Some recent developments in phonology

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PSYCHOLOGICAL REALITY IN PHONOLOGY: A THEORETICAL STUDY. (Cambridge Studies in Linguistics 25.) By P. Linell. Cambridge and London, Cambridge University Press, 1979. xvi + 295 pp. 0 521 22234 6. £19.75.

GENERATIVE PHONOLOGY: DESCRIPTION AND THEORY. By M. Kenstowicz and C. Kisseberth. New York etc., Academic Press, 1979. xiv + 459 pp. 0 12 405160 X. £17.85.

Linell's work certainly persuades the reader that the psychological aspects of phonology should be essential, and that internal, purely structural methods are no longer sufficient; external, substantive evidence is necessary, and linguistics cannot be an autonomous discipline if it is to be considered plausible and of value for cognitive psychology. Moreover, some kind of isomorphism between grammar and speakers' internalized knowledge (competence) is required.

The author raises serious doubts concerning the validity of word-level phonology in Chomsky & Halle's Sound Pattern of English, especially the synchronic analysis of the Great Vowel Shift (in fact, criticism generally focuses on this aspect of SPE phonology).[1] For Linell, the entire discussion on the proper degree of abstractness in phonology makes sense only if underlying representations are viewed as real forms and not as mere constructs or theoretical fictions (a point which is hardly questionable). According to him, covert linguistic competence is accessible to a certain extent, especially through violations of rules, the direction of linguistic change, language-variation, loans etc... (which does not alter the fact that we know very little about the neurophysiological basis of speech).

Linell advocates a certain degree of redundancy, of indeterminacy, and non-unique solutions (which distinguishes his approach from Vennemann's neo-empiricism,[2] and in that sense the label 'concrete phonology' can be misleading). He considers that solutions which seem to involve more formal complexity and redundancy often prove psychologically valid (cf. the now famous example of the passive in Maori (p. 82)). Unlike Standard Generative Phonology, he distinguishes two types of operations: 'construction' and 'execution'; doing so, he recognizes the necessity of a typology of rules (Chapter 10). Some marginal, non-productive alternations often used as evidence in favour of a highly abstract analysis are dealt with in the morphological component, or considered as suppletions, or involve via-rules (e.g. 'join/junction' in English). There are two types of rules of execution: perceptual redundancy rules, which perform the function of filling in predictable features, and articulatory reduction rules, often occurring in rapid speech (incidentally, the level of careful speech is central to Linell's work (Chapter 3)). The rules of construction consist of morphological operations (where causal phonetic relation need not be involved) and phonotactic constraints (and 'speakers' judgments of phonological correctness are built upon surface phonotactics'). Linell argues strongly against unique underlying representations of morphemes, which lead to abstract solutions. Instead, he suggests that the inputs of morphological operations are real word-forms (Chapters 4 and 7) and not abstract underlying forms: this is one of the most debatable suggestions in the book. Base-forms would be uninflected or semantically unmarked forms. Minor alternations are accounted for by morphophonological marking (alternation features — pp. 85-86). Of course, such a framework induces many bi-directional rules, but these duplications are limited to opaque rules. This kind of analysis is controversial from the point of view of Transformational Generative Phonology, as bi-directionality is contrary to the principle of formal simplicity (however, we should note that in the early stages of the acquisition of (flexional) languages, children often use uninflected forms).

Linell's theory tends to suggest that derivational morphology necessitates a separate treatment: in fact, the distinction between inflection and derivation is fairly traditional, and seems to be confirmed by diachronic as well as psycholinguistic evidence; vowel-shift rules in English are certainly not a part of the early acquisition of phonology.[3]

In his typology of rules (Chapter 10), the author does not exclude extrinsic ordering and some kind of global conditions from morphophonemic operations. He characterizes a rule as automatic only so long as it is surface-true ('transparent'), a constraint which is akin to Hooper's 'True Generalization Condition'.[4] On the other hand, the rules of 'construction' are non-gradual processes, with absolute effect, and they never introduce new segment-types.

Of course, we have been able only to summarize the major aspects of a book which should certainly be regarded as an important step in the development of post-SPE phonology.

The label 'concrete phonology' is irrelevant to Kenstowicz & Kisseberth's Generative Phonology, which belongs to a now firmly established tradition of theoretical phonology strongly opposed to absolute conditions on the form of rules and underlying representations, although it must be emphasized that it represents a great improvement in comparison with SPE phonology. Even though the authors refuse any a priori formal constraint and assume that the general covert properties of our linguistic competence are abstract, they none the less admit that the theory must be constrained in some way. Indeed, they are greatly concerned with the problem of abstractness, which they regard as one of the major issues in modern phonology, and to which they devote a whole chapter (Chapter 6). One can guess that their purpose is to persuade the reader that a (disguised) return to structuralism would be fundamentally misguided (cf. their criticism of the morpheme-alternant theory, pp. 180-96). Their review of a fairly recent theoretical trend, Natural Generative Phonology, is highly critical (compare pp. 219-32, the examination of Hooper's 'True Generalization Condition'), showing that they resent any idea of a return to 'concreteness', which they consider to be a hindrance to open-minded research.

Their book can be defined as a pedagogical introduction to the central notion of rule and to the place occupied by phonology within a grammatical model. An interesting feature is the emphasis laid on the psychological validity of generative analyses and on external evidence (slips of the tongue, creativity, productivity in loans, language-change and variation). We should stress the pedagogical qualities of the work: it is perfectly accessible to the student or to the beginner in phonology, in spite of its density. It not only provides the student with the basic notions but also teaches him along which lines he ought to argue when confronted with a corpus; the methodological aspects of modern phonology are explained at length, and the approach is deliberately gradual. Each point is carefully illustrated, and the numerous exercises (at the end of each chapter) and examples — mainly drawn from languages the student cannot be familiar with — compel him not to take facts for granted; such languages as Lardil or Yawelmani, being radically different from the Indo-European family, help him to grasp the notion of linguistic variety.

The term 'introduction', used to define the authors' aim, might be misleading, causing the reader to think that complex theoretical issues are either avoided or intentionally over-simplified. In fact, Kenstowicz and Kisseberth reconsider the main subjects they dealt with in their previous book (e.g. constraints on the form of

underlying representations, rule interaction, extra-grammatical or lexical information, morpheme-structure constraints, etc.),[5] but in a different light, and with more emphasis on notational or purely phonetic problems. If we had to define the authors' view of phonology in a few words, we would say that they are in favour of a phonology highly integrated into the general grammatical model. (Although the book is very stimulating, the entire discussion on abstractness suffers — in our opinion — from a lack of interest in the typology of rules.)

These two books therefore represent two radically different approaches to phonology: a more 'concrete' approach (Linell), which essentially claims that redundancy is preferable to formal simplicity and that a psychologically valid theory cannot consider morphemes as phonological invariants; and a more 'classical' approach (Kenstowicz & Kisseberth), which is fairly abstract and anti-empiricist, and advocates unique underlying representations, even in cases of minor alternations.

Fortunately, the debate is not likely to be closed in the near future.

1. N. Chomsky & M. Halle, The Sound Pattern of English (New York etc., Harper and Row, 1968).

2. T. Vennemann, 'Phonological concreteness in Natural Generative Grammar', in R. Shuy & Ch. J. Bailey (eds), Towards Tomorrow's Linguistics (Washington D.C., Georgetown University Press, 1974), pp. 202-19.

3. Cf. Breyne Arlene Moskowitz, 'On the status of vowel shift in English', in T. E. Moore (ed), Cognitive Development and the Acquisition of Language (New York etc., Academic Press, 1973), pp. 223-60.

4. J. B. Hooper, An Introduction to Natural Generative Phonology (New York etc., Academic Press, 1976).

5. M. Kenstowicz & C. Kisseberth, Topics in Phonological Theory (New York etc., Academic Press, 1977).