an -ite form meaningful and felicitous.

In my dissertation research, these preliminary methodological ideas will be refined to create a workable tense/aspect research model that investigates temporal functions of TA forms in the context of their more general information-structuring roles, both from a synchronic and a historical perspective.