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Phoneme

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PHONEME. Some phonological theories recognize an element called the phoneme, defined as the smallest sound unit that can distinguish words. For example, /d/ and /ð/ are different phonemes of English because they distinguish between the words *breed* and *breathe*. (These words are called a *minimal pair*; identifying minimal pairs is an essential part of analyzing the phonemic system of a language.) Speech sounds that are audibly different but are not used to distinguish between words are called *allophones*. For example, Spanish [d] and [ð] are allophones of the phoneme /d/ because no pair of Spanish words is ever distinguished by them. Allophones cannot distinguish words because they always occur in different contexts; they are therefore said to be in *complementary distribution*. For example, Spanish [d] occurs initially and after [n] or [l], with [ð] occurring everywhere else.

Since about 1950, it has been known that there are various problems with the concept of the phoneme (Halle 1959, Joos 1957). In some dialects of American English, for instance, the phonemic distinction between /ɪ/ and /ɛ/ (e.g. cf. *pit/pet*) is neutralized before a nasal, so *pin* and *pen* or *Jim* and *gem* are homophonous. The vowel occurring in these words, approximately [ɛ̃], must be an allophone of /ɪ/ or /ɛ/, because it is in complementary distribution with both—but which one is it an allophone of? Generative Phonology regards this and other paradoxes as definitive evidence against positing a phonemic level of representation (Chomsky 1964, 1966, Chomsky and Halle 1965). These arguments against the phoneme were widely accepted, leading to near-universal rejection of the phoneme as an element of linguistic theory. Still, the word "phoneme" continues to be used as a convenient way of talking about speech sounds, and the theory of Lexical Phonology includes a level of representation that harks back to the phoneme.

[*See also* Generative Phonology; Lexical Phonology, Overview; Phonology, *articles on* American Structuralist Phonology *and* European Structuralist Phonology; Segments; *and* Phonemic Systems.]

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PHONEMIC SYSTEMS. Most traditions of phonological analysis establish, for any given language, a set of contrasting sound types that distinguish one word from another. This set is usually designated the *phonemes*, or the underlying *segments*, of the language. Comparison of the content of such sets is one basic way to examine the similarities and differences among the phonological structures of languages. Generalizations can be based both on the number of members of the set and on the patterns of sound types found in the set. Much of the work to date on language universals at the phonological level has been based on the analysis of such patterns (Greenberg 1978).

The phonemic systems in a representative sample of 317 languages are described in Maddieson 1984, and expanded versions of the database underlying this anal-