and shared by the discourse participants. It is a common feature of this approach to require that theme be given or known information. This approach differs from *aboutness* largely in terms of its greater emphasis on the dynamic nature of discourse, on its processing over time or its flow in time (Chafe, 1994).

This approach is reflected in the early work of Weil (1887) and very early formulations of Prague School thinking (Mathesius, 1929). More recent work employing this view includes Chafe (1994) and MacWhinney (1977).

Theme as Center of Attention There is yet a third view of theme which ties the clause level theme or topic to some notion of attention. Early work in this area observes that certain concepts come to mind first in the production of utterances, and it is this coming into consciousness that defines the theme. Thus, van der Gabelenz (discussed in Gundel, 1974: 24) distinguishes psychological subject, 'the idea which appears first in the consciousness of the speaker . . . what makes him think and what he wants the hearer to think of', from psychological predicate, 'that which is joined to the psychological subject'. There is also important work in psycholinguistics which takes this view (Prentice, 1967; Sridhar, 1988; Tannenbaum and Williams, 1968). More recently, some linguists have examined how cognitive theories of attention are tied to the classical notions of theme or topic (Tomlin, 1983; 1995; 1997).

## Historical Foundations of Theme and Topic

Historically, theoretical ideas of theme and topic, at least as they affect contemporary scholarship, have emerged from Prague School research. Similar ideas are taken up by Halliday, Dik, and an array of researchers in North America.

Prague School Formulations of Theme and Topic For contemporary work in discourse the most important source of ideas for theme and topic has been the Prague School (Daneš, 1974; Firbas, 1964b; 1974). Its precursor, Henri Weil, merits mention at the outset, for Weil published an early (1844) treatise on comparative word order studies in which he attributed the flexible word orders of Latin and ancient Greek to a pragmatic notion he called 'the march of ideas' (Weil, 1887). In Super's (1887) translation, Weil observes that it is important for the speaker to place the listener at the same point of view as the speaker, that this can be done by providing a word of introduction preceding the remark intended about it. The interlocutors can then lean on something present and known in order to reach out to something less present and unknown. Weil treats the central notion of his 'march of ideas' as a point of departure, an initial notion on which the two intelligences meet.

The Prague School founder, Vilem Mathesius, was much influenced by Weil, and Mathesius's treatment of theme remains seminal for the field.

For Mathesius (1929; 1939; 1975) the theme was the starting point of the utterance. It was information already known to both speaker and listener which served also as the point of departure for the sentence as a whole. In later formulations the theme (or foundation) was also something that is being spoken about in the sentence. Thus, in example (5), lines 3, 4, 5, 10, the information conveyed by the bold-faced NP is in each case the theme because it is known to both interlocutors and because it serves as the conceptual starting point against which other information is construed, what is called the *rheme* (or sometimes *core* for Mathesius in particular).

This basic view of theme is sustained in one or another formulation among Prague School researchers. So, for example, Travnicek (discussed in Firbas, 1964b) defines the theme as the sentence element that links up directly with the object of thought, proceeds from it, and opens the sentence thereby. Travnicek rejects the notion that theme must be known or given information. Beneš (also discussed in Firbas 1964b) distinguishes the basis of the sentence from the theme. The basis is the opening element of the sentence which links up the utterance with the context and the situation, selecting from various possible connections one that becomes their starting point, from which the further utterance unfolds. The theme, following Firbas, is the element with the lowest degree of communicative dynamism.

One important variation in this arena is found in work by Jan Firbas (1964a; 1964b; 1974; 1987a; 1987b; 1992). While other Prague School efforts pursued a bipartite treatment of the sentence into theme and rheme or topic and comment, Firbas considered the information in the utterance to contribute to its development continuously. He articulated a scalar idea of sentence information he called communicative dynamism (CD). Information in the utterance was seen to fall somewhere on a continuous scale of novelty, beginning with elements with the lowest CD and moving through the utterance to those of highest CD. Thematic elements are those with the lowest degree of CD.

Halliday and Systemic Grammar A second tradition of research on theme is found in Halliday's (1985) systemic grammar. Halliday (1967b; 1976) treats theme not as the starting point of the utterance but as the clausal element about which the remainder of the clause is predicated. Thus, in example (5) the elements identified as theme are the elements for which the remainder of the sentence provides elaborative predication. The difference in use between active and passive clauses in English (see Cumming and Ono, Chapter 4 in this volume, for more detail) is very much tied to whether it is the semantic agent or patient about which the remainder of the sentence is predicated.

Dik and Functional Grammar While most discussions of theme and topic select one of these terms as their clause level thematic notion, Dik's (1978) theory of functional grammar employs both. A given sentence is composed, in part, of a theme as well as a possible topic. For Dik, a theme is an extra-

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clausal element preposed to the clause itself, and designates the universe of discourse with respect to which subsequent predication is construed as relevant or connected. Dik's theme is well illustrated by preposed adverbials headed by  $As\ for$  in English:

(7) As for Professor Smith, she's always helpful to students.

The preposed adverbial is the theme in that it specifies the universe of discourse (*Professor Smith*) against which the predication is construed as relevant (always helpful to students).

Topic represents a different notion within functional grammar. A topic presents the entity about which the predicate predicates something in the given setting. Thus, the answer to the question in (8), being about John, begins with John as its topic.

(8) To whom did John give the book? JOHN gave the book to Mary. TOPIC FOCUS

It is possible to observe individual sentences with both theme and topic:

(9) As for sushi, my favorite is made with fresh tuna. THEME TOPIC

The preposed theme specifies the universe of discourse within which the predication is to be construed; the topic represents the particular entity the predication is about.

North American Traditions There is no established North American school for discourse studies analogous to the Prague School or systemic grammar or Dik's functional grammar. There are, however, a number of important lines of research dealing with theme (and topic). Gundel (1974; 1988a; 1988b) offered an early treatment of topic in which topic is defined in terms of aboutness. Chafe (1976; 1980a; 1994) approaches the problem through a notion of starting point, which he treats as the conceptual beginning of information flow in discourse. Lambrecht (1994) defines topic in terms of aboutness. Vallduvi (1992) develops a notion of topic similar to Reinhard's, incorporating ideas of aboutness with initial position. Torulin (1983; 1995; 1997) argues for a cognitive account of theme, tying classical notions of theme to attention and its dynamic employment during discourse production.

There are numerous other efforts of interest to students of discourse. These include Goodenough (1983), Hawkinson and Hyman (1974), Jones (1977), Keenan (1976) and Keenan and Schieffelin (1976), among others.

Multiple Uses of the Terms 'topic' and 'theme'

The expression 'topic' is used widely to capture ideas similar to clause level theme. A careful look at the literature reveals at least three distinct uses.

'Topic' as Thematic Element In some writing a clause level topic is identical to clause level theme, the two terms being used virtually synonymously. This can be found in many places (Dahl, 1969; 1974; Hajicovà, 1984; Sgall, 1987).

Topic' as a Composite Grammatical Unit In other work, the term topic is used to capture an extra-clausal adjunct generally preposed in the clause. In models of discourse which adopt this strategy a topic represents a composite between a pragmatic notion akin to theme and a structural reflex of that notion, typically but not always initial position. Thus, a topic can be distinguished from a theme or from a subject (which in such cases is treated as having a thematic component). Li and Thompson (1976) drew a distinction at one point between subject prominent and topic prominent languages, the latter characterized by topics which are defined as preposed and discourse central. More recently, Lambrecht (1981; 1987a; 1987b) describes a topic slot for French, this slot being located sentence initially but outside the core clause. In a similar vein, Dik and his colleagues also define a clause external unit, though they use the term 'theme' to describe shis unit.

There has even been some effort to capture the notion of topic within the configurational structures of government and binding theory and its predecessors (Chomsky, 1965; Aissen, 1992).

Topic' as Referent Perhaps the greatest departure from original Prague School senses of theme and topic is found in the literature of topic continuity (Givón, 1983; 1989). For Givón the notion of topic is tied to the tocessibility of a referent in a conceptual representation. The more accessible a referent is, the higher its degree of topicality. Since topicality is defined by a scale, all referential elements in the utterance in principle can easigned a topicality value of one kind or another. Thus, every referent to one degree or another is a topic.

## Discourse Level Theme (Global Theme)

To understand the problem of higher level or discourse level theme, we must distinguish between the centrality or significance of a referent globally and the aggregate propositional goal of a discourse or some major component of a discourse.

Generally, in a stretch of connected discourse, one referent emerges as central, or the one that the propositions in the discourse are about. This global significance of one referent affects choices made at the clause level; that is, the clause level theme is in some way a local reflection of some higher level unit of discourse — something like a paragraph or episode. Given two competing referents at the clause level, it seems natural that the local theme would be related to the same but more general or higher order theme. That is, if a given paragraph or episode is about Mary (and not

really about John), then clauses in that paragraph dealing with both Mary and John should tend to treat Mary as clause level theme because Mary contributes to better cohesion with the higher level episode or paragraph theme.

In much the same way as clause level matters are tied to higher level paragraphs or episodes, so, too, are these mid-level units connected to yelligher level structures. While the embedding of lower level units into higher ones is ultimately recursive, in most discourse studies one seldom looks beyond the three levels of organization and development: clause level or local: paragraph or episode; and overall text or discourse or slobar.

The term 'global theme' is also related to the notion of what the overall discourse is about. In this case, the global theme has the form of a proposition rather than a noun phrase (Jones, 1977; Keenan and Schieffelin, 1976; van Dijk, 1985). Although not as strong as the claims on local sentence level themes, there has been a recognition of the importance of global theme. As an illustration, consider the following passage (from van Dijk, 1985; 298):

(10) This morning I had a toothache. I went to the dentist. The dentist has a big car. The car was bought in New York. New York has had serious financial troubles.

Although each sentence is connected with the previous one by having a common referent, the passage as a whole lacks coherence, owing to the lack of a global theme. Rochester and Martin (1977) report that connected but incoherent discourse is characteristic of thought-disordered and schizophrenic patients.

Related to global theme is the notion of macrostructure formulated by van Dijk (1977; 1980; 1985). Macrostructure is the global semantic structure of a discourse and may be expressed by its title or headline or by summarizing sentences. Macrostructure propositions are derived by macrorules, that is, by eliminating those propositions which are not relevant for the interpretation of other propositions (deletion), by converting a series of specific propositions into a more general proposition (generalization) and by constructing a proposition from a number of propositions in the text (construction), and from activated world knowledge.

Work in the field of psycholinguistics has demonstrated that a well defined global theme facilitates text comprehension; it functions as an advance organizer (Frase, 1975), scaffolding (Anderson et al., 1978), or anchor point (Pichert and Anderson, 1977) by evoking a mental model (representation) in the comprehender. Such a representation might be called schema (Rumelhart, 1980), frame (Minsky, 1975), script (Schank and Abelson, 1977), or scenario (Sanford and Garrod, 1980). The fact that comprehenders construct discourse models as well as linguistic representations has been corroborated in a number of studies. In one of the most frequently cited experiments, Bransford and Johnson (1972) asked their subjects to listen to and later recall the following passage: