Chapter Three

LANGUAGE AND THOUGHT

Because language is used to encode thoughts, many believe that thought and language are the same. Frequently, this is an unexamined assumption, one held by scholars, clinicians and laypersons alike. There are many problems with such an assumption, however. The position defended here, a position dependent upon language data, is that thought and language are separate entities. Although we often convey thought by language, this does not mean that language and thought are the same.


Until we are forced to examine their relationship, we assume that language and thought are one and the same. Before embarking on any discussion of psychotic speech, it is essential to separate the concept of language as opposed to thought. As a linguist, one oriented to pragmatics and discourse analysis, my position has been and still is that one analyzes discourse according to verifiable constructs and, from those analyses, one proceeds to the thoughts behind the discourse (Chaika 1974, 1981, 1982a, d, e; Chaika and Lambe 1985). Such an insistence on the separation of language from thought has excited much debate, but it has been gratifying to see that others have begun to see the value of such an approach (Andreasen 1982a; Neale, Oltmanns, and Harvey 1985). Harvey and Neale (1983, p. 165) remind us that Bleuler (1950) himself made the point that thought and language are not one and the same. Still, the issue is clouded for many.

Lanin-Kettering and Harrow (1985, p. 1) claim that my position is that “we often see disordered speech in patients who have adequate underlying thoughts and ideas.” Not only have I never made any such claim, I do not even see how such a claim can be made at all at this time or in the foreseeable future. Not only are there as yet no infallible instruments for measuring the adequacy of underlying thoughts, but there has certainly
been no widespread cognitive testing of speech disordered patients. What I have said is that we must first consider in what ways schizophrenic speech is disordered and then determine what mechanisms must have gone awry to produce such speech. Then, perhaps, speech data can be correlated with thinking.

I have also insisted that any explanation for schizophrenic speech must be based upon all the data as elaborated in Chapters 1 and 2. Certainly, some schizophrenics show no structural deviation in their speech and even those who do, do not necessarily do so all of the time. If we do not insist upon the separation of thought and language, then we would be in the odd position of claiming that schizophrenics with structurally intact speech have no thought disorder. Thought disorder is not necessarily accompanied by any of the speech disorders discussed in the previous chapters, nor, so far as we know, does it necessarily indicate disordered thought (sec. 5).

Andreasen and Scott (1982) and Andreasen (1982b) have revived the concept of negative versus positive schizophrenias with the latter including hallucinations, delusions, and TD but the former showing flattened affect and paucity of speech. Their specification of negative and positive symptoms provides a welcome distinction between the terms TD and SD, and yet unites them on a scale. As the last chapter showed, hallucinations and delusions are related to speech dysfunction even if they are not one and the same. As with SD, not all patients have hallucinations and delusions and those who do, do not always have them.

[2] Schizophrenic Speech or Language?

Holzman, Shenton, and Solovay (1986, p. 361) argue that the term thought disorder (TD) should be retained rather than adopting speech disorder (SD), because schizophrenics do not share a language or even a dialect. This, of course, is very true. In some measure, I myself may have contributed to their criticism of the term SD. Chaika (1974) made the tactical error of referring to “schizophrenic” language. All language is polysemous. The word language can mean either the system that is a separate language or it can refer to a specific kind of language within one language. For instance, if we hear profanity, we could say, “such language,” or “strong language” as in movie ratings. Neither of these is referred to as speech. More recently, in his impressive review of the subject, Cozzolino (1983) many times speaks of schizophrenic language as I did, as in enti-
tling a section The Importance of Language Analysis for Diagnosis (p. 105.) Since I erred in that 1974 article by referring to an intermittent aphasia, many scholars devoted themselves to arguing about whether or not schizophrenics were aphasic in the sense of the term meaning organic impairment. I had used aphasia in its generic sense of speech dysfunction.

The position here is that there is schizophrenic speech, but not a schizophrenic language. As already demonstrated, there is a constellation of errors in speaking performance which is associated with some schizophrenics, but, to date, there is no solid proof that the underlying language system is impaired. To the contrary, Grove and Andreasen (1983) have shown that psychotics can process speech, but that their output is dysfunctional (p. 32). The fact that their processing shows no deficit certainly argues for an intact underlying system.

The most compelling evidence that SD psychotics are suffering from a speech disorder is that they manifest the same symptoms whether or not they have ever even been in contact with other schizophrenics. Non SD patients do not necessarily themselves become SD even if they are hospitalized together. There are many kinds of speech dysfunction, ranging from childhood aphasics to stutterers to severe pathologies preventing clear pronunciation to that caused by physical damage to parts of the brain. Disordered psychotic speech is another of those pathologies.

In support of this contention, it has often been reported that there is high interrater reliability in discriminating between normal and schizophrenic speech and that lay judges can discriminate between such speech and that of normals as well as psychiatrists can (Andreasen 1979a; Kertesz 1982; Maher, McKeon, & McLaughlin 1966; Rochester, Martin, & Thurston 1977). Andreasen's Scale for the Assessment of Thought, Language, and Communication, henceforth TLC, is a widely used scale which engenders high interjudge rater reliability. Allen (1985) shows that "a clinician's acumen" can reliably discriminate between SD schizophrenic speech and normal speech. This concurs both with previous studies and with the contention by linguists that, by and large, native speakers of a language can judge if it is being used deviantly without any particular training. Gleitman, Gleitman, and Shipley (1972) found that young children could make such judgements.

Allen (1985) also makes the interesting claim that "the speech of all schizophrenics does indeed differ from that of normals but in as yet unspecified ways." Given the large literature on the characteristics of
schizophrenic speech, this is a startling conclusion. In contrast to Allen, Fraser, King, Thomas, and Kendell (1986) made a linguistic analysis of schizophrenic speech and found that schizophrenics did produce syntactically simpler sentences with more errors than did manic and control populations. The judgements of deviance have to proceed from actual deviations in the message given.

[3] Thought Disorder or Speech Disorder?

Some clinicians characterize the population of schizophrenics as being either TD (thought disordered) or NTD (non-thought disordered). Rochester and Martin (1979, pp. 4-6, 169) argue convincingly that the diagnosis of TD is circular since it depends on the patient's speech. In their words, "The clinician proceeds from a personal experience of confusion to infer that the patient is confused." Despite the fact that they see the circularity of this concept, still they use the terminology throughout their work, a study of cohesive ties in narratives.

Several investigations have shown that thought disorder, or what is called thought disorder does not distinguish between patient populations. Simpson and Davis (1985) found that manics were more likely to be TD than were schizophrenics. Harvey, Earle-Boyer, and Wielgus (1984) using the TLC found it reliable for discriminating schizophrenics from manics, but they also found that the concept of TD was not useful for discriminating between the groups. Although TD was present at the outset, "the majority of the differences between the two groups were apparently due to verbal productivity and not other aspects of "thought disorder (p. 462)." Their results vis à vis manic and schizophrenic TD were different from Simpson and Davis." Harvey et al. found that TD somewhat was more stable in schizophrenics than in manics.

Andreasen (1982) herself makes some compelling arguments that the term thought disorder should be revised, also noting its circularity, by virtue of its being inferred from speech. She also comments on the vagueness of that term. She (p. 296) demonstrates that

Thought is a philosophical term rather than a medical or scientific one and therefore should probably be avoided in scientific writing. When the concept of thought is invoked, thought process should be distinguished from thought content.

She suggests that either the term dysphasia or dyslogia be substituted, a
suggestion apparently not followed. Some investigators have adopted SD, a nomenclature I suggested as it is parallel to the already entrenched TD (Chaika 1982d) Andreasen and Grove (1986), revive thought disorder in a discussion of the reliability of the TLC. However, they do reiterate that a diagnosis of thought disorder is inferred from speech; thus, is circular. It is undeniable that the TLC does work as a diagnostic tool. Notice that this doesn’t mean that it reliably measures thought or speech. What it does is to allow clinicians to diagnose schizophrenics and manics reliably. Andreasen and Grove (p. 356) conclude that “‘thought disorder’ should not be considered to be pathognomic of schizophrenia or diagnostic of it.” They found that mild abnormalities in language behavior even occur in normals, as did Rochester and Martin (1979) and Chaika (1982e, 1983b; Chaika and Alexander 1986. See Chapter 8).

Harvey and Neale (1983, p. 175) maintain that “… the term thought disorder in its present use is misleading and should be split into two categories … discourse failure … deviant cognitive processes that relate to discourse failure. They (p. 160) show that “… a simple designation of a patient as thought disordered or not on the basis of a clinical evaluation of speech is not a useful diagnostic sign.”

[4] Is Language Is Based on Thought?

Simpson and Davis (1985) say that “Disordered thought structure results … from abnormalities in the pattern of speech such as … word salad …” (boldface mine). It is not clear how word salad, which is a collection of words lacking syntactic markers, causes thought disorder. The term word salad refers to an agrammatical collection of words. It is not clear how these can change the structure of thought, especially since all humans have collections of words in their mental lexicons, but few are psychotic.

More likely, syntactic rules have been violated in word salad, or haven’t been brought into play, but anthropological and cognitive linguistics have repeatedly shown that syntax itself does not affect thoughts (Kay and Kempton 1984; Scribner 1977; Macnamara 1977; Bickhard 1987). Rosch (1977, p. 519) insists: … it has not been established that the categorizations provided by the grammar of the language actually correspond to the linguistic units.” Macnamara (1977) says that it is not likely that we will find a physical resemblance between language and thought. McNeill (1979, p. 294) puts it well when he says that grammars describe a
language, but do not describe “... (however ideally or abstractly) the cognitive functioning of individual users.” Kreckel (1981, pp. 37-38) emphasizes “the predominance of cognitive categories over linguistic expressions ... the predominance of principles of organizing knowledge... over the way of expressing this knowledge. In other words, thought and language are not the same, and it is thought that motivates language, not the reverse.

Aha! I can almost see the scholarly thrust to the jugular. If thought does direct language, then doesn't that mean that disordered thought produces disordered speech? No. There is no evidence at all from cognitive or social science studies that there is such an equation. The one thing we can say with assurance is that language does not control thought, but we cannot say that thought always controls speech. Commonsensically, we can think one thing and say another. We need not say anything at all about what we are really thinking. Casual chit-chat and other forms of phatic communication often has little to do with conveying thoughts.


Although it is thought that determines what language forms we select, there is still no one-to-one correspondence between the two. Many scholars disagree. Holzman (1978, p. 373) declares “Speech is, after all, spoken thought,” an idea reiterated in Holzman et al. (1986). Even though speech is often spoken thought, it does not follow that all speech directly reflects an individual’s thoughts, nor that all thought is accompanied by speech, nor that all deviant speech proceeds from deviant thought processes. People can be crazy in quite ordinary speech (sec 6).

Chaika (1974, 1982d) and Chaika and Lambe (1985) have consistently maintained that there is a fatal circularity in claiming that speech is thought because thought is encoded in speech. In response, Lanin-Kettering and Harrow disclaim that

... the inference that strange speech suggests strange thinking is not circular since the schizophrenic patient’s strange speech can fit into a construct about his disordered thinking that is grounded in a larger nomological net...

In other words, strange speech is caused by strange thinking because the strange thinking is grounded in the net of nomology (the laws of the mind). Not only does this fail to prove causation, it fails to prove correla-
tion between strange speech and disordered thinking. Thought is expressed through the medium of language, but it does not follow that language is a direct expression of thought. That is a logical fallacy. Structurally deviant speech can contain logical thoughts that are appropriate for the matter at hand. For instance,

In temperance due I don't see any reason why two men can't proceed as popular as ever both in themselves as a duocratic and as a democratic premise. I mean the God-given greatness of this country, and I hope there are no more triangular conflicts in a two-party government. (reported in Laffal, 1965, p. 133)

As one raised on the premise that two-party systems are essential to our democracy, but that a three-party one would weaken it, I find this patient's plea for temperance, the ideation expressed, far from bizarre, although the deviations in expression are evident as they are in the following from the nonproficient writing of ostensibly normal college freshman.

Generalizations have no place in terms of different opinions insofar as the discussions of heroes or any other topic.

Again the ideation here is perfectly normal. The student was simply trying to say that we cannot make generalizations about heroes or related topics. As I was the professor for whom this was written, I was able to verify what it was the student meant. This kind of fractured writing is not at all unusual from the pens of incompetent writers. The point is that the kinds of deviance we see in incompetent normal writers may occur as well in psychotic speech and writing. The incompetence in deviant sentences in each group arises from different underlying causes. Whatever causes the incompetence, however, the result is the same. In neither instance, is it possible to correlate thought structures with language structures.

Another kind of evidence for the separation of language and thought comes from Curtiss (1977). She studied the tragic case of Genie, a girl tied to a bedpost with no human companionship until she was pubescent. Despite intensive training, and a willingness and enthusiasm on her part, Genie's speech remained syntactically like a two year old's but her cognitive processes, including solving problems, were far beyond that of a child whose syntax was as rudimentary as hers.

Kuczaj (1983) has also studied the child's self-learning strategies. As a result, he affirms that children are far more sophisticated in language
learning than in any other cognitive sphere at the same age, pointing out that children have to deduce such things as abstract form classes and rules for manipulating them. The enormous literature on first language acquisition has demonstrated time and again that nobody could teach children to do what they do when learning to speak (e.g., Menyuk 1971; Brown 1983; Bickerton 1981; Wanner and Gleitman 1982). They analyze language and show evidence of abstraction and logical deductions from their analysis before their second year. There is a great disjunction between speech and other cognitive processes in childhood. This argues that speech and thought are separate and develop separately.


The very concept “thought” is ill-defined. Cummins (1983) has summarized the difficulty psychology has had in defining thought in any general way. Thought remains an undefined entity. How then can we correlate speech with a concept so nebulous as thought? If we cannot make such a correlation, then we cannot define thought in terms of speech or vice versa. Nor can we readily determine the interface between them.

Is a thought equivalent to a word, a phrase, or a sentence? Traditional grammar equates thoughts with sentences, as in the well-known definition of a sentence as a complete thought. There are many problems with this formulation. The first deals with the problem of subordinate clauses. Since sentences with subordinate clauses can be broken down into several sentences, does each clause contain one thought, or does the entire structure punctuated as a sentence represent the thought? Consider the following:

1. The boy who dated Griselda before he dated Maria went to his prom with Zelda who used to date Oscar.

This can broken down into four sentences: (1) the boy went to his prom with Zelda, (2) the boy dated Griselda before, (3) the boy dated Maria, (4) Zelda used to date Oscar. How many thoughts are contained in 1 then? One or four? If one claims that language and thought are identical and that disruption in speech is the same as disruption in thought, then one must be able to correlate thought with speech structures.

A second problem concerns the ubiquity of ambiguity and paraphrases. In themselves, these show that language and thought are not identical.
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One statement such as "exciting women can be dangerous" can mean two very different things like:

2A. Women who are exciting are dangerous.
2B. If you excite women, that is dangerous

If one can get two entirely different thoughts from an identical sentence, then language and thought cannot be the same. Similarly, if one can give the same thought in divergent ways, then, too, language and thought cannot be the same, as in

3A. Despite years of trying, nobody has ever been able to prove that language and thought are the same.
3B. Scholars have not demonstrated that linguistic functioning and cognitive activities are identical although they have tried to do so for a long stretch of time, years, in fact.

Other problems with assuming an identity of thought and language structure is that normals frequently make slips of the tongue and other errors in speech production. If speech and thought were one and the same, these would always indicate disruptions in thought processes, a conclusion few would care to make. Rather, it is usually assumed that such errors proceed from momentary lapses in retrieving correct words or sounds, or lapses in self-monitoring (Fromkin 1971.)

Those patients who do produce abnormal speech during psychotic bouts may themselves verify that such speech does not reflect their actual thoughts. Chapman (1966) presents several such comments from patients, and the patient mentioned in Chapter 2 who was surprised at his speech when he saw himself on video is another.

Thoughts cannot be directly observed although speech can (Chaika 1982d; Chaika and Lambe 1985). If speech shows structural deviance, that does not constitute proof that thought does. It is possible for normals to create nonsense words and sentences although their thinking processes may be intact. The classic example is Lewis Carroll’s *Jabberwocky*, which is structurally normal but has words which do not happen to appear in the language. So far as we know, the ability to produce this kind of nonsense is part of one’s natural linguistic ability. Conversely, one can create structurally abnormal sentences from known words such as "am girl yesterday went come boy." One can produce total gibberish as Sid Caesar and Danny Kaye did in their comedy routines. They went one better. They produced gibberish that sounded like different languages.
None of these kinds of deviant productions, not even the gibberish, derives from any dysfunction in thought. There is also religious GLOSSOLALIA in which people utter concatenations of sounds and others in the congregation interpret these as meaning something. Lee (1982) reports on two intellectual (his term) glossolalists who claim to remember their glossolalic utterances and what they meant. Upon observation, “...it was observed that the form of their utterance changed and did not correspond to the given interpretation in a consistent way” (p. 552). As much as one might disagree with Pentecostal Christianity's belief in speaking in tongues, one certainly cannot say that those who do this are necessarily demented in any way. Many very brilliant people, highly intellectual and productive, who seem normal in every way, engage in this activity. No researcher into this population has ever found evidence that they are thought disordered.

The opposite may also be true. A patient might utter structurally normal sentences which indicate impaired cognition. One complained to me, “That tape recorder is reaching out and destroying my brain cells.” Another asked me if I was still talking. When I said, “no?” He said, “That's not you talking?” He was having auditory hallucinations and we were in a private room alone with no person in earshot. I had not said a word. Such comments and questions indicate either hallucinations, grossly impaired ability to deduce cause and effect, or failure to discriminate between animate and inanimate objects, all of which impinge directly on thought. Yet there was no disruption of language itself.


Most telling, perhaps, is that there are several cognitive tasks for which language is of little or no value, although they certainly seem to demand thinking. Language is notoriously poor for describing how to use tools or how to construct something. For this reason, descriptions of mechanical devices typically contain copious diagrams. The best way to teach someone how to sew or to use any kind of tool is to demonstrate it physically. No language is needed at all. Anyone who has to put together a complicated toy from verbal directions knows how little good verbosity is for a guide in this sphere. It is with good reason that trade schools emphasize hands-on experience. Yet, certainly, figuring out what one needs to do to achieve certain ends with tools involves problem-solving skills as well as other thought processes.
One sees this disjunction in academic pursuits. Richard Lambe provides the example of teaching statistics. Many concepts in the text become comprehensible to the student only after he or she has begun to put the techniques to practice when solving statistical problems. Similarly, many teachers have had the experience of difficulty in verbalizing abstract material when they have had to teach it, although they were able to solve complex problems using the same principles when they were students themselves.

Neisser (1976) cites the complex mental imagery involved in the orienteering of the Puluwat as they travel hundreds of miles over the open seas in their canoes. He shows that their orienting schemata accept visual information and direct action with no necessary interface of verbalization. Similarly, city dwellers have recursive cognitive maps upon which they act daily, but do not necessarily—indeed, frequently cannot—verbalize the landmarks upon which they base their actions.

Note that all of the above disjunctions between language and cognition involve very different kinds of thinking: verbal, mechanical, mathematical, concrete, abstract, orienteering. What constitutes “thoughtness” of all these kinds of thinking?


There is an essential distinction between speech, an overt behavior, and thought, a cognitive process inferred on the basis of many different overt behaviors including speech. The fundamental importance of this distinction requires the fullest possible analysis of psychotic speech qua speech since no inference can be more secure than its base in observation.

We have first to explain the observable linguistic behavior and not confuse the issue by talking about thought disordered (TD) vs non-thought disordered (NTD) speakers. Indeed, if one is using structural deviation as the basis of dividing schizophrenic patients into TD vs. NTD, then one is in the peculiar position of claiming that some schizophrenic patients, those with structurally normal speech, are not thought disordered. Why then do we consider them schizophrenic? One would assume that all psychotic patients suffer from an impairment in thinking, but structural deviations in speech in and of themselves are not the proof of that nor are they proof of the nature of the impairment.

Lanin-Kettering and Harrow (1985, p. 4) provide an example of the problems attending undifferentiated constructs of language and thought.

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They argue that “a flexible boundary should be maintained concerning what is considered a problem in thought versus what is considered a problem in language.” Such a procedure obviates all science. One cannot push the boundaries of analysis around willy-nilly. One needs principled reasons for establishing, changing, and maintaining boundaries. The alternative is to advance *ad hoc* explanations. By definition, this is the stuff of fable and prejudice, not medicine or science.

They ask, “When we discover stretches of discourse that show problems in cohesion, should we attribute them simply to a speech-language dysfunction independent of and subsequent to thought?” As Chapter 6 shows, cohesion in discourse is effected by syntactic means. It is not at all unusual for speakers to fail to apply the appropriate means in speech or in writing. Effecting cohesion for one’s listeners/readers is an ongoing problem even in the most ordinary of interactions. Hence, comments like, “I don’t follow” or “Run that by me again” or even “Huh?” If language were one with thought, such promptings would not be necessary.

Following Chaika and Lambe (1985), the position here is that we must first unearth the nature of schizophrenic speech behaviors in and of themselves, and then we must correlate those with other cognitive and problem-solving tasks. We are in a poor position to use speech as an inferential base for claims about thought until we understand more clearly the interface between speech and thought in normal as well as well as nonnormal populations.

If we seek to explain speech in terms of cognition, then the underlying cognitive skills for which we are testing must be those known to figure in speech production. This, of course, forms the basis to my objections about word association testing as a way to determine dysfunction in speech. Since speech is never normally produced on the basis of associations between semantically or phonologically-related words, results of word association tests do not explain production. Even if people give weird word associations to words given in isolation, that doesn’t explain weird sentences or discourses because sentences aren’t formed on the basis of word associations. Similarly, theories like faulty pigeonholing do not explain speech dysfunction because speech is not produced on the basis of pigeonholing.
Inference from Performance Versus Evidence.

There is a difference between what we infer or suppose or imagine and what we observe. For instance, Lanin-Kettering and Harrow say that we may justifiably deduce from the outward facial expression of a frown that someone is depressed. However, such an inference is justifiable only after specific neuromuscular pathology has been ruled out such as tardive dyskinesia. Moreover, a frown does not only indicate depression. It may indicate intense concentration or it may be only a pretended frown assumed for purposes of discipline or humor.

In defense of their equation of thought with language, Lanin-Kettering and Harrow (1985, p. 2) make the interesting claim that “we do not understand all of the details about many of our best constructs... [but] they can still be useful and valuable even before we have gained complete understanding of them” and then “prove” this by saying that intelligence is one such construct, “e.g., highly intelligent people perform better on intellectual tasks than less intelligent people.” This is a classic example of circular reasoning. If you define intelligence as what is measured by certain tests, then obviously those who do well on those tests are intelligent, but that doesn’t mean that intelligence is a valid construct, or a construct at all, or that people who do well on those tests are genuinely more intelligent than those who do not.

Their second example of a poorly understood construct is that of the “concept of the gene which was at the level of construct for many years until recent advances provided strong evidence for the physical existence of genes.” The problem here, counters Richard Lambe, is that as these advances were made, in observation as well as inference, the entire concept of what a gene is itself changed as well, so that the original constructs were modified or altogether abandoned. In sum, utilizing the construct of thought in the absence of hard data about it is as likely to yield fallacious correlations with speech as it is to yield valid ones.

Discriminating Between Competence and Performance.

Lanin-Kettering and Harrow argue for discriminating between competence and performance, what deSaussure long ago termed la langue versus la parole. Although Chaika (1974) did assume a deficit in competence, subsequent research has indicated that this was putting the cart before the horse. Chaika, like previous authors, was attempting a charac-
terization of performance, extrapolating from that a characterization of competence.

The entire question of competence vs performance when applied to research in a linguistically impaired population is a can of worms. Neither de Saussure nor Chomsky derived their theories from mucking about with real people. Chomsky himself has repeatedly warned that his theories are not necessarily applicable to the real world. He has on several occasions specifically disavowed any practical applications of transformational grammars to teaching or psychology. This is not to say that they cannot be so used. It is just that he claims no necessary psychological or pedagogical validity for them.

The problem with questions of underlying competence rests largely on the problem of deciding what constitutes competence in the first place. For instance, some aphasics with known lesions do know that their utterances are faulty. Does this mean that their competence is all right, but their performance is not? Recall also that Chapman (1966) interviewed schizophrenic patients after psychotic episodes. He reports that they complained that while they were psychotic they were not able to say what they intended. They recognized the deviation in their speech but at that time were not able to correct it. Can we say that their competence is diminished because they can't say what they want? Or do we say that it is only a performance error? If they recognized the deviation, then that argues for intact competence, but if they cannot produce structurally nondeviant speech, is not that a matter of competence as well? Or is it performance?

If upon release, a patient evinces surprise at a tape recording of his disrupted speech during a psychotic bout, does that mean that he was not linguistically competent before the viewing, but he was after? Or did he simply have performance problems before? In a subsequent hospitalization, should we consider his performance but not his competence impaired just because he was able to judge his speech as deviant during a prior hospitalization?

Consider also patients who claim to be possessed by spirits or other outside agencies and that this accounts for their garbled speech. What does this mean in terms of competence vs performance? It may be that such an explanation derives from the patient's desire to explain what he or she perceives as deviant speech. If so, does this argue that the patient suffers only from a deficit in performance? Given a patient whose speech is so disintegrated that he or she descends into uninterpretable gibberish,
can we really say that competence is not affected at least during the time of the disordered performance? It is incumbent on any scholar to describe how they distinguish between competence and performance if they wish to use that distinction in their explanations.


The strange associational chaining seen in schizophrenia is evidence of lexical storage with interlocking networks between lexical items. As Chaika (1982a; Chapter 2) observes, the triggering in these chains often seems to be “thought-less” although the individual lexical items in other contexts would communicate thoughts. What makes these chains so strange is that although we can figure out why one lexical item is triggered by another on the basis of semantic or phonological features, there is no meaningful connection in terms of the communicative situation. That is, we know why the chaining occurred but we can’t derive meaning from it.

Lanin-Kettering and Harrow employ a static conception of language. They assume that “language provides an intricate system of concepts that is the foundation and instrument of conceptual activity.” For language itself to be the foundation of concepts, the meaning of lexical items would have to be fixed. However, a crash course in the *Oxford English Dictionary* quickly reveals just how drastically meanings change over time, and they do because lexical items do not have fixed meanings, constructs, or concepts. Nor do speakers and writers have to redefine a word used in a somewhat new context. They need only be skillful enough to use it so that a hearer can figure out its meaning in a given context. Hence, some years ago, an innovative use of *rip off* resulted in a meaning of “steal” added to the original one of “tearing something off of something” and *gay* has pretty much lost its earlier meaning of “lighthearted fun.”

Meanings of words are the most changeable part of a language. Unless we assume that our “foundation... of conceptual activity” changes every time someone uses a word in a new way, then there must be some differences between the words and the thoughts behind their selection. Also, the very fact that any concept may be conveyed by many different words and sentences, that is, can be paraphrased, indicates that language may be the instrument of thoughts, but words are hardly a static system of concepts.
Strange Speech Is an Undifferentiated Given.

Unfortunately, many of Lanin-Kettering and Harrow's arguments are weakened by imprecise terminology. For instance, they repeatedly refer to "strange speech." Do they mean "strange in the sense of structural strangeness," or "strange in the sense of bizarre imagery or claims?"

Content and form in speech are two very different things, constituting situations that may well take very different explanations. Paraphrases often take very different forms even when they mean the same thing. By definition, paraphrase must be in a different structure and use different words than the item paraphrased. As the next chapter will show, the very selection of a synonymous verb may result in a very different sentence form. It would be difficult to the point of impossible to figure how many possible paraphrases any given sentence might engender, even one quite semantically simple. The problem is that any speaker can be skillful enough to employ an old word in a new sense. Therefore, even though one person might finally hit a point beyond which his or her ingenuity can think up a new paraphrase, another person might be able to come up new ones. There is no fixedness of form in language.

Explanation of the Data.

Any explanation for schizophrenic speech must account for all of the data observed. We cannot sweep data embarrassing to our personal scientific constructs under the rug. In addition, any explanation must accord with what we know of the structure of normal language and speech, how it is acquired, how perceived, and how performed. We know that speakers do make slips of the tongue and have other temporary, even transient, problems with encoding their thoughts, such as not being able to explain to another exactly what one means in a given instance. Whether in writing or in speech, "the right words" may be a long time coming.

A behavioral explanation for schizophrenic speech would have to show how one class of people was stimulated to respond linguistically with the peculiar combination of features of SD speech, and, at that, only during psychotic bouts. Even in a family with a history of schizophrenia, all children do not become schizophrenic and even of those that do, not all evince archetypal schizophrenic speech. Berenbaum, Oltmanns and Gottesman (1985) showed that twins do not necessarily both evince
formal thought disorder. Berenbaum et al are careful to say (p. 4) that by thought disorder they mean speech disorder, "—such as derailment, incoherent speech, and non sequitor responses to questions—and not as an inference of underlying pathology in cognitive processes." Moreover, there are also SD patients who do come from families with no other schizophrenics surrounding them, SD or not. How could they have "trained" to speak this way?

Behavioral explanations for schizophrenic speech have been advanced since Bleuler (1950) because of the "associational" character of glossomanic chaining. Behavioral psychologists study the ways that one event is associated with another. The problem in schizophrenic speech is that normal speech is never produced by chance associations of shared semantic, phonological, or syntactic relations of one word with another. What makes such speech deviant is the fact of the chaining itself.

Rutter's (1985) theory that schizophrenics fail in communication because they don't take into concern the needs of the listener fails on similar grounds. He is correct. However, it is a usual thing in discourse for people to fail to take into account the needs of listeners. These include bores, nags, long-winded pests, professors whose lectures are "over the heads" of their students. However, none of these break into word salads, gibberish, neologizing, and glossomanic strings. What requires explanation is why one class of people, psychotics, behave linguistically in a manner perceived to be bizarre by laypersons and scholars alike. Rutter's theory begs the question.


Vygotsky's (1934a,b) *Thought and Language* has taken on fresh importance in recent years partly because of his early insistence on the cultural origins of language learning (Hickman 1986; Lee 1987; Paprotte and Sinha 1987; Lucy and Wertsch 1987; Holzman and Newman 1987), and partly because of his discussions of word associations and, as we shall see, of his formulation of the concept of *inner speech*, a form of speech completely unlike overt speech. The latter two domains of inquiry have been attractive to clinicians as well (Harrow and Quinlan 1985; Kozulin 1986).

By inner speech, Vygotsky does not mean the internal dialogues and monologues which we all regularly indulge in. These are in our normal everyday tongue, using our regular vocabulary and syntax.
These differ from outer speech only in that we utter these inaudibly or not at all. However, if we did utter them, we would be using our normal pronunciations. Grumet (1985, p. 185) quotes research which shows that such internal dialogues are accompanied by sensorimotor excitation in the larynx, tongue, and lower lip measurable by electromyographic impulses. It is not unusual to notice normal people moving their lips and tongue while actively engaging themselves in such self-speech. However, this kind of internal speech is subauditory normal speech, not the kind of speech which has its own laws.

We can pay tribute to Vygotsky’s brilliance, but still acknowledge that many of his ideas have been superceded in the half century since his death. Vygotsky’s theorizing about schizophrenia forms a very small part of his work. He believed (1934b, p. 129) that schizophrenics can only think concretely, a position with which Kozulin (1986, p. xxxiii) and Harrow and Quinlan (1985, p. 159) concur. Vygotsky bases this belief on the erroneous one that primitive people think concretely, a view no longer held. We have come to realize that such judgments derived from the inability of anthropologists to come up with tests that elicited the mental operations being investigated. We still don’t know how to test unerringly for cognitive skills. As Scribner (1977) pointed out, in her studies of the Kpelle in Liberia, she regularly saw them using cognitive skills in daily life although in formal testing they couldn’t seem to use them. Similarly, many of Vygotsky’s pronouncements on how children think have to be modified in view of more recent research.

Perhaps Vygotsky’s greatest appeal to clinicians is because of his conception of inner speech. He (1934b, p. 30-32) posited that children first accompany their activities with egocentric speech (pp. 30–34) and that this develops into inner speech (pp. 225–235). He conceives of this inner speech as originating in truncated external speech. In time, it develops into everything preceding speaking, except thought itself (p. 249). Moreover,

... it is a specific formation with its own laws and complex relations to the other forms of speech activity ... the opposite of external speech. The latter is the turning of thoughts into words ... With inner speech, the process is reversed, going from outside to inside. Overt speech sublimates into thoughts. (p. 225–230)

Nowhere does Vygotsky describe this formation, give us any of its laws, nor tell us how he knows what these relations are. He also (1934a, p. 135; 1934b, p. 230) claims that his formulation of inner speech unfolding
inwards, so to speak from egocentric speech, is "... a fact and facts are notoriously hard to refute." Kozulin (1986) sums up Vygotsky’s position as

... the predominance of sense over meaning, of sentence over word, and of context over sentence are rules of inner speech. While meaning stands for socialized discourse, sense represents an interface between one’s individual (and thus incommunicable) thinking and verbal thought comprehensible to others... in inner speech words must sublimate in order to bring forth a thought. In inner speech, two important processes are interwoven: the transition from external communication to inner dialogue and the expression of intimate thoughts in linguistic form, thus making them communicative. (p. xxxviii)

Kozulin says that inner speech is incommunicable. If it can't be conveyed to someone else then we know neither what it is nor how it relates to outer speech. If it is incommunicable, then we can't know anything about it. Nobody can observe it. Nobody can communicate it. What, then, is inner speech? Vygotsky (1934b, p. 225) denies Kurt Goldstein’s formulation of it as the preverbal stage, the stage in which ordinary language does not figure, that shadowy area of motive and "the whole interior aspect of any speech activity." Vygotsky especially describes such “inarticulate inner experience” because it “dissolves” separate structural planes. The construct of inner speech can be tempting. Psychiatrically, for instance, one could assume that the strange verbalizations of SD schizophrenics is inner speech breaking through. The problem is that, despite Vygotsky’s claims, what he describes, the very development of inner speech in the child and the existence of inner speech itself, are not facts.

By his own definition, Vygotsky’s definition of inner speech is unobservable, unknowable, and untestable, hence, unscientific. Even so uncritical a pair of reviewers as Lucy and Wertsch (1987, p. 81) demur that Vygotsky “did not sufficiently account for the differentiation of the egocentric function from the social function of speech.” Vygotsky died long before the significant research into linguistics, cognition, and language acquisition that we have today. Research methodology has become more sophisticated, as has the uses of statistical measures. None of my arguments mean that there is no inner speech. I cannot prove that it does not exist any more than Vygotsky proved that it does. Like Freudian and Chomskyan interpretation, this one aspect of Vygotsky’s work remains a matter of faith.

Because they impinge on questions of schizophrenia, Vygotsky’s views
on language learning also require some mention. Vygotsky died long before the explosion of research into language acquisition and linguistics that we can draw upon today. In part, his conceptions rested unavoidably upon an inadequate view of the complexity of the task. For instance, he (1934b, p. 219) thinks that children start out expressing single words because their thought is "an amorphous whole" and that as they develop inner speech, they learn to map their thoughts onto larger structures.

Intensive study into language acquisition has confirmed that the mapping actually goes in the other direction. The toddler frequently uses single words to indicate sentential communication before he or she has had a chance to learn syntactic rules. We now know that the reason that children start out with one word utterances is that it is not possible simply to imitate language (Ervin 1964; Chaika 19895, pp. 17–18). At the time of the one-word stage, children haven't figured out the complexity of rules for word formation, much less for syntax and discourse, but this doesn't mean that their thinking is so limited. Gleitman, Gleitman, and Shipley (1972) showed that children under the age of 4 use adult standards to make grammatical judgments about the well-formedness of speech, even though the children themselves are still making the errors in their own productions that they detect in others.

Their knowledge is in advance of their actual linguistic skills. For instance, children confuse most sets of antonyms and other words in sets, such as *wife, mother,* and *sister* (Donaldson and Wales 1970; Clark 1971, 1972, 1973)6 for the same reasons that adults have so many slips-of-the-tongue involving them (Chaika 1974, 1977). Antonyms are used in the same syntactic environments and share a good many semantic features with each other. The child may confuse the words *big* and *small,* but this does not mean that he or she doesn't distinguish between a big piece of cake and a small one.

More recently, Slobin (1982), who has studied language acquisition in children learning languages as diverse as Turkish, Serbo-Croatian, and Italian, warns against assuming that a child's immature syntax mirrors similarly immature thinking. He suggests the metaphor of a waiting room. Children make use of the linguistic means at their disposal to express what they wish "while 'waiting' to master the adult forms (p. 168)." Lois Bloom (1970) even earlier made the point that even when the child was limited to a two-word utterance, like "Mommy sock," he or she would use that utterance for a variety of meanings, such as "this is
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Mommy's sock,” “Mommy, put on the sock,” “the doll has on Mommy’s sock,” or “let's find Mommy's sock.” The child certainly knows the difference between these meanings, but has to use what is at his or her disposal, depending on the adult to match the utterance to the context to get the right meaning.

Vygotsky's conclusion (1934b, p. 231) is unwarranted that a child's egocentric speech derives from “insufficient individualization of primary social speech,” such that children do not separate it from social speech and is “a correlate of the insufficient isolation of the child’s individual consciousness from the social whole” (p. 232).

To the contrary, study after study on child language acquisition has given us a picture of the child as an active investigator, controlling his or her input, setting up his or her own practice drills, deciding what he or she will learn (e.g., Brown 1973; Menyuk 1969; Kuczaj 1983). A particularly American experience illustrates. Children of European immigrants have regularly failed to learn their parents' native language despite being raised in homes in which it was spoken regularly. The United States provides us with a virtual laboratory of the baby’s sense of autonomy from social speech as represented by the languages spoken in its home. A very common occurrence in immigrant homes was—and is—that children as young as 2 years old make no attempt to imitate or practice a language spoken by grandparents, or even parents.7 The fate of bilingualism in America shows clearly that toddlers have already separated their individual goals from their families'. The family language constitutes the first social speech of the child.

In quite a different context, Cook-Gumperz and Green (1984) show the dangers in assuming that egocentricity8 in speech causes a child's speech productions, such as narrating a story in what appears to be a highly idiosyncratic way. What they found was that apparent deviations in such narrations actually represented a first step, so to speak, in relating stories. They examined books written for young children to see what effect these books might have on narration, finding that children include in their verbalizations representations of the pictures which accompanied the stories. Stories by children which researchers thought had no form actually do have the form of the books read to them including the graphic forms and their pictorial representations.

How Vygotsky's formulations would have changed had he lived we do not know. His conception of inner speech depended upon his beliefs about how children learn language and he claimed that these were based
upon experiments. Unfortunately, he did not describe them in any detail, nor did he show explicitly how his conclusions related to his results. In fact, he considered poems and passages from novels adequate proof and it is these which he specifically cites in defense of his opinions.

Vygotsky (p. 213) does remain fresh in his conception of the cultural origins of learning and how these are mediated by language learning. That is, as the child learns language, he or she does learn strategies for understanding as well as for speaking. For instance, Scollon and Scollon (1981) show how Athabaskan children learn how to abstract themes from stories as part of the child rearing practices in their culture. Ochs (1987), based on her study of Samoan children, demonstrates that even when one understands words in nonnative culture, one may not understand the point of those words. She claims that even though children may display egocentric speech, it means different things in different cultures, going so far as to suggest that Piaget's and Vygotsky's sharply differing views on egocentricity of early speech may have been because of the differences between Russian and Swiss societies.


Finally, common sense must prevail. If thought does not exist prior to language, then how does the speaker or writer know which lexical items (what are commonly called "words") to choose? If, indeed, thought and language are one and the same, we have no way to account for the words and syntax that are selected by the speaker. Since the speaker has many choices for any given thought or thoughts, it cannot be that the language is prior. There has to be a step previous to selection of language forms.

Notes

1 They attribute this deficit to a short term memory loss.

2 This is actually a question of some interest. There are tales of people learning to "speak schizophrenic" either because of being hospitalized for long periods with them, or because they were nurses or orderlies. However, I can find no longitudinal studies which confirm this. Nowadays, few patients remain in a hospital setting for very long, so the opportunities for observing such a phenomenon may no longer be present.

3 Rather than entering these by the dates of the translations, I have opted for this perhaps unconventional dating for the two versions. Kozulin's translation is substantively different from Hanfmann and Vakar's; he has revised the text; and has
provided his own extensive notes and preface. This preface, “Vygotsky in Context,” and the endnotes constitute another interpretation of Vygotsky’s work. What I have done is listed Kozulin’s lengthy prefatory essay as a separate work, which indeed it is. This was done in order to lessen confusion between the Kozulin preface and notes and the Vygotsky translations themselves.

Actually, Vygotsky and Piaget both dealt with this issue. Vygotsky disagreed with Piaget’s formulations of inner speech.

The literature is literally loaded with examples of children’s inability even to know what an adult is getting at. One of my favorites provided by Fromkin and Rodman (1983, p. 333) is:

Child: Want other one spoon, Daddy.
Father: You mean, you want the other spoon?
Child: Yes, I want other one spoon, please, Daddy.
Father: Can you say “the other spoon”?
Child: Other . . . one . . . spoon.
Father: Say . . . other.
Child: Other.
Father: Spoon.
Child: Spoon.
Father: Other . . . spoon.
Child: Other . . . spoon. Now give me other one spoon?

It is often said that autistic children do not distinguish their ego boundaries because they confuse the words you and me. All children confuse words used in sets like these. How they ever learn you and me correctly is a wonder. The children are always referred to as you and the other person always refers to him or herself as I. The child somehow has to learn to reverse these references despite the fact that they never hear them that way. Autistic children notoriously have language learning difficulties. We should expect that their problem with the words for first and second reference persist longer than in other children.

A friend of mine recently told me that he and his twin visited their grandmother every single day of their childhood, but, since she spoke no English, they never had any conversations with her and they really know nothing about her except for her baking prowess. They never learned her language at all. Similarly, a Cuban emigre acquaintance told me of the problems his son had with his father, the child’s grandfather. It seems that the father speaks no English, and the child knows no Spanish. When I asked why the child never learned Spanish which is spoken in the home, the answer I got was classic, “He’s American.”

They do not discuss this in the Vygotsian context, nor do they speak specifically of egocentric speech. However, the deviant narrations they are investigating seem to qualify.