

In: Z. S. Bond: *Slips of the Ear: Errors in the Perception of Casual Conversation*. New York: Academic Press (1999).

FOREWORD

Listening to speech is one of the most refined skills that we humans have. It is a skill which is exquisitely tailored to the native language; this happens during the first year of life, even before the little listener has become a little speaker. It is an extraordinarily robust skill. As listeners we have no problem understanding speakers whose voices we have never heard before. We can understand men and women and children though their vocal apparatus will produce enormously different acoustic signals. We can comprehend speech against considerable background noise, and we can compensate for the effects of arbitrary blockages of the vocal tract such as a cold in the nose, a pipe clenched between the teeth, or a mouthful of food. The radical bandpass restrictions imposed by communications systems do not prevent us from conversing on the telephone. Listening to our native language seems simple and virtually effortless.

But the impression of simplicity covers a highly complex perceptual performance. Although to listeners it seems as if speakers utter one word after another, in fact speakers do not make it particularly easy for listeners to apprehend words in sequence. Speech signals are produced as a continuous stream, and they contain no consistent and obvious cues—except perhaps at the boundaries of larger syntactic units—to inform the listener where one word ends and the next begins. There are, furthermore, far-reaching contextual effects of phonemes upon one another, so that simple invariant cues to phoneme identity can also not be counted upon. Listeners have to decode the speech signal to extract from it the discrete words which the speaker originally encoded. It is, after all, the words which form the common knowledge base upon which speakers and listeners draw. Each utterance may be entirely new, but it should be made up of words which both parties to spoken interaction know. Recognition of an utterance as the sequence of individual words which compose it constitutes quite a feat,

given the continuity and the contextual variability of speech; nevertheless, it is a feat which we perform with heedless ease.

Only very occasionally does the process go wrong. It is perhaps remarkable that this book is not enormously larger. Slips of the ear do not happen regularly, every few listening minutes, as a matter of routine. Why not, given the complexity of the listening task? The struggle to answer this question has kept speech scientists and psycholinguists busy for generations. The answer draws, as one would expect given the robustness of human listening, on the flexibility of our perceptual system. This system is, one might say, "overengineered": it is full of backup and fail-safe features. Indecision or inadequacy at one processing level can be resolved or compensated for at another level. The comprehension system is not a fragile chain that is only as strong as its weakest link; it is more like a well-practiced team where any member may be called upon to deliver greater or lesser performance in a given operation. When the process does then go wrong, it is because the team as a whole has been unable to complete the task, not because one element has fallen short.

It follows from this that when slips of the ear do occur, they provide researchers with data about the way the team performs, i.e., about the comprehension system as a whole. Thus when a listener reports hearing "oregano nose" in place of "a ring in her nose," the implications are not confined to the fact that a higher front vowel may be misperceived as a mid front vowel, and a velar nasal as a velar stop; experiments in perceptual confusion, and indeed comparison of acoustic signals, could already have led us to expect that. The error allows us the further insight that the comprehension system does not necessarily prevent such a misperception from gaining access to conscious awareness. A listener who hears "you can spend a minute" when the speaker actually said "you can spend a mint" provides us information about more than the evidence requirements for the perception of weak vowels in English; the error also sheds light on listeners' choices between sequences of greater or lesser transitional probability. This is also true, of course, of the listener who hears the nonword "chine" for "chain," since the probability of nonwords occurring in casual conversation is very low!

The architecture of the human language processing system is a subject of heated psycholinguistic debate centered on the following issue: are levels of language processing autonomous, or is there feedback from later stages of processing to logically prior stages? Evidence of how likely listeners are to perceive nonwords, or of the relative proportions of high- and low-frequency words in reported misperceptions, can shed light on this issue, just as can listeners' ability to appreciate puns or to notice when speakers make slips of the tongue.

Thus we can ask many sorts of questions about the wealth of material in this volume. How often do these various types of error occur? Do errors differ greatly, or are there clear patterns to be found? To some of these questions, the

book provides answers. But more importantly, it provides the means for us to find out for ourselves the answers to new questions. It cannot offer ready-made answers to all the research questions about slips of the ear, because many such questions may yet be devised. When future researchers construct hypotheses from which predictions about perceptual errors in listening can be derived, however, the predictions may be tested against this corpus. The errors in the corpus come almost exclusively from “causal conversations”—that is, from real life. All large corpora with potential relevance to theory are useful; but corpora of naturally occurring real-life data, because of the great investment of effort in the collection process which they represent, are rare and particularly valuable. There is no misunderstanding that!

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