Chapter 1
The Problematic

Psycholinguistics is the name given to the study of the psychological processes involved in language . . . psycholinguistics is closely related to other areas of cognitive psychology, and relies to a large extent on the experimental methods used in cognitive psychology (Harley, 2001, p. 3 f.).

Human language is language because it is used by people for a purpose, namely, to live with other people (Hörmann, 1981, p. 303).

Chapter Prospectus

Chapter 1, *The Problematic*, sets forth the state of the question. For the most part, our research has developed over the years as a critique of mainstream psycholinguistics. Mainstream psycholinguistics has engaged primarily written discourse, has based its limited engagement of spoken discourse on a written language bias, has accepted the autonomy of language throughout the entire realm of discourse, has not taken into account the communicative context of language use, and has largely neglected the research of its own historical precursors. Spontaneous spoken discourse (i.e., genuinely meaningful use of spoken language among human beings for purposes of communication) is looked upon in such a tradition as deficient in comparison with written discourse. In the present book, spontaneous spoken discourse is considered to be lawfully structured in its own right, and therefore eligible for the premier research role in language use insofar as it is the universal, original, and basic form of human discourse.

What's It All About?

How does one get at what people do with spoken language, at why and how they use it in the act of communicating with one another? Scholars have fussed and fumed over these questions ab initio. Their importance is quite simple: The best

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way to know what people are thinking and feeling is to listen to them and interrogate them – in words – regarding what is being communicated. And so, how people use language becomes crucial as soon as we begin to operate on a human level. Such commonplace verbalizations as "Would you mind repeating that?" and "Just what do you mean by that?" give eloquent voice to our everyday interest in how people use language when they address one another.

And yet, just accepting speaking and listening as eminently human activities does not throw light on why and how people engage either of these activities. Why do they begin to speak at all in the midst of their other preoccupations with everyday life? Why do people tell stories? Why do mothers use words to babies who don't understand words? How do people terminate conversations? What does "Oh!" mean in a specific context, and what does it add to the ongoing discourse? How do we know when someone is lying? Or can we really? Every one of these questions is a worthy candidate for research on the use of language. But how do we – precisely as psychologists – go about research on language use?

Historical Beginnings of Mainstream Psycholinguistics

At mid-twentieth century, a convergence of historical developments contributed to a new birth of interest in these questions. There was something of a post World War II malaise within psychology, a discontent over behaviorism that left a vacuum to be filled. As it turned out, the filler came not from within psychology – at least as regarded the questions of language use – but from the neighboring science of linguistics. Noam Chomsky (1957) embodied the movement that came to be known as transformational or generative linguistics. His influence on a psychology of language use came to be conceptualized under the title psycholinguistics. The word itself predated Chomsky and is traceable back to the 1940s (see Rubenstein & Aborn, 1960), but the key insight was Chomsky's, namely that "an understanding of grammar must be central to any serious understanding of the human mind" (American Psychological Association [APA], 1985, p. 286). This is a hugely bold and radical statement of principle. The APA simply accepted it as "demonstrated" by Chomsky, but what that demonstration consisted in has never been clarified. On the face of it, it seems to be diametrically the opposite of Ong's (1982, p. 7) statement that:

> Computer language rules ('grammar') are stated first and thereafter used. The 'rules' of grammar in natural human languages are used first and can be abstracted from usage and stated explicitly in words only with difficulty and never completely.

Is then grammar really the appropriate starting point for the investigation of the human mind, or even more specifically, as it was to be billed in the emerging discipline of psycholinguistics, for a psychology of language use? Or did Chomsky have the cart before the horse?

The More Remote Background of Modern Psycholinguistics

Perhaps it would help to step back from the immediate origins of modern mainstream psycholinguistics for a moment to consider the ways in which the question of how people use language has been answered through the ages. For indeed, an inveterate tradition of observing and collecting linguistic frequencies, mistakes, commonalities, exceptions, specific forms of language use, and, yes, even rules has been in use by students of language for millennia. The study of language did not spring full grown from the head of Chomsky at mid-twentieth century.

A considerable store of systematic knowledge about language use actually predates modern psycholinguistics and the mid-twentieth century. In fact, many of the great psychologists of the nineteenth and early twentieth centuries engaged language use. These would include Karl Bühler, Jaymond M. Cattell, Sigmund Freud, William James, O. Hobart Mowrer, Jean Piaget, Clara and William Stern, Lev S. Vygotsky, and Wilhelm Wundt. Much of this historical background has been summarized in Blumenthal (1970), and developmental aspects of it have been reviewed by McCarthy (1954). But most of these precursors are not even mentioned in recent mainstream psycholinguistic texts: Cutler (2005) and Field (2004) have mentioned none of them; and Harley (2001) has mentioned only Vygotsky. Suddenly at mid-century, the Zeitgeist shifted and the principles used by these early scholars, along with their findings, became somehow irrelevant and were ignored. In fact, Knobloch (2003, p. 29; our translation), in his review of the history of psycholinguistics, has concluded that "it is overflowing with promising, but then abandoned research programs . . . . The mountain of unsolved problems and untested models left in its wake by psycholinguistics notably continues to grow."

The Cognitive Revolution

Evidently, more than just a convergence of Chomsky and weariness with behaviorism took place in mid-twentieth century with respect to the way in which questions were to be asked about language use. Baars (1986) has referred to it as *The cognitive revolution in psychology*, although it still remains unclear whereunto this revolution has come. In fact, much of the vaunted abdication of behavioristic methods has amounted to mere posturing; many of the breakthroughs have evaporated or been reduced to meaningless abstractions; and in fact, the very meaning of the terms *cognitive* and *cognition* has become so eviscerated as to now be a mere shiboleth. As one cognitive scientist (Fodor, 2000, p. 100) has put it:

> What our cognitive science has done so far is mostly to throw some light on how much dark there is. So far, what our cognitive science has found out about the mind is mostly that we don't know how it works.

Graumann (1987, p. 58; our translation), a social psychologist, has criticized the individualism that a cognitive approach has produced within social psychology:

> This "individualism" of psychological [rather than sociological] social psychology is not at all limited to the methodological; the favorite theories and models are almost all centered on the individual. The prototype of the social relationship is the dyad; however, the other is often reduced to only a representation within the one: the other as "cognition."

According to Quasthoff (1995, p. 4), herself a linguist: "*Psychology* focuses on the cognitive processing of knowledge as the basic function of communicative processes." Her narrow focus on "the cognitive processing of knowledge" also described quite well the limited spectrum of psychology engaged by mainstream psycholinguistics.

Presently, we are left with a cognitive science in which "meaning is a core unsolved problem" (Fitch, 2005, p. 395), in which "psycholinguistic data is irrelevant to formal linguistic theory" (Boland, 2005, p. 23), in which neurolinguistic research "has not advanced – in an *explanatorily significant* way – the understanding of either linguistic theory or of neuroscience" (Poeppel & Embick, 2005, p. 104), in which there exists "a deep dissatisfaction about the psycholinguistic quality of most neuroimaging studies on language" (Hagoort, 2005, p. 157), and in which "consensus at any concrete level has been elusive" (Crocker, 2005, p. 363) for extant models of language comprehension. It should be noted that all these expressions of criticism originate not in opponents to mainstream psycholinguistics, but from contributors to a single volume (Cutler, 2005) with its own origins deeply rooted in the mainstream psycholinguistics of the Max Planck Institute (MPI) of Psycholinguistics in Nijmegen, The Netherlands. If current publications are any indication, then both the recent *Cognitive linguistics* (Evans & Green, 2006) and the *Handbook of latent semantic analysis* (Landauer, McNamara, Dennis, & Kintsch, 2007) have provided additional evidence, respectively, of a continuing popularity for formal and mathematical approaches to meaning in the cognitive tradition.

Some Current Criticisms of Mainstream Psycholinguistics

If one looks further, outside the tradition of mainstream psycholinguistics, additional criticisms must be taken into account. Sabin and O'Connell's (2006, February 15) review of Cutler's (2005) *Twenty-first century psycholinguistics: Four cornerstones* has criticized its failure to engage "what a speaker intends to say or means" (p. 8) and "the concepts of intention, meaning, consciousness, purpose, perspective, dialogue, social role, culture, affect, and finality" (p. 9). It is difficult, if not impossible, to imagine how communicative language use could ever be comprehensively and profitably engaged without taking these concepts into account. However, this litany of perhaps seemingly disparate elements can be traced to a more unitary objection to modern

mainstream psycholinguistics, namely its overwhelming emphasis on the language system itself, on the syntax and well-formedness of sentences. Herrmann (2005, p. 78; our translation) has commented on this emphasis in somewhat different terms as follows: "The psycholinguistic *mainstream* hardly ever gets beyond investigating the mental and neural processes involved in the production and reception of individual sentences."

The Centrality of Grammar in Mainstream Psycholinguistics

What went wrong? Or was mainstream psycholinguistics wrongheaded from the beginning? We wish to argue that it has been wrongheaded from the very beginning of the psycholinguistic era in mid-twentieth century and from the inauguration of the cognitive revolution as well. The erroneous rationale upon which the whole edifice was based can be seen in a passage from Chomsky's (1957, p. 106) foundational *Syntactic structures*: "The most that can reasonably be expected of linguistic theory is that it shall provide an evaluation procedure for grammars.... Grammar is best formulated as a self-contained study independent of semantics." Such a proclamation should have been enough to scare away any self-respecting psychologist of language use, but it was not. Quite the contrary, given the malaise over behaviorism and a fresh interest in higher processes, and given the penchant for meticulous experimental analysis on the part of some folks at Harvard University, just down the road from Massachusetts Institute of Technology, it became a heady, seductive potion. Notable among these folks were George A. Miller and his students. We are convinced that the real attraction of this veritable mystique was an almost magical reductionistic clarity. But the baby was thrown out with the bath; semantics – what people actually talk about and listen for – was reduced to a role derivative from and subordinate to grammar.

The problem was not grammar itself; language use does involve grammar, very importantly. The problem lay in the very reductionism that came to constitute the gospel of the new discipline. The reductionistic clarity did not derive from syntax alone, but from the arbitrary restriction to *syntax on the written page*. It is easy to work with well-formed sentences that appear on the written page precisely because sentences on the written page have already been formulated out of the richness of our overlearned, alphabetized literacy – the product of years of schooling. And so, the well-formed written sentence became the unit of empirical analysis for the modern psycholinguist, and the cognitive processing of such materials by experimental subjects became the focus of psycholinguistic theory. That such civilized literacy, not the use of oral language as such, was leading the parade for psycholinguists has never, to our knowledge, been acknowledged by them. To modern scientists, enveloped in our scientific approach to language use, how an analphabetic speaker or listener can use language seems hardly imaginable. Or, as Ong

(1982, p. 2) has expressed it: "We – readers of books such as this – are so literate that it is very difficult for us to conceive of an oral universe of communication or thought except as a variant of a literate universe." And we are also so literate, as Miller and Weinert (1998, p. 378 f.) have insisted, that we find it hard to acknowledge that children do not learn Chomsky's "magnasyntax" (p. 378) as the basis of their first language: "As their first language children do not acquire the written variety of their native tongue but the structures and vocabulary that they hear in the spontaneous speech around them" (p. 379). Thus, the science derived from generative grammar is chained to a literate bias and cannot see beyond it. And yet, millions of speakers and listeners use language quite articulately and eloquently everyday without the benefit of alphabetization or literacy of any kind.

Ideal Delivery: A Corollary of Syntactic Well-formedness

These real, but implicit underpinnings of modern psycholinguistics are shown more clearly in a corollary to well-formedness in written discourse. Thus, Chomsky's (1965, p. 3) classical ideal speaker speaks like a written page:

> Linguistic theory is concerned primarily with an ideal speaker/listener, in a completely homogeneous speech community, who knows his language perfectly and is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors (random or characteristic) in applying his knowledge of the language in actual performance.

This linguistic principle was then translated into psycholinguistic theory by Clark and Clark (1977, p. 261):

> For there to be a speech "error" there must be a "correct" way of executing a sentence, and this will be called the *ideal delivery*. When people know what they want to say and say it fluently, they are giving an ideal delivery.

Chomsky's and the Clarks' conditions for the legitimate use of oral language place both linguistic and psycholinguistic theory squarely in a never–never land of well-formed sentences on the lips of ideal speakers and do not enable us to learn about how people actually speak and listen effectively in a real world. Or, as Harris (1981, p. 33) has put it: "The 'ideal speaker–hearer,' it might appear, is in fact a communicational cripple." Even earlier, Abercrombie (1965, p. 1) had emphasized the differences between conversation and what he referred to as "spoken prose" (i.e., a written text read aloud). After invoking a litany of all the grammatical, indeed illiterate horrors that appear when conversation is committed to paper, he concluded:

> But of course it *should* be illiterate – literally. It should be different from written language. We are so used to deriving our notions of what is correct and logical in language from prose, that we find it hard to realize that a quite different set of standards must be applied to conversation. (p. 6)

More than a third of a century later, spontaneous spoken discourse is still notoriously conceptualized as flawed and inefficient: "The language of dialogue is disorderly compared to the straightforward sentences of monologue" (Garrod & Pickering, 1999, p. 10).

The fact of the matter is that spontaneous spoken discourse is orderly in multitudinous ways that transcend the sterile lawfulness of syntax or grammar – or well-formedness and the ideal delivery. It is neither necessary nor even possible for an idealized grammar to carry the entire burden of orderliness in the communicative use of spontaneous spoken discourse. Furthermore, these other-than-grammatical forms of psychological orderliness or lawfulness are discoverable by means of the traditional principles and tools of the scientific method. The question still remains: Whence comes the bias in favor of the laws dictated by grammar, to the exclusion of the richest treasures of orderly, intelligible data derivable from empirical analyses of genuine language use – spontaneous spoken discourse?

In 1982, Per Linell wrote a book, entitled *The written language bias in linguistics*, in which he claimed that modern language scientists have concentrated almost exclusively on written language as the prototype of language use. More recently, Linell (2005) has published an entirely new book under the very same title and with a much more detailed criticism of the written language bias. Once again, his claim is that syntactic well-formedness has assumed a disproportionate importance. Ong (1982, p. 75) has summed up succinctly the problematic that arises from this emphasis on the written language: "It is impossible for script to be more than marks on a surface unless it is used by a conscious human being as a cue to sounded words, real or imagined, directly or indirectly." As it turns out, then, Chomsky's (1965, p. 3) characterization of the speaker's "grammatically irrelevant conditions" that arise "in applying his knowledge of the language in actual performance" should be the other way around: Speaking and listening are the primary psychological evidence, whereas the autonomous grammatical system is an abstraction derived from them. But from this autonomous grammatical system, a psychological understanding of our use of language can never be derived, precisely because it has not only been shorn of the "memory limitations, distractions, shifts of attention and interest, and errors," but, even more importantly, because it has been isolated from context, prosody, dramatis personae, and a host of other paralinguistic and extralinguistic phenomena that are constitutive of the reality of all interactive behavior. Hence, Chomsky's characterization has nothing to do with the actual bodily embeddedness of spontaneous spoken discourse.

Recently, there has been much ado about research carried out by Daniel Everett on the language of the Pirahã, a remote Amazonian tribe (Colapinto, 2007, April 16; Grossman, 2007, June 10). The issues have even been dated in jest as B.C. (Before Chomsky) and A.D. (After Dan). The claim made by Everett's followers is that Chomsky's requirement of recursiveness as a universal property of human languages has now been proven false insofar as the Pirahã language does not make use of syntactic recursiveness at all. It appears that Everett has made his case, despite the protestations of Chomsky's

followers. We wish here to make the additional point that Everett's claim misses a more important deficiency in Chomsky's system: As we have outlined above, his theory is incapable of dealing with spontaneous spoken discourse; in fact, the inability of such a theory to deal with spontaneous spoken discourse has been swept under the rug of twentieth-century linguistic fad. More than a quarter of a century ago, however, Hörmann (1981, p. 315) had already rejected Chomsky's claim that generative grammar is relevant as an explanation of the meaning and understanding characteristic of everyday spoken discourse:

> The claim has revealed itself as an idle promise; the fact is that a theory of language developed on purely rational grounds, as is the case with generative transformational grammar, discloses its inadequacy as soon as it is exposed to the crucial test of its predictive power, i.e., the power to predict events as they occur in everyday life.

Chomsky and the modern mainstream psycholinguists are – at best – performing an autopsy on a cadaver, rather than dealing with the actual involvement of interlocutors in the bodily liveliness of spontaneous spoken discourse. The cadaver metaphor, interestingly enough, has a history of its own. Linell (2005, pp. 9, 196, footnote 11) has traced it back to von Humboldt's (1841–1852/1969, p. 419; our translation) comment that "dissection into words and rules is nothing more than a defunct concoction, the consequence of scientific dismemberment" and his claim (p. 186; our translation) that "genuine language is to be found only in articulated speech; the grammar and the lexicon are hardly comparable to a lifeless skeleton of speech." Linell has also cited Bakhtin's (1981, p. 292) description of the written: "All we have left is the naked corpse of the word, from which we can learn nothing at all about the social situation or the fate of a given word in life." Voloshinov (1973, p. 71) and Firth (1968, p. 47) have added their own descriptions of the written and the linguistic analyses thereof, respectively, as cadaverous. We would like to include in this history the description by Rommetveit (1974, p. 61), credited by him to Birdwhistell (1971):

> Birdwhistell argues that what is preserved in typed transcripts of face-to-face dialogues is in fact only 'the cadaver of speech'. And an essential part of what is lost in the transcription has to do with what Roman Jakobson refers to as meta-linguistic operations, i.e., with shifting premises of communication conveyed by, for example, body movement, gesture, facial expression, and tone of voice.

Or, as the essayist Siri Hustvedt (2006, p. 102) has put it quite bluntly: "In every book, the writer's body is missing."

The Users of Language

Bühler (1934/1982) has designated his theory of language itself as a *Sprachtheorie* and his theory of language use as an *Organon* or tool theory. Banal as it may sound, "Language is a tool, defined as to its use by the people who use it" (O'Connell, 1988, p. 62 f.). *Meaning and understanding* exist only in the psyche

of man, as Hörmann (1976, 1981) knew full well when he so entitled his book to emphasize these absolutely basic processes of language use; on paper alone, words remain "mere semantic potentialities" (Rommetveit, 1974, p. 87). The confusion of the two realms – potentiality on paper vs. actuality in the psyche – has for many years now pinpointed the locus of the problematic we are here discussing. Isolation of words and sentences in a theory that relies on the claim of an autonomous syntactic structure has yielded nothing but confusion about a genuine psychology of language use, or, as Hörmann (1981, p. vii) has written more than a quarter of a century ago: "The models and theories current in linguistics tend to approach a level of complexity at which extreme sophistication borders on folly." What have been forgotten are simply the agents in all this, speakers and listeners. And hence, we should acknowledge at the outset that the rest of this book should be read not as a treatise on spontaneous spoken discourse as some free-standing phenomenon, but as a treatise – as should be every psychological essay – on *people* speaking and listening interactively, meaning and understanding. In our own view, such an emphasis constitutes the only way imaginable of integrating language use comprehensively into psychology. Apart from "*an intersubjectively established, temporarily shared social world*" (Rommetveit, 1974, p. 29) among people, no speaking and listening can occur. This is precisely why Graumann (1984, p. 247; our translation) has insisted that a psychology of language use must be subsumed within a social psychology: "Every science of signs must articulate and axiomatize the domain of social living, where alone signs exist and are of consequence."

Modern mainstream psycholinguistics, on the other hand, has become dependent to such an extent on the discipline of linguistics as to be considered by Herrmann (2005, p. 12 f.; our translation) itself a linguistic discipline in contradistinction to a psychological discipline:

> The psycholinguists (as linguists) generally take as their point of departure the language system itself and subordinate the development of their theories regarding language use to linguistic conceptualizations: How is language instantiated in people? On the other hand, the psychologists of language use (as psychologists) see as their primary task the integration of language use into psychological events.

Fifteen years ago, Reyna (1993, p. 23), in assessing the relevance of linguistics for psychology, expressed the following warning: "For psychologists, therefore, the ultimate concern is that linguistic theory might bear no relation to behavioral reality – that it is just an abstract game with symbols." One more example of perhaps inordinate dependence on linguistics can be found in Quasthoff's (1995, p. 3) reductionistic definition of human communication as "in essence – albeit not exclusively – the mutually oriented vocal production and reception of linguistic signs." As we proceed through the pages of this book, it will become more and more evident that it is quite questionable whether the two approaches can ever be reconciled to one another as complementary contributions to a unitary psychology of language use.

The Autonomy of Language

We have referred already to the overwhelming emphasis on the language system itself and to the claim of autonomous syntactic structures. These themes are conceptualized by mainstream psycholinguistics as extremely important in the search for an answer to the question: "How is language instantiated in people?" (Herrmann, 2005, p. 12; our translation). The claim that the language system is autonomous is in turn related to the claim of nativism (language as somehow biologically determined) and the doctrine of telementation, as Taylor (1997, p. 3) has named it: "Language must 'give' us what we 'get' through communication." Almost 30 years ago, Reddy (1979, p. 290) criticized the concept more thoroughly as the *conduit* metaphor:

> (1) Language functions like a conduit, transferring thoughts bodily from one person to another; (2) in writing and speaking, people insert their thoughts and feelings in the words; (3) words accomplish the transfer by containing the thoughts or feelings and conveying them to others; and (4) in listening or reading, people extract the thoughts and feelings once again from the words.

O'Connell (1988, p. 52) has summarized the conduit metaphor as follows: "Words simply *carry* information from speaker to hearer." This doctrine constitutes a fundamentalistic application of Shannon and Weaver's (1949) *The mathematical theory of communication* to language processing. Linell (1982, p. 146) has renamed it as the *translation* or *recoding* theory, according to which meaning can be derived "by applying a linguistically correct analysis to these linguistic products." But, meaning cannot simply be milked from linguistic structure, because meaning is not entirely pre-existent to the utterance itself, and understanding never exhausts intended meaning. More importantly, speaking and listening both involve a multitude of other systems, not just the linguistic system. And accordingly, meaning and understanding are far more than the two ends of a pipeline through which autonomous linguistic structures travel unscathed by the human psyche. We wish to take aim at this conviction of many linguists and psycholinguists alike, namely, that words are simply *carriers* or *media* of information from speaker to listener.

In all this, the problem of the interactive agents as units of analysis remains. For it is precisely the interaction, not the action of any individual interlocutor as such, that is the core principle of a dialogical theory of spontaneous spoken discourse. How this transcendence of the individual in the dynamic interaction should be conceptualized and empirically investigated is still an open question.