Chapter One

THE FEATURES OF PSYCHOTIC SPEECH

The strange speech of some psychotics has baffled clinicians and laypersons alike, exciting all kinds of extraordinary interpretations. Some even have assumed that there is nothing wrong with schizophrenic speech, claiming that it is deliberate. An analysis of the linguistic forms of such speech demonstrate that it is definably different from normal speech, and the many kinds of deviations evinced are all disruptions of normal speech processes. This chapter demonstrates the kinds of disruptions responsible for psychotic speech.


Caplan (1980, p. 235) sums up the value of linguistic analysis of aberrant speech production:

... it utilizes psycholinguistic and linguistic constructs derived from scientific studies of language structure and processing rather than intuitive taxonomies and analyses. As a result, it achieves... specificity in the description of the linguistic and psychological deficits...

Such an analysis bears heavily on the question of whether or not schizophrenic speech shows structural deviation, as well as the nature of any deviation. It can be shown that such speech can be deviant although not all is. Furthermore, the kinds of deviation manifested in schizophrenic speech must be taken in account in any interpretation of it.


One of the most baffling characteristics of the kinds of speech that is associated with schizophrenia (henceforth SD) is that it is intermittent. Not all schizophrenics speak this way, and those who do, do so at some times and not at others. It is not only schizophrenics who are likely to speak this way. Manics do, and so do some with schizoaffective disorders.
For this reason, the term *psychotic speech* is more accurate than *schizophrenic*. Unless findings show that only schizophrenics manifest certain features of speech, and there are some that do, the former term will be used. Because some psychotics show no structural deviations in their speech, those who do will be termed SD, speech disordered speakers, as opposed to NSD, nonspeech disordered. A major problem in research has been that investigators have not ensured that they were testing only SD psychotics so that, often, studies seem to contradict each other because like populations have not been compared with each other.

Because of its intermittent character, many observers have assumed that it is deliberate and that the patient can speak differently if he or she so wishes. Laffal (1965), for instance, assumes that one of his patients resorted to deviant speech because he wished to avoid the therapeutic situation. Forrest (1965, 1976) maintains that SD patients are trying to say what it is to be schizophrenic, but that ordinary language is not sufficient for this task. It will subsequently be argued that as attractive as these positions are, they are untenable.

Bateson (1972, pp. 202–217) advanced the interesting theory that schizophrenics were caught in a double bind as children because they had unloving parents. When the child accused the parent of being unloving, he or she was punished and the parent denied lack of love. Hence, Bateson posited, the child did not learn to communicate properly. Bateson offered no observational proof of this theory, nor has anybody else done so. There is no case history proof that all schizophrenics or even most schizophrenics were ever caught in such a bind. Nor is there any evidence that normals have not been caught in such a double bind. The intermittent character of SD speech negates the double-bind theory. It cannot be the case that schizophrenics haven't learned how to communicate, because there are times when their communication is normal in structure. Another point of information relevant to the double-bind theory is that children learn language as much from peers and other adults as from their parents. In fact, sociolinguistic studies have determined again and again that the peer group is the primary source of a child's language, not the parent. Peer learning is one reason that language changes in every generation. In contrast, even when schizophrenic speech is displayed, it coincides with psychotic bouts. Most likely, then, it is psychosis which causes the speech, not failures in early language learning.

The cyclic character of SD speech must be explained, as well as the
particular deviations. SD patients might evince difficulty in a different stratum of linguistic production at different times, even in the same discourse. That is, at one time, a patient might have intact syntax but evince word-creation difficulty; yet, at another time, might show disordered syntax although words used seem to be usual words in the language (Chaika 1974; Rochester and Martin, 1979, pp. 177–178).

That I here and earlier (Chaika 1974, 1977, 1982a) present a list of the kinds of speech disruptions associated with schizophrenics does not mean that these are a “checklist” of symptoms as Herbert and Waltensperger (1982, p. 244) claim. No one patient may display all of the deviations reported in conjunction with a diagnosis of schizophrenia, nor will any particular deviation occur in all patients, both circumstances that I have always stressed. Even though no one patient may have evinced them all, many patients have evinced some of them, some patients have evinced them all, and, of course, some patients have evinced none of them, all circumstances which must be accounted for in any discussion of psychotic speech. All of the deviations presented here have been reported again and again as occurring in some schizophrenic patients at least some of the time. These are the deviations that have long excited comment, and those who evaluate psychotic patients rely on these symptoms for diagnostic purposes.

Still, researchers like Maher (1972), Fromkin (1975), Cohen (1978), and Herbert and Waltensperger (1980, 1982) claim that there is nothing structurally wrong with schizophrenic speech. Maher (1972, p. 13) says, “What seems to be most clear is that . . . perhaps most of the disturbances of language found amongst schizophrenic patients do not involve syntactic errors . . . .” With the exception of Fromkin, none of these are linguists so that their evaluations are essentially lay evaluations. Fromkin asserts that schizophrenic speech is normal creative language, and Cohen (1978, p. 1) stated that “. . . as cryptic or disorganized as schizophrenic speech may sound, it rarely (if ever) includes hard instances of agrammatism or word-finding deficits.” Yet word salads, outright gibberish, and other severe syntactic errors have long been reported in the literature. Hard instances of agrammatism have long been noted in the literature and are quite easy to find, as we shall see.

Lecours and Vanier-Clement (1976) assert that schizophrenics do not suffer from semantic errors or word-finding differences, although they do admit that schizophrenics make unusual, abstract, and bizarre word choices. This in itself, as they note, is not a sign of linguistic dysfunction.
Unusual word choices abound in witticisms, good prose, and artistic language, but these are quite different from schizophrenic unusual word choices. Witticisms, good prose, and artistic language in some way elucidate a message in a memorable or aesthetic manner. In contrast, schizophrenic “unusual” word choices rarely have any such relevance. Similarly, the “abstract speech” of schizophrenics differs from normal abstract speech. Any scholar indulges in the latter, but the abstraction is in aid of presentation of intellectual constructs and the abstract language in which such presentation is embedded is relevant to the points being made. Moreover, the scholars can bring it up again, discuss its import, rephrase it. In contrast, schizophrenic abstractions show no coherence to any point, nor can they usually be discussed, much less rephrased and refined. Paraphrasability is a hallmark of normal speech production. It is part of the essential character of language. Every normal utterance can be paraphrased. The paraphrase may not be as beautiful as the original or as succinct, but it can convey the same meaning. All psychotic utterances cannot be paraphrased. Here, and in subsequent chapters, we will see distinct definable and testable differences between the most creative of normal speech and psychotic speech itself.

Lecours and Vaniers-Clement do acknowledge schizophrenic gibberish but attempt to distinguish it from those in aphasic productions by claiming that schizophrenics reemploy their nonwords. However, there is no support in the literature to substantiate such a claim beyond the fact that, occasionally, within one stretch of speech, the same nonword might be repeated. There is presently no hard evidence that such reemployments last beyond that one interaction. My own study of psychotic narrative, The Ice Cream Stories, henceforth referred to as ICS (Chaika 1982e, 1983b; Chaika and Alexander 1986; Chapter 8), did yield some gibberish, but, the next week when patients were asked to recall their stories, they never reemployed the gibberish, nor did they even in the first telling. In addition, as the next chapter shows, apart from repetitions of a given word or nonword in one speech situation, there may be many other kinds of perseveration (Chaika 1982a; Manschrek, Maher, Hoover, and Ames 1985). It is the sum of repetitions and perseverations which must be accounted for.

Gibberish and neologisms are clear instances of word-finding deficits, and they, too, are easy to find. ICS yielded both syntactic and lexical deficits as well as deviations in global narrative structure. These lexical deficits included circumlocution reminiscent of mild anomic aphasia in
which the meaning is inappropriately spread over too many words (Chapter 8).

Schizophrenic utterances have been likened to poetry, sleeptalking, and the aphasias (e.g., Forrest 1965, 1976; Sullivan 1964 [originally published 1944]; Brown 1977; Chapman 1966; Benson 1963; Chaika 1974a, 1977; Buckingham 1974 [personal communication]). These comparisons are apt, and that they can be made at all is, in itself, revealing. There may well not be any single deviation which can't be found in other speech pathologies, or even in normal creativity and error. What characterizes speech as being particularly schizophrenic is some combination of errors depicted below, occurring cyclically, intermittently, but, in a given interaction, persistently.


Clinicians themselves have long considered the speech disruptions illustrated below as pathognomic of positive symptom schizophrenia. Andreasen's (1979a, 1979b) widely used diagnostic guidelines actually center on these kinds of speech disruptions although her terminology differs from mine (Chapters 2, 10, and 11) reflecting our mutually different backgrounds, but the characteristics she cites seem to accord with mine—or mine accord with hers.

Viewed in comparison with the levels of normal language, the features of schizophrenic speech are:

- gibberish
- neologisms
- opposite speech and other erroneous retrievals of words
- glossomania
- rhyme and alliteration inappropriate for the context
- intrusive errors
- word salad and other syntactic disruptions
- perseveration and other repetitions.

Any interpretation of schizophrenic speech and any hypothesis of its provenance must take these into account.

The first kinds of speech disruption are perhaps the most disruptive of all and seem to occur more rarely than the others

[1] Gibberish:

1A. ... gao, itivare ... ovede (Forrest 1976)
1B. [speaking about a pet] He still had fooch [fʊcli] with taykrimez [θeɪkraɪmz] I'll be willin' to betcha. (Chaika 1974)

Assuming that Forrest spelled his examples of nonwords as accurately as the orthographic system of English allows, then his examples of gibberish conform to the phonetic rules of English. Naive spellings, spellings which are used by those unversed in phonetic transcription, are frequently an accurate index to pronunciation. Most of our information about Colonial American English, for instance, derives from the study of semiliterate spelling errors. Of course, I am not calling Forrest semiliterate. Forrest is a sensitive psychiatrist, but the principle is the same. If one does not know a standard spelling for a word, then one will substitute letters from the ordinary orthography that would usually spell the sounds in question.

Fortunately, I was able to transcribe the gibberish I present, so I can attest to the fact that both the sounds used and their combinations are allowable in English. This is both interesting and significant as it suggests, but of course does not prove, that the speaker intended to utter an actual word in the language. The patient who uttered taykrimez above, for instance, aspirated the initial [t] as is required by English phonetic rules. Although these productions are gibberish, they seem to be gibberish in English. Phonologically and phonotactically, the only things wrong with any of these nonwords is that they do not happen to be words in the language, and a perusal of the venerable OED reveals that they never were.

[II]. Neologizing

2A. . . you have to have a plausity of amendments to go through for the children's code, and it's no mental disturbance of puterience, it is an amorition law. (Vetter 1968, p. 189)
2B. . . with syndicates organized and subsicates in the way that look for a civil war . . . (Herbert and Waltensperger 1982)
2C. I'm don't like the way I'm puped today in thought . . . because of
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the slash of my wrist like I'm was puped to do. I'm be puped tall letter I'm write to you... (Herbert and Waltensperger 1980)

As with the gibberish, all of this neologizing forms distinctly English nonwords, using unremarkable English roots and morphemes. *Plausity* has what appears to be the same root as the *plaus* in *plausible*, and the *-erience* in *puterience* occurs in words like *experience*. Similarly, *subsicates* is formed out of the common morphemes sub- and -icate. Since neither Vetter nor Herbert and Waltensperger provide IPA transcription, we can't know whether or not the *put* is pronounced like *putrid* or like the verb *put*. For the same reason, we can not determine how the *<u>* in *puped* was pronounced. I would assume that it was not the *<oo>* in *pooped* or they would have spelled it that way. I also have to assume that the other morphemes were pronounced as American speakers usually pronounce syllables spelled that way, for untrained ears typically adhere to spellings commonly used for given syllables. That is, if the patient pronounced *-ity, -erience*, and *-ition* normally, then the naive transcriber is most likely to spell those as he always does. In contrast, a linguist would use IPA and spell *plaus* with a [z] not an *<s>*, *-erience* with an [s], not a *<c>*>, and *-ition* with an [s] rather than a *<ti>*. Vetter and Herbert and Waltensperger also do not indicate meaning, presumably because the patient did not, and the context did not provide clues.

The gibberish and neologizing above are two halves of the same coin. Their only substantive difference is that gibberish is composed of sounds that do not form any recognizable word or morpheme. Neologisms, on the other hand, while still not forming words now in the language, do contain recognizable morphemes or other nonmorphemic parts of words. They are alike, however, in that neither results in recognizable lexical items in the language, nonwords. Furthermore, the patient who utters either does not or cannot say what it is that they have said. Robertson and Shamsie (1958) claim that the gibberish they observed in a multilingual belonged to different languages although they don't say how they determined this and, of course, they provide no phonetic transcription as a check. They admit that although the patient uttered a great deal of such gibberish, he wasn't “prepared” to explain what he said.

There are two logical reasons for this circumstance. One is the one Robertson and Shamsie presuppose: that the patient simply did not want to explain it. The other is that the schizophrenic intended to say something, but it would only come out as gibberish. In point of fact, if SD patients
do not explain what their gibberish means, there is no basis for the assumption that their gibberish is intentional. Gibberish is gibberish because no meaning can be extracted from it, just as neologisms are discerned as such because they convey no meaning. Therefore, all we can do is compare it to normal language and to other features of SD productions; thereby finding a consistent, rational and verifiable analysis for all of them.


Chapman (1966) and Chaika (1974a, 1977, 1982a), albeit on somewhat different grounds, argue that gibberish and neologizing are indicative of word finding difficulties. Considering that human languages are so constructed that new words can be made up and old words can be used in new ways to effect new meaning, it is not likely that neologizing and gibberish are a sign of creativity (LaFerriere 1977; Forrest 1976; Fromkin 1975). That is, there is usually a recognizable difference between normal creativity and unusual schizophrenic usages, although some find that link tenuous at best. For instance, Nancy Andreasen (1973), a psychiatrist with the rare qualification of also having earned a Ph.D. in literature, questions the artistry in James Joyce's *Finnegan's Wake*, claiming that much of it is merely schizophrenic speech, and that portions of this were rated as schizophrenic by raters, a claim sure to be contested by some Joyce scholars.

The gibberish and neologizing noted above occur within sentences with otherwise recognizable words, lending credence to the belief that the patient is trying to convey an actual message, but is undergoing problems in retrieval of words. Because anybody can use a new word in such a way that another can understand it, we have to count this as a real deficit since the patients seem not to be able to provide enough context for this to happen.

Over the years, those who would explain psychotic speech have imputed intention to such incomprehensible speech, claiming that it is deliberate. However, it is the very production of gibberish and neologizing which must be explained, not what it means, for it may mean nothing and even if the patient intended a meaning, we cannot always derive it. Trying to derive intent from grossly disordered speech is akin to an English speaker's making an interpretation of a Populucan sentence if she were dropped into the remote corner of Mexico in which that language is
spoken. If natives used graphic enough gestures, she might get some meaning and determine intention from them, but on the basis of their words, she could not impute intention because she can't understand the meaning of their utterances. It is true that we derive meaning partially—indeed largely—on the basis of what we perceive the intent of the speaker to be, but this is done by matching the words and syntax to the context of utterance and to the conventions of the social group in which it was uttered (Chaika 1989, pp. 114–115, and Chapter 7).

Moreover, we can never get away from the incontrovertible fact that a person who is having difficulty explaining an experience does not suddenly launch into gibberish or spout unexplained neologisms to do this. That is why schizophrenic speech has been labeled as schizophrenic and it is why psychiatrists and other researchers have devoted so much time and effort to explain it.

This does not mean that I think all psychotic speech is uninterpretable, as Hoffman and Sledge (1984, p. 153) strangely claim. They assert that I have said that “schizophrenic irregularity is identified according to its nondecodability.” Chaika (1974, 1977, 1981, 1982a,c,d,e, 1983a,b) has shown the contrary. One can't decode gibberish. That's why it has been called gibberish. Nor, frequently, can one decode word salads. That's why they have been called word salads. But many other less disrupted utterances of schizophrenics can be decoded very sensibly by reference to what we know of normal linguistic production and normal decoding strategies. By using such tactics, I have even been able to show that some schizophrenic discourse can be understood by our usual strategies, and, in fact, is quite normal (Chaika 1981). It is part of the beauty of our natural linguistic abilities that we can decode imperfect speech. If we couldn't, then we would never be able to understand toddlers, foreign speakers, and those with various speech impediments. It is only the most highly disrupted speech which we cannot understand by usual means. Some schizophrenic speech is comprehensible. Some is not. Some comprehensible schizophrenic speech may still be definably bizarre or “schizophrenic” in the sense that term has long been used.


The relationship between neologisms and gibberish is that both may be caused by a failure in retrieving an intended word from the mental
They appear to be severe instances of what in normals are called slips of the tongue.

Fromkin (1975) asserted that such schizophrenic errors were no more abnormal than normal slips of the tongue, providing as instances of normal slips:

3A. Soul hecond path
3B. Slee throwed sloth

She says that if one did not know the context or the reference... “soul hecond path” for “whole second half,” or “slee throwed toth” for “three toed sloth,” these would seem to be gibberish as much as the schizophrenic “He still had fooch with teykrimez.” (X reported in Chaika 1974). In this evaluation Fromkin ignores a crucial difference between normal slips and psychotic ones. Normal slips show distinct patterns and are in a sense orderly as one can retrieve the speaker’s intended words quite easily. For instance, one need only isolate the consonant phonemes in each phrase Fromkin mentions and move them to corresponding positions in other items in the phrase until the apparently intended words appear. For “soul hecond,” only the initial consonants need be transposed. Path can be explained easily on the grounds of similarity of phonetic features. Both the intended lexical item and its substitute contain acoustically similar consonants initially and finally, and have the same vowel sound. Furthermore, confusion of /θ/ for /f/ is a common cross-dialectal and child language phenomenon as when mouth is pronounced “mouf.” “Slee throwed toth” is correctable by moving the initial consonants to their proper places. This is a typical anticipatory slip in which the /sl/ of sloth replaced the initial consonant cluster of three; then the initial cluster of three replaced the initial cluster of toed; finally, the initial consonant of toed replaced the initial cluster of sloth, so that the error constitutes a retrievable round robin.

This is not possible with the gibberish reported in Chaika (1974a). Transposition of phonemes does not correct “[fUc] ‘fooch’ with [tθekraimz] ‘teykrimez’” or [sɔwɔndan] ‘sawendon’ saw [θ3 rɔ’turch’ [fɔ]’law’ [juəri]’juerie” (Chaika 1974a, p. 260). These schizophrenic errors are not orderly as are those presented by Fromkin (1971, 1975). Like a child’s errors or a foreigner’s, a normal slip can usually be understood by regular human decoding ability. Psychotic gibberish can’t be.

GLOSSOMANIA, also known as ASSOCIATIONAL CHAINING, is often cited as a particularly schizophrenic verbal display (Werner et al. 1975; Lecours and Vanier-Clement 1976). It is related to SYNONYM. It seems to me that glossomania is related to the fact that synonyms are never complete. Even when two or more words share some meaning, typically they do not share them all, and even when they do share meaning, they often cannot be used in the same contexts. That is, synonyms typically have different COLLOCATIONS, words they may co-occur with. They are synonyms only to the extent that they share a common meaning.

For instance, note the differences in the semantically almost identical words roast and bake:

- Roast the peppers and the beef.
- Roast the pork.
- Bake the ham.
- Bake the cake or the cookies.
- Bake the potatoes.
- Roast the potatoes.

The kind of potatoes referred to changes according to the verb selected. Although both roast and bake refer to cooking in an oven, roast potatoes are peeled and cooked with a roasted meat, but baked potatoes are cooked with jackets on, often apart from any other foodstuffs in the oven. Synonyms, even very close ones, can allude to quite different things in certain contexts. Despite their shared semantic features, they often don't easily substitute for each other.

Glossomania is a chaining in which shared meanings of words progress linearly, so to speak, from one phrase to another, getting progressively further and further away from whatever meaning was apparently intended as in the following excerpts:

4A. Did that show up on the X-rays?
You'll see it tonight
I've been drinking phosphate.
You'll see it in the dark (inaudible)
Glow.
We all glow as we're glowworms. (Patient X reported on in Chaika 1974.)

Here, the mention of X-rays appears to have triggered the mention of
phosphate, which triggered the statement that something will be seen in the dark, which triggered the word *glows*, which triggered the statement about *glowworms*.

4B. My mother’s name was Bill.

(low pitch, as in an aside, but with marked rising question intonation)

...And coo?

St. Valentine’s Day is the official startin’ of the breedin’ season of the birds.

All buzzards can coo.

I like to see it pronounced buzzards rightly.

They work hard.

So do parakeets. (Patient X reported on in Chaika 1974)

In the above, the name *Bill* reminded X of the now almost archaic expression *bill and coo*, which is a reference to lovebirds. Hence, St. Valentine’s Day, the holiday of love, is mentioned, followed by comments about birds, including another repetition of *coo*, this time attributed to buzzards. Expressions like “they work hard” are common short phrases of the sort that are often spoken in full almost as automatic responses. In fact, it is such bizarre couplings, here of buzzards and working hard, that are especially indicative of the automatic nature of glossomanic chaining. Phrases and words related to each other in some way elicit each other, although they are inappropriate.

The following samples of glossomania were elicited by Bertram Cohen (1978) from first admission acute schizophrenic males describing Farnsworth-Munsell color disc #2, a salmon pink:

5A. A fish swims. You call it a salmon. You cook it. You put it in a can. You open the can. You look at it in this color. Salmon fish.

Here, the color reminds the speaker of the color of a fish, a salmon. Salmon is typically eaten after it has been cooked and canned, hence the allusions to this process. What is especially interesting in this response is that the very first statement of identification is the generic “a fish swims,” even before the color is identified. The swimming has nothing to do with the color naming task, but fish swim and the color reminded him of a fish.

5B. Pancake make-up. You put it on your face and they think guys run after you. Wait a second! I don't put them on my face and guys don't run after me. Girls put it on them. (Cohen 1978, p. 29)
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In this, Cohen's subject apparently correctly identified the discourse as being the color of pancake make-up which goes on the face and which is something identified with girls who want to attract guys. This leads to the comment that the speaker doesn't use it, so that guys don't run after him which is followed by the avowal that girls use pancake make-up.

The following were all elicited from Disc #35

5C. How blue I am (singing). If I were blue, I'd like to be this green instead, I really like it. You could put it in a salad and eat. (Cohen, p. 28)

Here the green color chip apparently reminds the patient of a commonly sung or spoken phrase involving the color blue which is related to green, and like green has a special metaphorical sense. Blue is associated with melancholy in English, and green with youth or innocence. Both can appear syntactically after the verb be to indicate the state mentioned, as in "I am blue/green" or "She is blue/green." The mention of the target word green triggers the food that is usually green, salads, and that, in turn, elicits eat.

5D. Green (SHOUTS) Hold on, the other is too! In the garden such a green is unlikely. Too synthetic! The other is more gardenreal [Cohen's spelling as one word], piecemeal, oatmeal green, greenreal, filmreal, greenreal. (Cohen, p. 28)

This shows still other kinds of associations. Green is evocative of gardens, but the speaker feels that this particular green is not the green of gardens. It is synthetic. Synthetic is the opposite of real, so the speaker combines into one word repetitions of both garden and real. This evokes the rhyming association of piecemeal, which leads to another compound word with meal, then the green is picked up again, this time wholly inappropriately as oatmeal is not really green. Then both green and real are triggered, this time in a new compounding. Cohen gives the spelling of real in filmreal, but the association could very well have been reel of film. The homophony of real and reel could have triggered the word film. As will be shown shortly, glossomanic chaining may also occur because of other kinds of similarity between words such as their rhyming or alliteration, and then we have to see the differences caused by antonymy.

In all of the above passages, chains of utterances are related to each other on the basis of partial semantic similarity of immediately prior statements. As Vonnegut (1976) wrote of his own schizophrenic episode,
the schizophrenic pays too much attention to everything at once. Irrelevant associations which are normally suppressed come to the fore inappropriately, leading the SD speaker to hop from one to the next without relating them to a topic. Many of these synonymous chains also have common expressions like "they work hard," "I am blue," and "picnic on the green" interlarded with the semantically triggered retrievals.

Such output indicates a lack of control of normal speech processes in which such phrases and lexical associations do not usually figure. That this can happen even in relatively constrained environments is amply shown in Cohen's study.


Glossomania can also be triggered by chance repetition of morphemes with or without shared meanings:

6. . . . Das ist vom Kaiserhaus, sie haben es von dem Voreltern, von der Vorwelt, von der Urwelt, Frankfurt-am-Main, das sind die Franken, die Frankfurter Wurschtchen, Frankenthal, Frankenstein . . . (Maher 1972, p. 9)

Besides the semantic connection of the Kaiserhaus with the Voreltern, ancestors, there is the repetition of the morpheme Vor- in Vorwelt, and the -welt in Urwelt, and, of course, the Urwelt is literally the Vorwelt as well. Since the Kaisers were descended from the Franks, there is a semantic connection between Kaiserhaus and Franken. The city Frankfurt-am-Main was named for the Franks, therefore eliciting mention of die Franken. Frankfurter Wurschtchen, little sausages made in Frankfurt, repeats the morpheme Frank, as does the name of the city Frankenthal and, of course, Frankenstein. We certainly have no difficulty seeing the connections between the phrases in 6 above, but we still feel its bizarreness. In addition to the repetition of morphemes, this passage also displays alliteration. In German, a word initial V as in Vorwelt and von and the F in Frank are both pronounced as [f]. This chance alliteration might also have prompted the mention of these words.

This passage consists of words that are especially tightly related both morphemically and semantically in certain features. It is, nevertheless, incoherent and recognizably schizophrenic because it is not subordinated to a topic. Each phrase is glued to others by inherent features in the
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lexicon of German. The phrases in which some of the words are embedded are themselves trite phrasing serving as a vehicle to present the words.


Glossomania may also be triggered by chance phonological features of words, resulting in rhymes and alliterative strings inappropriate to the topic or occasion of discourse, as in:

8. [in response to statement “Hello, anyone here want some coffee?”]: Head, heart, hands, health. (Chaika, 1974a)

The alliterative chain “head, heart, hands, health” appeared to have been prompted by an exceptionally strong aspiration on “Hello . . . here . . .” the h’s elicited the “four H’s” (of the young farmers’ organization). This is virtually a clang response. Clark (1970) comments that this kind of response occurs in word association testing, especially if subjects are forced to respond rapidly, although 8 did not result from any limit on response time.

The following two were produced in the ICS:

9A. Little girl in candy store. Mommy and Daddy away [pause] that day. . . .
9B. Little girl in candy store. [pause] Runnin’ free. Her parents did not really care. So she just gets up and takes to the air.

The last two, 9A and B, were produced by the same person one week apart. In both instances, the patient uttered these with a strong repetitive beat, and paused before the rhyming line just as if he were reciting poems in grade school.


At times, psychotics may start talking on a topic and suddenly slip into another. This differs from glossomania because there is no chaining on the basis of morphemic or phonological similarity. Rather while speaking of one thing, the patient suddenly starts to recount another. The following narrative was elicited by asking a patient to describe the ICS
videotaped sequence. The videotape showed no boys, nor did it have anything to do with anybody looking out for anybody else, or anybody getting blamed for anything or anything about men using other people. The narrator here did mention that the video brought back memories, but there was no elucidation of “that area” or what it is that people will do every time. There seems to be a general mixing up of various ideas and memories of actual events:

10... I was watching a film of a girl and um s bring back memories of things that happened to people around me that affected me during the time I was living in that area and she just went to the store for a candy bar and by the time ooh of course her brother who was supposed to be watching wasn’t paying much attention he was blamed for and I did not think that was fair the way the way they did that either so that’s why I’m just asking yah could we just get together and try to work it out all together for one big party or something ezz hey if it we’d all in which is in not they’ve been here so why you just now discovering it. You know they they’ve been men will try to use you every time for everything he wants so ain’t no need and you trying to get upset for it. That’s all. That’s all.

Harrow, Lanin-Kettering, Prosen, and Miller (1983) employ the terminology “intermingling and loss of set” for such speech. They use this terminology for glossomanic chaining as well (Chaika and Lambe 1985). Their terminology just labels the behavior. It does not explain it in any way. In what ways does it intermingle? How is this different from normal recollection of the “Oh, that reminds me...” variety? As we shall see, changes of topic, hence “loss of set” is a normal and usual phenomenon. Yet, 10 above is typical of psychotic speech. How does it differ from normal changes of topic and what can have caused it?


Comparing psychotic glossomanic productions to normal ones subordinated to the topic or nature of the social interaction makes manifest the difference between controlled and automatic retrieval of linguistic forms. Glossomania sets off a round of synonyms, rhymes, alliterations, or personal memories not germane to the matter at hand. This seems to be an automatic process. Normal speech is controlled, subordinated to both
the social situation and the intent of the speaker. There is no such control in glossomanic chaining and related intrusions.


Schizophrenics also have been reported to use an antonym of an appropriate word or to otherwise select the wrong word for what apparently would be the correct meaning.

11A. Dr. Dean, come here.
Pt. What, you said go already.
Dr. No, I didn’t say go. I wanted to sit down near you Dean.

(Patient leaves room, and doctor follows)

Dr. Mr. Redfield, come on, I want to talk to you.
Pt. You want to talk to him? (pointing to another patient)
Dr. No, I want to talk to you. Laffal (1965, P. 84)

11B. [the patient said] yes for no, always for never, I do know for I don’t know. (Laffal, 1965, pp. 31–35).

11C. I seen a little girl lookin’ in the window ’n ah say wan’ some ice cream so but didn’t have money to get it so she asked her mother ’n her mother said not now because it’s near suppertime uh the kid was put down so he goes to the father ’n the father say ch-told where to go gave him the money so she could buy ice cream . . . she was sittin’ there . . .

Laffal believes that the patient used opposite speech in order to avoid the therapeutic situation. It is entirely possible, however, that the patient was having difficulties in discriminating between words which share semantic features. 11A, for instance, was produced after a stretch of gibberish. The patient who produced 11C was telling me what he had seen in a video I had presented the week before. He confused masculine and feminine pronouns, and the sittin’ there referred to the girl’s standing there. It is surely not without significance that the substitutions seen here parallel the kinds of error prevalent in normal slips of the tongue. Fromkin (1971, p. 46) says

The literature and my own data attest the fact that, besides the phonological similarity in substituted words, errors often involve semantic features in common or substitution of antonyms, i.e., words having the same features with opposite values.
She gives as examples of antonymous slips:

- I really like to—hate to get up in the morning
- It's at the bottom—I mean—top of the stack of books
- This room is too damn hot—cold
- The oral—written part of the exam.

Normal slips of the tongue commonly consist of antonyms or other words in sets so that people say up for down, more for less, big for little, or stove for refrigerator. Children typically use one-half of an antonymous set to stand for each, for instance saying up when they are in your lap and want to go down. Additionally, in word association testing, antonyms are the most common response, even more likely than synonyms. The reason for this is that antonyms are actually more alike than synonyms are. They typically can appear in the same linguistic environments and share all features of meaning save the one that distinguishes between them. For instance,

- This elevator goes up / This elevator goes down.
- I want more / I want less.
- He's so big / He's so little.
- Put it in the stove / Put it in the refrigerator.

Antonyms and related words in sets, unlike synonyms, are easily substitutable for each other, which explains why they are more likely to be given in word association tests than synonyms are. This is true of words that belong in the same semantic sets, such as color words. Such responses are called paradigmatic associations (Clark and Clark 1977, pp. 477–483). It is generally conceded that testing of word associations gives us a picture of the probable organization of the mental lexicon. It is important, therefore, to note that schizophrenic errors implicate word sets that are common responses in word association testing.

There is corroborating evidence for the position that opposite speech and other confusions of semantic features on words are not deliberate. A patient, here called Y, presented me with what appeared to be some interesting confounding of closely related words. Consequently, I devised a simple test to see if he could distinguish whether or not certain sentences and words meant the same thing or not (Chaika 1977). During our first interview, Y commented:

12. I think you can [help me]. You're an open system.
   I'm an open system.
Knowing that the verbs *have* and *be* (Chapter 5) have the same meaning in certain paraphrases, I suspected that he might have meant 'You have an open system. I have an open system.' In 12, the verb *be* is inappropriate. Humans usually can't be systems. However, in certain sentences, those involving locations, *have* and *be* alternate depending upon the subject of the sentence. If a location is the subject of a sentence, a form of the verb *have* must be used, but a synonymous sentence with the location postponed to the end of the sentence would require *be*, as in

- The box **has** toys.
- The garden **has** roses.

Here, the box is the location of the toys, and the garden is the location of the roses. Because the locative noun is in subject position, it does not take a preposition, although speakers know that the subject is the location. If the location appears at the end of the sentence, then the preposition must be stated and the verb is a form of *be*,

- Toys **are** in the box.
- Roses **are** in the garden.

One can't say *Toys have in the box.*

Because Y told me that he was a cookware salesman, in the same conversation I asked whether he gave discounts. **He** replied

13. Yes, I'm 75%, 50%.

This makes sense only if one assumes that Y meant 'Yes, I give 75%, 50%. This again appears to be a confusion between two words with shared semantic features.

As Bendix (1966) showed, a componential analysis of English verbs reveals that there is a large set of verbs which share a great many semantic features, and, like antonymous pairs, differ from each other only by one value. Although the verb *take* is not the issue here, it will be used to illustrate componential analysis of semantic features. *Give* and *take* share the meaning of "be in possession of." These are reciprocal verbs, indicating the same action. They differ in that the source of one action is the object of the other. If Jack gives me something, then I took it from him. There is also a feature of time involved. To *take* is to *be* in possession at the time one is speaking of; that is, it is to *have* possession. To *give* is not to *be* in possession at that time; that is, it is not to *have* possession. *Give* (and its reciprocal *take*) contain both the features of *be* and of *have*. Notice the four-way synonymy of the following:
• I gave him arms.
• He took arms.
• He was armed.
• He had arms.

If Y had a disruption in his ability to assign semantic features to lexical items, he could easily confuse have, give, and be. The disruption need not be permanent. It coincided with his psychosis at the time of the interviews. To test this hypothesis, I devised a simple test. After receiving informed consent, Y was asked to tell whether two short sentences differentiated only by antonyms were alike or different. These were presented orally with the verbs in different persons and tenses and the order of presentation was randomized. Typical sentence pairs were:

• I have an open system/I am an open system.
• You are 75%/You give 75%.
• John brought books/John took books.
• Henry lost his watch/Henry found his watch.

He said that each pair above was the same. His incorrect judgment on the first two pairs coincided with his incorrect production of 12 and 13 above. He did confuse the pairs of verbs have and be, and be and give, saying they meant the same thing in contexts in which they didn’t. Thus, as Fromkin noted in slips of the tongue, he substituted words with semantic features in common. He also substituted antonyms, words having the same features with opposite values, such as brought and took, and lost and found.

Y did not have complete inability to judge antonyms for he correctly identified the following pairs as being different.

• I became 40/I am 40.
• Jack is tall/Jack is short.
• I take 75%/I give 75%.

He was then tested on sets of words, some of which differ in their morphological structure, notably affixes, and some of which are antonyms. He had no difficulty in distinguishing the following pairs as being different.

• lie-liar
• lie-truth
• tall-short
• trap-trapper
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- hypnotize-hypnotist
- tall-taller-tallest

However, again, he judged the following as being the same when given as individual words.

- is-has

He also rated as being alike:

- getting into-getting off.

Both the opposite speech presented by Laffal and patient H's twin difficulties with antonymy and synonymy match Fromkin's slip of the tongue data.

Kaplan (1957) claimed that "opposite speech," the use of the antonym of a target word, comes from "a relatively lower stratum in the development of linguistic thought organization." That is, it represents a step prior to the selection of an intended word. Jason Brown (1977), speaking more broadly, says, "Even pathological speech forms can be thought of as a preliminary level in normal language that pathology has brought to the fore." That is, the word actually uttered is not the one intended, but one related to it in one or more different ways. Such a view explains the correlation of opposite speech with slips of the tongue and responses in word association testing, as noted above. It also explains the occurrence of opposite speech in schizophrenia. That, too, can be seen as an instance of retrieval of words semantically related to target words. In a sense, opposite speech and other such retrievals are severe and persistent examples of the slip of the tongue phenomena.

Although he interprets these data differently from me, Laffal (1965) demonstrates that the words in opposite speech are antonymous to those appropriate for the context. "I do know" vs "I don't know" is an antonymy at the level of syntax as well as of semantics, as the language encodes that meaning onto a grammar rule operating at the level of the clause.


Interestingly, errors caused by retrieval of antonyms of apparently target words do not seem to be implicated in the kinds of verbal chaining that are strongly associated with psychotic speech. The reason for this might be that the antonymic set is completed with two words or phrases,
the two opposites, whereas synonyms, rhymes, and alliterative sets are far longer and more complex. There are typically several synonyms and paraphrases for any given word or phrase, there are potentially many rhymes, and, of course, many words start with the same sound. Therefore, once a synonymic, rhyming, or alliterative chain is accessed, it can literally go further than an antonymic set. There is not so much of a natural brake for these as there is for antonyms which can be considered chains with only two links.


The picturesque term word salad was coined to describe an odd jumble of words which sound like connected discourse, but are lacking the syntactic markers to subordinate them to syntactic structures. This, of course, leads to incomprehensibility even when the words themselves are quite ordinary and usual, as we see in:

14. After John Black has recovered in special neutral form of life the honest bring back to doctor's agents must take John Black out through making up design meaning straight neutral underworld shadow tunnel. (Lorenz, 1961)

Allied to word salads are stretches of discourse which, for the most part, conform to normal sentence structures but in which some syntactic markings are, nevertheless, missing. As in the following, it is often possible to decode these simply by adding the missing syntactic cues. In 15A, for instance, the verb and noun suffices -ing and -ion are missing, and in 15B, verb tense and possessive endings are missing as indicated in the boldfaced words, as is -ize on memory. Also, such syntactic markers as the use of the auxiliary do in “I still not have...” is omitted:

15A... succeeded in the pull of a perfect crime... framed by the artificial inseminate Detroit Michigan is in danger of have of World War III site Russia and Israel is try to drive me to approve of war against Canada. (Herbert and Waltensperger, 1980, p. 85)
15B. I am being help with the food and the medicate... to speak and think in a lord tongue... the memory knowledge... I still not have the thought pattern.... (courtesy of Dr. Bonnie Spring)

The above show clear instances of errors in sentence syntax and certainly falls into the category of agrammatism. Syntactic markers such as
the -ing morpheme to indicate gerunds, the -ion morpheme to change a verb to a noun, and the -ing indicating the present progressive of try are all missing.


Besides missing syntactic markers, the larger discourse in which 15B was embedded also showed perseveration beyond the requirements of the discourse (Chapter 7, 9, 10, 11), resulting in the repetition of words and phrases such as the food and the medicate. The pathological nature of this perseveration can be appreciated only by seeing the entire. There can be no explanation for psychotic speech without also taking into account such perseverations.

16. well I want to work for god in the mission and to work for god in the mission you have to be able to speak and think in a lord tongue in my opinion now to speak and think in a lord tongue you have to be able to memory the process memory the parle- the process in the bible the thought pattern the brain wave and your thought process must be healthy enough and your legs must be healthy enough to when you want to study and and from when you want to study and progress in the way of the lord you should you should read the bible and as you read the bible you should if you are in good shape physical and mental and mental good shape and physical good shape you should be able to with your thought process your mental process and your brain wave you should be able to acquire the memory knowledge necessary as to study the bible to speak and think in a lord tongue you should be able to memory all the knowledge down on down on the page in the bible book to work for god in the mission now in the position I am in now with the medicate and with the hospital program I am being helped but at the same time that I am being help with the food and the medicate and the the food and medicate and the ah same process that I am being help by the food and medicate and the and the ah rest I feel that I still do not have this I still not have the thought pattern and the mental process and the brain wave necessary top open up a page open up the old testament and start to memory it the old te- the old new testament page of the bible start to have me-memory knowledge necessary to speak to think in the lo- speak and think in the lord's
tongue while you study while you study the bible while you study
the bible the memory the knowledge necessary to go to work for god
in the mission so when your thought problem your brain wave and
your mental process is quick enough you will be able to memory the
knowledge in in the old testament and new testament bible and
from memory knowledge in the old testament and new testament
bible you are able to memory the knowledge necessary to to mem­
ory the knowledge necessary necessary to think and speak in the
lord's tongue and go to work for god in the mission. (Data courtesy
of Dr. Bonnie Spring)\textsuperscript{10}

Rutter (1985) claims that psychotic speech emanates from a social
dysfunction, that the speaker fails to take into account the needs of the
listener. The kinds of anomaly laid out in this chapter make manifest
the difficulty with such an interpretation. We have seen disruption at
every level of language, from word formation to discourse.

We all at least sometimes fail to take into account the needs of our
listeners. Bores frequently do, as do the overly taciturn, but such failure
does not take the form of gibberish, word salads and the kinds of circular
discourse we have just seen. These all indicate a larger problem.

The next chapter will attempt to give a unified explanation of this
almost bewildering variety of linguistic dysfunction, exploring as well
what schizophrenics have said about their own condition.

Notes

\textsuperscript{1}Using participant observations, researchers can devise a wide variety of tasks,
e.g. asking for directions, both during an SD patient's psychotic bout and when in
remission.

\textsuperscript{2}Robertson and Shamsie (1958) do claim that a multilingual patient was speaking
different languages in gibberish, but they offer no proof that this was actually so and
none of the gibberish I have ever heard or seen mentioned in the literature supports
their conclusion.

\textsuperscript{3}When new words are coined, they typically are not heard as neologisms, but as
slang or metaphor. For instance, whoever coined the metaphor \textit{uptight} in the 1960s
would not have been perceived as uttering a neologism as it was understandable by
normal means of decoding.

\textsuperscript{4}For the uninitiated, both \{f\} and \{θ\} (\textit{th}) are made by forcing air between the lips
and upper teeth (for the \{f\}) and the tongue held behind the teeth (for \{θ\}). Because
friction is produced, these are both called \textit{fricatives}. Additionally, both are produced
with the vocal cords spread apart so that a hissing sound is produced. This results in
voiceless sounds. Both are voiceless fricatives. When sounds are so similar they often are involved in slips of the tongue. (Voiced sounds occur when the vocal cords are relaxed and air pushed through them vibrates, as in making a [v]).

5Cohen's interpretation of these data did not agree with mine, however, and he is in no way responsible for my interpretation.

6Notice that other primary colors like red, orange, or white cannot be used alone to indicate some other state.

7Actually, other verbs could also be substituted for be with slight differences in connotation, such as “The toys are lying in the box” and “Roses are growing in the garden.” This does not affect the analysis here, however, since the alternation between have and be still holds, so that a confusion between them still can occur.

8The reader may disagree that be and become are true antonyms. They pattern with antonyms because they can be inserted in the same environments in most instances.

9The transcript of this monologue capitalized the first person pronoun and nothing else. I have adhered to this practice.

10Dr. Spring does not necessarily endorse my interpretations of these data, however.