What Did You Just Say?
Slips-of-the-tongue, Intention, and Word Production

In a series of lectures and articles, David Kaplan (1990, 2011) has developed an account of words that gives a central role to causal-historical chains of usage and the present intentions of their users. Part of Kaplan's account is a story of how words are created and disseminated through a linguistic community, which requires an analysis of what makes a given utterance/inscription of a particular word.[1] According to Kaplan, a speaker can only use a word through producing an utterance performed with a particular, related intention directed at speaking that word.

In my (2016) I demonstrate that Kaplan's account—or any account that requires a speaker to have an intention to utter a specific word—proves inconsistent with models of speech planning in psycholinguistics as informed by data on slips-of-the-tongue ('slips' for short). In this paper, I develop a positive analysis of what words (if any) have been spoken in a given utterance. In the first section, I provide a brief exegesis of the relevant psycholinguistic literature upon which the analysis is based. In the second section, I develop the positive analysis, which focuses on the psycholinguistic details of the processes responsible for the production of an utterance as opposed to the intentions of the speaker (if any) in producing the utterance. In eschewing intention as a means of determining what words have been said in a given utterance, we need a principled means of distinguishing when an utterance, u, constitutes saying a word, w, as opposed to constituting, e.g., mere noise that just so happens to phonologically resemble properly saying w. As I argue, what matters for saying w through u is that u is causally explained by the speech planning system's use of tacit knowledge associated with w stored in the mental lexicon.[2,3] Put a bit more clearly,

A speaker, s, speaks a word, w, through an utterance, u, iff

(1) s's performance of u is causally explained by the activation and utilization of the lemma and tacit morphophonologic knowledge associated with w in s's mental lexicon by the speech planning system, and
(2) u satisfies relevant phonetic performance standards on speaking w.[4]

As I demonstrate, the above analysis allows us to identify which words have been uttered in a host of cases involving slips, while the intentions of the speaker are of little to no use in determining the words uttered. In the third and final section of the paper, I offer several refinements to the analysis on the basis of recent psycholinguistic literature.[5]

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[1] I focus on words in speech as opposed to writing, signing, semaphoring, etc., because I draw on research in psycholinguistics, which focuses on speaking as opposed to other means of word production.

[2] Roughly, one's mental lexicon is realized in the declarative knowledge one has about a given language. Items in the lexicon will consist of collections of information about a particular word, like its meaning, syntactic properties, morphophonologic structure, and so forth. See (Aitchison, 2012) for further discussion.

[3] Kaplan allows that words—or, more carefully, stages or parts of words—can be literally located in one's mental lexicon. I speak of the tacit knowledge of a word as causally explaining an utterance as opposed to the word itself so as to remain metaphysically neutral regarding what words are.

[4] (2) is adapted from Hawthorne and Lepore (2011), who convincingly argue that for an utterance, u, to be of a word, w, u must meet relevant phonetic performance standards on speaking w.

[5] The refinements are in response to work using rigorous methods of observing the processes of the articulatory system during a slip (e.g., Electromyography (Mowrey & MacKay, 1990) and X-ray film (Boucher, 1994)). Evidence from these methods supports the existence of cascading effects from the morphophonologic level of speech planning to the

In order to understand the merits of the above analysis, a brief discussion of the speech planning system is in order: Words or phrases are not recalled from the mental lexicon as morphophonologic wholes, instead, they are constructed and reconstructed out of remembered morphemes and phonemes anew in speech planning.[6] Speech planning is, roughly, a three-tiered process dealing with semantics, syntax, and morphophonologic structure, respectively. At each tier the intended message is built from the relevant linguistic unit. The semantic level concerns the message a speaker intends to convey and involves a preverbal representation of the content, which is subsequently encoded into language. At the syntactic/lemma level lemmas are placed in a grammatico-functional structure, where a lemma for a word is the set of semantic and syntactic information stored with it in the mental lexicon, such as its syntactic category, grammatical function, and diacritical features like tense, mood, etc. At the morphophonologic level the structure chosen at the syntactic/lemma level is realized in morphemes and phonemes while the prosodic character of the overall utterance is also determined. After this final level of planning, the message is translated by the motor control areas of the brain into instructions executable by the vocal tract (Levelt, 1993).

To see how my analysis works, let's take the following word intrusion error, which is an instance of an actual slip discussed in (Garrett, 1975),

The speaker intends to say, "All I want is something for my elbow," but accidentally utters what sounds like,

U: All I want is something for my shoulder.

It's seems clear the speaker accidentally said the word "shoulder" through U—at least this is how we would pretheoretically describe the case. The problem for an intentional account of word production like Kaplan's is that the speaker has *no* intention to say "shoulder", and it would be absurd to insist the speaker actually said the word "elbow" through what sounds exactly like a successful utterance of "shoulder". The most plausible psycholinguistic explanation for U is the following (cf. Garrett, 1975): The speaker's intention to discuss his elbow causes semantically associated lemmas in his mental lexicon to become activated. At the syntactic/lemma level, the lemma associated with the word "shoulder" is accidentally 'selected' by the speech planning system—e.g., noise in the speech planning system may cause the lemma associated with "shoulder" to have a higher activation level than the lemma associated with "elbow"[7]—and takes the functional position intended for "elbow" in the message being constructed. The morphemes and phonemes associated with "shoulder" subsequently become activated and are placed into position at further levels of speech planning.

What explains the speaker's performance of what sounds like "shoulder" is the speaker's tacit knowledge of the phonologic structure of "shoulder" and the activation of this knowledge by the speech planning system. While unintentional, U is still the result of the speaker's competence with and

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articulatory system. Cascading occurs when multiple, competing representations of the expression to be uttered, associated with different degrees of activation, send signals to the articulatory system. The phonologic character of the subsequent utterance is affected by each of these representations in proportion to their activation levels. In other words, there isn't a unique morphophonologic representation of the (un)intended utterance sent to the articulatory system, and what is uttered is explained by a host of competing representations processed in parallel. See (Goldrick, 2006) for an overview of work on cascade effects.

[6] The fact that words and phrase are built anew allows for creativity in language use, e.g., people's ability to produce words and phrases not previously encountered (Dell, 1995).

[7] This talk of activation levels is common in psycholinguistics, as many models of speech planning utilize neural-network diagrams. It would take us too far afield to discuss the exact details of the processes that determine the activation levels of different lemmas and how lemmas are selected in the speech planning system, but the details are not important for my concerns.

tacit knowledge of the phonologic structure of "shoulder" as opposed to the result of, say, a random electric shock to the articulatory system that luckily ends up producing what sounds like an English word. On my account, the speaker says "shoulder" through U, as the speaker's utterance of "shoulder" satisfies both (1) and (2). Thus, we secure the intuitively clear result that the speaker actually says "shoulder".

The above word intrusion error is just one of several slips I discuss that demonstrate the merits of my analysis. Another slip on which I focus is a spoonerism attributed to William Archibald Spooner himself (the namesake for this type of slip),

Spooner intends to say, "God is a loving shepherd," but accidentally utters what sounds like,

U_1: God is a shoving leopard

Hawthorne and Lepore (2011) claim that U_1 fails to meet relevant phonetic performance standards on the words intended, and, therefore, Spooner fails to utter any words through his performance of what sounds like "shoving" and "leopard". Kaplan (2011) argues that Spooner has actually spoken the words he intended through U, including "loving" and "shepherd", despite the clear gaffe in pronunciation. As I argue, depending on competing conceptions of what happens psycholinguistically with the performance of U_1, Spooner says just what it sounds like he does, namely, "shoving leopard."

Slips have served as a central source of evidence for psycholinguistic models of speech planning and production. Although the average human will make an audible slip in speech approximately once in every one thousand word utterances, slips occur with enough frequency that they cannot merely be ignored or treated as noise in an adequate analysis of what words someone has spoken in a given utterance. An adequate philosophical theory of words cannot afford to ignore the psycholinguistic particulars of speech.

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