

In addition to those millions of different individual vocal tracts, each individual will not pronounce the word me in a physically identical manner on every occasion. Obvious differences occur when that individual is shouting, or has just woken from a deep sleep, or is suffering from a bad cold, or is trying to ask for a sixth martini, or any combination of these. Given this vast range of potential differences in the actual physical production of a speech sound, how do we manage consistently to recognize all those versions of me as the form [mi], and not [ni] or [si] or [ma] or [mo] or something else entirely? The answer to that question is provided to a large extent by the study of phonology. Phonology is essentially the description of the systems and patterns of speech sounds in a language. It is, in effect, based on a theory of what every adult speaker of a language unconsciously knows about the sound patterns of that language. Because of this theoretical status, phonology is concerned with the abstract or mental aspect of the sounds in language rather than with the actual physical articulation of speech sounds. If we can manage to make sense of Bob Belviso's comic introduction to the story of Goldilocks and the Three Bears quoted on the previous page, we must be using our phonological knowledge of likely combinations of sounds in English words to overcome some very unusual spellings of those words. (See the end of the chapter for a translation.) Phonology is about the underlying design, the blueprint of each sound type, which serves as the constant basis of all the variations in different physical articulations of that sound type in different contexts. When we think of the [t] sound in the words tar, star, writer, butter and eighth as being "the same," we actually mean that, in the phonology of English, they would be represented in the same way. In actual speech, these [t] sounds are all potentially very different from each other because they can be pronounced in such different ways in relation to the other sounds around them. However, all these articulation differences in [t] sounds are less important to us than the distinction between the [t] sounds in general and the [k] sounds, or the [f] sounds, or the [b] sounds, because there are meaningful consequences related to the use of one rather than the others. These sounds must be distinct meaningful sounds, regardless of which individual vocal tract is being used to pronounce them, because they are what make the words tar, car, far and bar meaningfully distinct. Considered from this point of view, we can see that phonology is concerned with the abstract representation of sounds in our minds that enables us to recognize and interpret the meaning of words on the basis of the actual physical sounds we say and hear.