        Some of Professor Kenneth Pike's tagmemic theory is explained, and an attempt
to apply it in freshman English classes at the University of Michigan is described. Two
writing subjects (a concrete object and an abstraction) are examined from the
aspects of contrast; range of variation; and distribution with respect to class,
context, and matrix. The three-week experiment with tagmemic theory in freshman
English is briefly described, and its effectiveness is assessed. Remarks are offered
on the relative relevance of rhetoric and linguistics to composition classes. (AF)

Linguistic Theory as an Aid to Invention

HUBERT M. ENGLISH, JR.

ONE CANNOT WRITE "by" a linguistic theory as such, or at least one would not want to. The analogy of painting by numbers comes to mind: *by* suggests that the writer or painter is a mere mediator, not originator, that his contribution is only the mechanical execution of a design formed by someone else.

Nevertheless we recognize that some of the qualities of original composition can be systematically sought out. We learn to ask ourselves questions about the role or voice we want to assume for a particular piece; we develop our own lists of favorite *topoi* where we can usually find things to say; we contemplate our subject in relation to some larger design or framework of ideas—Aristotle's four causes, Hegel's thesis, antithesis, and synthesis. If linguistic theory can contribute to a systematic approach that will work for most students by reducing the amount of unproductive effort that goes into their papers, then writing "by" a linguistic theory makes good sense.

The ways in which such a contribution might be made, I believe, are two. The first is exemplified by the "slide rule" composition course developed recently at the University of Nebraska [See Margaret E. Ashida and Leslie T. Whipp, "A Slide-Rule Composition Course," *College English*, 25 (October, 1963), 18-22] in which students first work out detailed descriptions of the linguistic features of certain specimens of expert writing (e.g., counts of compound sentences and post-verb subordinate clauses, kinds of sentence openers, kinds of appositives, transitional devices), and

Mr. English is a member of the English Department, University of Michigan.

then attempt to incorporate these features in their own writing. The approach here is through form; the effort is directed at fostering imitation.

My subject, however, is the other way in which it seems to me that linguistic theory might contribute to the teaching of composition. Here the approach is through content and the effect is to foster invention.

Pretty clearly the difficulty of teaching invention is at the heart of the problem of teaching a student how to write. You can't do much about his unity, coherence, and emphasis if he has nothing to say. Too few papers present the teacher with real cerebration, that fundamental substance of thought that must be there before he can work effectively as critic and editor. Without it there is nothing much for him to do but to correct spelling and punctuation and to tell the student in a final comment that he failed to meet the assignment.

I want to make it clear that the order of thought I am remarking the absence of is relatively low, low enough to be within anybody's grasp. I am not concerned with a kind of thought that is foreign to the student's present knowledge and experience. His inability to write intelligently about collectivism or the Swedish cinema does not trouble me; that will presumably come in time. What does trouble me is the student who is unable to produce anything on a subject that I know he does know something about—an object before his eyes, a common word to be defined, a straight-forward essay that he has just read. Not subtle insights, keen sensitivity, stylistic refinement; just elementary evidence of a mind at work. It is at

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this level, I think, that linguistic theory—namely one branch of tagmemic theory as developed by Professor Kenneth Pike of the University of Michigan—can help a student order his thinking about a subject and get that thinking into writing. (See *CCC*, May, 1964, pp. 82-88).

Professor Pike's work with a great many languages over the years has led him to the idea that all language systems, despite an enormous variety of means, are designed to provide certain fundamental kinds of information about "units" (structural wholes at any level) within the system. Each unit, in other words, from the phoneme on up the grammatical hierarchy, becomes intelligible because the system of which it is a part fixes it for us with respect to certain concepts that are the same for all languages, even though two languages may have very different ways of providing the necessary information. Pike's analysis leads him to three such fundamental concepts: *contrast, range of variation,* and *distribution,* the last of which is subdivided into distribution with respect to class, distribution with respect to context, and distribution with respect to matrix. There is accordingly a total of five modes of knowledge, five aspects which, collectively, permit total apprehension of the linguistic unit. A chart showing the application of these five modes for a simple example—the phoneme /p/—is helpful (next page).

The application to the teaching of composition comes through a generalization that takes these ideas out of the realm of linguistics as such: these concepts turn up in all languages because they are fundamental categories of thought, basic modes through which the human mind apprehends reality. If the generalization holds, then one ought to be able to use these concepts, turned into appropriate questions, as tools for thinking systematically about any subject. If a student can master them

he need no longer sit staring at a blank page and waiting for the inspiration that never comes. He has an orderly method for canvassing his knowledge of a subject and—equally important—for finding out where that knowledge is incomplete. He can put to himself a set of questions which will give his mind something definite to operate upon. They will not do his thinking for him, but they will help him bring such knowledge as he has to the point of articulation. An examination of the subject from these five points of view is almost bound to turn up something worth saying in a paper. Here, let us say, is a thing (or event or idea) to be written about: How does it differ from other things more or less like it? In what ways could we alter it without changing it essentially? What could we substitute for it? In what sort of context—spatial, temporal, conceptual—does it characteristically occur? Can it be seen in some matrix that clarifies its relationship to things that resemble it?

Suppose we take two conceivable subjects for writing, one a concrete object (*divan*) and the other an abstraction (*democracy*), and run them through the five modes. The questions and answers under each mode are intended to suggest only a few of the many possibilities.

(1) *Contrast*

Why is a divan not a chair? (Seats more than one.) Why is a divan not a bed? (Structural differences. Primary purpose not for sleeping.)

Why is a democracy not a monarchy? (Limitation on terms of office. No provision for hereditary rule.) Why is a democracy not a plutocracy? (Franchise not dependent on financial status.)

(2) *Range of Variation*

Can we upholster our divan with elephant skin? (Yes, kind of material may be varied indefinitely.) Can we upholster it with nothing? (No, such a

ASPECT	INFORMATION YIELDED ABOUT UNIT	EXAMPLE			
Contrast	What it is not.	/p/, not /b/, etc.			
Range of Variation	How much change it can undergo without becoming something other than itself.	Allophones of /p/: *pit, tip,* etc.			
Distribution (Class)	Alternatives that might be substituted for it in a particular structure.	For /p/ in *apt:* /k/, /f/, etc. (but not /b/, /d/)			
Distribution (Context)	What characteristically occurs with or around it.	/sp/ but not /bp/; /pl/ but not /pm/			
Distribution (Matrix)	Location in system or network that simultaneously locates comparable units.		Action at lips	Action at tongue tip	Action at back of tongue
		Air stopped, vocal cords still	/p/	/t/	/k/
		Air stopped, vocal cords vibrating	/b/	/d/	/g/
		Air stopped in mouth but not in nose, vocal cords vibrating	/m/	/n/	/ŋ/

piece of furniture would be a bench or settee.) Can we remove its back? (No, it would then be a couch or day bed.) Its arms? (Problematical; usage of the term is not so precisely fixed.)

Can a democracy tolerate communal ownership of property? (Yes, so long as the people retain effective control over such property.) Can it tolerate the suppression of educational institutions? (Doubtful; a knowledgeable electorate is probably essential.)

(3) *Distribution with Respect to Class*

In typical circumstances (say a living room) could we replace our divan with a bookcase? (Suited to setting but not to function.) With a bed? (Suited to function but not to setting.) With cushions on the floor? (Carries certain social implications: greater informality, etc.)

Could the freedom of the people be preserved if a democratic form of government were replaced by a limited monarchy? (Possibly, but the limitations would probably turn out to be democratic in character.) What if the democratic form were replaced by a benevolent despotism? (Probably not; contentment need not include freedom.)

(4). *Distribution with Respect to Context*

In places where divans are found, what is typically found with them? (In living rooms, chairs, tables, lamps, etc., but probably not other divans—although these might turn up in club rooms, theatre lounges, or hotel lobbies. Such places are other typical contexts for a divan, each with its own distinctive features.)

What other characteristics of a society tend to accompany a democratic form of government? (Literacy, prosperity, stability, materialism—a case might be made for any of these, as well as for others. Whether the democratic form of government is cause or consequence, of course, is another fruitful question, and one that this approach leads to.)

(5) *Distribution with Respect to Matrix*

To fix "divan" in relation to comparable entities, one might devise a matrix with the obvious "dimensions" of purpose and capacity; that is, down the left side we might write "for sitting" and "for reclining"; across the top, "one person," "two people," three or more." The nature of "divan" could then be seen to reside partly in the fact that it alone of the various kinds of furniture will fit in two of the compartments thus created: "for reclining, one person" and "for sitting, three or more."

A similar kind of matrix might be constructed for forms of government, with "democracy," "communism," "fascism," etc. occupying the various compartments. A variation, perhaps equally instructive, would be a matrix with compartments designed to contain not forms of government but the governments of specific countries. At the left we might list economic bases of societies—e.g., "capitalistic" and "socialistic." Across the top, the distribution of power—e.g., "divided" and "centralized." The problem of placing recognized democracies and recognized non-democracies in such a matrix ought certainly to yield insight into the nature of democracy.

Hopefully the student who has grasped the five modes of thought will be able to apply them, almost like a map grid, to the terrain of any subject and thus introduce a degree of order that will place him in the position, not of having to find ideas, but of having to choose from an abundance of them. The crucial question, of course, is whether the return in invention is commensurate with the investment in time and attention that grasping the theory requires. Elaborate scaffolding is wasteful if the finished building is no more than a cottage. Our experience at the University of Michigan suggests that there is no simple answer to this question.

Seven graduate students teaching sec-

tions of the regular Freshman English course last year agreed to participate with me in an informal trial program over a period of five weeks. After two weeks of preparations including frequent meetings with Professor Pike, each of us devoted three weeks to imparting the concepts of the theory to his students through explanation in class and through a series of jointly produced writing asignments intended to lead the class through the five modes of thought one by one. One more paper done at the end of this period (which in some cases stretched beyond three weeks) presumably reflected whatever benefit the students had been able to derive from their theoretical studies. The period of instruction, as well as the training period for teachers that preceded it, was kept deliberately short: we were interested in finding out what could be gained from a minimum investment. As might be expected, where the teacher was sold on what he was doing the student apparently benefited; it was impossible to say that "the experiment" worked or didn't work.

Some observations, though, held generally. The period of time allotted was not enough. The theory, unlike, say, a mathematical operation, cannot be applied widely as soon as the general principle is grasped. It requires a good deal of "soaking in," a considerable amount of trying out before it can be used with any degree of sureness. An individual instructor whose interest runs in this direction and who can take the time to master the theory and explore its applications can, I believe, produce a noticeable improvement in the writing of some of his students. For a multi-sectioned course taught by a large staff, however, the use of this theory probably requires a more elaborate training program than can be contemplated, although the existence of an appropriate textbook might create a significantly different situation.

Student writers under the influence of the theory frequently became absorbed in the means to the detriment of the end: instead of writing good essays they wrote papers that exemplified the theory elegantly. One teacher complained of "excessive hairsplitting"; another that students managed to work in some aspects of the theory "only after a peculiar stretch of the imagination, which, while interesting, did not always lead to relevant distinctions." The difficulty here, I think, is not so great as may appear at first sight. It is in fact a common problem when the student's attention is first directed to technique: apparently there is an inevitable stage during which conscious control of means must manifest itself in awkward and mechanical ways. Rhetorical ideas too—organization, for example—when first presented for conscious employment are more than likely to turn up in a highly artificial form.

But this does not mean that we can be content with the way in which partly digested theory gives the whole writing process the cramp, especially since linguistics, being farther removed than rhetoric from the actual practice of writing, can cause more pain. On the face of it, and until research teaches us better, rhetoric in a broad sense appears to be the logical subject matter of a course that aims to improve writing. Linguistics, though it may afford valuable insights, stands at a remove. Linguistics is concerned with language as fact, rhetoric with language as instrument; the one is science, the other art. Before the insights of linguistics can be put to effective use in a composition course they must undergo a kind of translation into rhetoric, into ideas directly applicable to writing. Given such a translation, solid benefits may be hoped for, but it by no means follows automatically from the presentation of linguistic ideas.