Improvisation, Language, and Cognition

Peter Blouw

Language has puzzled scholars for centuries. Plato, for instance, mused about the connection between a name and its referent. Hobbes and Locke theorized a link between language and reason. And more recently, philosophers have begun to explore relationships between language, human consciousness, and mental representation (See Searle, Dennett, and Fodor). One question of particular interest emerging out this rich body of work surrounds the relationship between the composition of a linguistic phrase and its articulation in speech. Put simply, the two tend to occur simultaneously. Daniel Dennett claimed as much when he remarked that we often "discover what we think (and hence what we mean) by reflecting on what we find ourselves saying" (245). Colloquial experience would also seem to confirm that utterances typically arise spontaneously and with little in the way of deliberation. The more important point is that if one builds from a very simple definition of improvisation as "the simultaneous performance and conception of a work" (Dean 3), then it becomes apparent that the general spontaneity of language makes it suitable for analysis as an improvisational phenomenon. Carried further, such analysis of improvised speech also provides an interesting point of entrance into questions concerning the nature of cognition and independent thought.

In positing that language use is improvisational and indicative of certain aspects of human cognition, the aim of this essay is not to overlook the many instances in which language use is deliberate, preplanned, and highly structured. To be sure, prepared

addresses such as eulogies and business presentations are unlikely to be improvised. Yet such instances are the exception rather than the norm. Keith Sawyer, an ICASP scholar interested in improvised speech, sensibly points out that ordinary "conversation is collectively created" and that "we do not speak from a script" when engaged in small talk (155). And even when conversations are planned or thought about beforehand, it is exceedingly rare that they are composed word-for-word. Moreover, in focusing on improvisation in relation to language rather than music, this essay is not intended to suggest that musical and linguistic improvisation are wholly distinct. Consider for instance, that music is conventionally thought of as a language itself. Words and tones alike belong to sign systems used for communicative purposes, and as such, it seems likely that questions examining the cognitive underpinnings of language use can shed light of the cognitive functions involved in the production of improvised music.

Historically, such questions would have been difficult to answer. Early pioneers of analytic philosophy, for instance, viewed language in solely truth-conditional terms. Statements had to be empirically verifiable, or correspond truthfully to a particular state of affairs; otherwise, they were deemed "nonsense" (Preston). Often called logical positivism, this approach was eventually abandoned because any articulation of the approach itself is not empirically verifiable (and is thus self-defeating). Elsewhere, behavioral psychology ruled the day. Central figures in the field, such as B.F. Skinner, thought that language behaviors were learned associatively and through the conditioning of speakers by their environments. All that mattered were "the current features of the environment impinging on the speaker" and "the speaker's history of reinforcement" with

respect to prior instances of verbal behavior (Cowie). In simpler terms, humans were thought to learn language through an ongoing process of association and punishment/ reward that aligned their speech with that of a broader language community. Overall, the main point is that neither positivistic philosophy nor behavioral psychology is particularly compatible with the idea that speech is improvisational: in both cases, language meaning is dependent upon and controlled largely by external conditions.

Fortunately, neither intellectual paradigm survived past the mid-twentieth century. Philosophy of language shifted towards pragmatics, or the study of language as it is *used*, and Noam Chomsky's notion of an arguably improvisational "generative grammar" revolutionized both linguistics and psychology. With three broad claims, Chomsky largely destroyed behaviorist accounts of language acquisition. First, he pointed out that language use is stimulus independent in the sense that people can and do respond in an almost infinite variety of ways to the same environmental conditions (Cowie); this casts doubt on the idea that verbal behavior is conditioned in the classical sense. Second, he noted that people can understand and produce an infinite number of sentences (Thagard 50) – this means that they must have a "recipe" or "mental grammar" for constructing utterances beyond those memorized through rote learning (Pinker 9). And third, Chomsky argued that this mental grammar is universal and largely innate because it develops with minimal instruction and through exposure to a highly limited and individualized set of language examples. As he put it:

> The language each person acquires is a rich and complex construction hopelessly underdetermined by the fragmentary evidence available [to the

> child]. Nevertheless individuals in a speech community have developed essentially the same language. This fact can be explained only on the assumption that these individuals employ highly restrictive principles that guide the construction of grammar. (qtd. in Pinker 10).

In other words, all children of a given language community adopt the same unconscious grammatical principles because they are innately equipped to "distill the syntactic patterns out of the speech of their parents" (9).

The significant feature of Chomsky's theory is that it presents speech as something that is *freely created*. There are no rules, aside from the rules of the mental grammar (which simply ensure communicability and have no bearing on what is being communicated). If correct, this theory of universal grammar would seem to suggest that the capacity to improvise is a fundamental feature of the human mind: grammar is innate, and it allows speech to be "composed on the spur of the moment" with extremely little in the way of "rote recall" (qtd. in Mackenzie 173). Granted, being capable of improvising speech does not guarantee one to be a collaborative improviser: the responsiveness, attentive listening, and social creativity often associated improvised practices are arguably not intrinsic to improvisation itself; debates and trails, for instance, involve a great deal of improvisation, yet are typically showcases of highly adversarial behavior. Nonetheless, the innate capacity to use language in an improvisatory manner seems to be an important precondition for creative collaboration.

All this is not to say that the idea of universal grammar is taken as a self-evident truth. Chomsky has his critics, and one of their major points of contention surrounds the

presence of preset phrases in almost every language. Ian Mackenzie, for one, has pointed out the widespread use of what he calls "institutionalized utterances" or "fixed and semi-fixed expressions" (173). Examples include speech fragments such as "*by the way*," "*in a nutshell,"* and "*not on your life"* (174), along with framing constructions such as "*My point is that _____"* or "*I'm sorry to hear about _____"* (174). Other scholars, notably James Nattinger and Jeanette DeCarrico, have used the commonality of these phrases and constructions to contend that language is acquired through a process in which children memorize "pre-fabricated lexical chunks of language" (Mackenzie 174), and then break these chunks into parts that are recombined to create phrases. The result of their argument is a simple reversal of Chomsky's position: language consists of a "grammaticalized lexis" rather than a "lexicalized grammar" (174). Mackenzie, however, is not so strictly opposed to the notion of an innate generative grammar. His central points are that "we are much less original in using language than we imagine" and that "we only improvise phrases from scratch if all else fails" (173, 175).

The same could be said about music. Clichéd sound patterns are widely used by improvisers, along with more spontaneous and original creations. Keith Sawyer, for instance, notes that Charlie Parker "drew on a personal reperatoire of about 100 motifs, each of them between four and ten notes in length" (157). Similarly, Andy Hamilton remarks that the improvisational techniques of Ray Bryant and Oscar Peterson can be best described as making use of a "'bag of tricks' model" of cliché deployment (179). This is not to say that improvisers are misrepresenting themselves as being wholly spontaneous in their creativity. Rather, these examples simply illustrate that improvisers

are faced by what Sawyer calls a “tension between the need to develop ideas in advance and the potential for a gradual evolution toward patterned rigidity” (157). The point overall is that in speech and music alike, spontaneous originality is often present only within the confines of preconceived structures and frames.

The sum of these considerations suggests that both extremes in the dominant theories of language cognition are problematic. A process of totally “free creation” in speech seems unlikely given formulaic nature of many speech acts; conventional phrases and conventional thinking are all too common to suggest otherwise. Yet the opposite stance is even more obviously problematic. If language were completely formulaic and learned by rote, then speaking (or thinking) something original would be impossible. Accordingly, speech cognition seems to occupy a tenuous middle ground between efficient formulas and surprising novelties. And if one considers this conclusion in relation to the arguments made in favor of the potential for improvisation to foster new forms of social organization (eg Heble and Fischlin), it seems clear that using language more freely offers one potential pathway towards thinking more freely about notions of community and social interaction. Speech alone might not offer all that improvised music does in fostering unique social practices, but it is central to the articulation of hopeful possibilities for a better world. The real puzzle of language, then, seems to be how best to harness and develop its power as an agent for change.

Works Cited

Bennett, Maxwell, Daniel Dennett, John Searle, and Peter Hacker. *Neuroscience and Philosophy: Brain, Mind, and Language.* New York: Columbia University Press, 2007.

Cowie, Fiona. "Innateness and Language", *The Stanford Encyclopedia of Philosophy*. Ed. Edward N. Zalta. http://plato.stanford.edu/archives/sum2010/entries/innateness-language/

Dean, Roger and Hazel Smith. *Improvisation, Hypermedia and the Arts since 1945*. Harwood Academic Press, 1997.

Dennett, Daniel. *Consciousness Explained.* Toronto: Little, Brown and Co, 1991.

Hamilton, Andy. "The Art of Improvisation and the Aesthetics of Imperfection." *British Journal of Aesthetics* 40.1 (2000): 168-185.

Fischlin, Daniel and Ajay Heble. "The Other Side of Nowhere: Jazz, Improvisation, and Communities in Dialogue." *The Other Side of Nowhere: Jazz, Improvisation,and Communities in Dialogue.* Eds. Daniel Fischlin and Ajay Heble. Middletown, CT: Wesleyan University Press, 2004: 1-42.

Fodor, Jerry. *The Language of Thought.* Cambridge MA: Harvard UP, 1975.

Frye, Northrop. *The Educated Imagination.* Toronto: House of Anansi Press, .

Mackenzie, Ian. "Improvisation, Creativity, and Formulaic Language." *The Journal of Aesthetics and Art Criticism.* 58.2 (2000): 173-179.

Pinker, Steven. *The Language Instinct.* New York: William Morrow and Company, 1994.

Sawyer, Keith. "Improvisation and the Creative Process: Dewey, Collingwood, and

the Aesthetics of Spontaneity." *The Journal of Aesthetics and Art Criticism* 58.2 (2000): 149-161.

Thagard, Paul. *Mind: Introduction to Cognitive Science.* Cambridge, MA: MIT Press, 2005.