VOL 12, NO. 3, 1986

Scale for the Assessment of Thought, Language, and Communication (TLC)

by Nancy C. Andreasen

The following set of definitions was developed to improve the reliability of assessments of "formal thought disorder." In the past such assessments have been unreliable at least in part because clinicians and researchers have not agreed upon the meaning of the terms which they have used. It is hoped that the following definitions will provide a common and reliable stock of terms to describe the language and cognitive behaviors which can be observed in psychiatric patients.

This set of definitions began with a clinical recognition that the concept of "formal thought disorder" has often been misused and misunderstood. First, it has often been treated as if it were unitary, but in fact it is composed of a number of different language behaviors which are conceptually divergent and not always correlated in the same patient, such as "poverty of thought" and "loose associations." The recognition of the diversity of concepts and terms has led to the specification of 18 different types of "formal thought disorder."

Second, it has been assumed that "formal thought disorder," or at least "thought disorder," is pathognomonic of schizophrenia and omnipresent within schizophrenic patients. Clinical experience contradicts both assumptions. Language behaviors such as associative loosening, clanging, blocking, overconcrete or repetitive speech, and poverty of speech also occur in other psychiatric disorders such as mania or depression, and they also occur in the speech of people who do not meet the criteria for any psychiatric diagnosis, particularly when they are fatigued or stressed. Furthermore, some schizophrenic patients seem to speak and think normally, with only specific delusions or hallucinations (i.e., disorders of content of thought or perceptual disorders) as manifestations of their schizophrenia.

Because the term "formal thought disorder" has been so misunderstood and misused, it is recommended that it no longer be used. The various disorders which comprised the concept of "formal thought disorder" can be better conceptualized as "disorders of thought, language, and communication." If viewed from an empirical perspective, most of them are in fact disorders of communication, and the notion of thought need only be invoked to explain a few of them.

That is, the following set of definitions began with the idea that the reliability of assessments could be improved if "thought disorder" were defined in terms of language behavior, and only behavior which could be directly observed would be evaluated. Most of the time, the language behavior involves a dyadic interaction between a speaker and a listener, and the disorder occurs because the speaker fails to follow a set of rules which are conventionally used to make it easier for listeners to understand. When the speaker fails to take the various needs of the listener into account, the result is usually a communication disorder. According to this definition, the following items from the scale are "communication disorders": poverty of content of speech, pressure of speech, distractible speech, tangentiality, derailment, stilted speech, echolalia, self-reference, circumstantiality, loss of goal, perseveration, and blocking. The concept of language disorder should be invoked for those specific disorders in which

Reprint requests should be sent to Dr. N.C. Andreasen, Department of Psychiatry, University of Iowa College of Medicine, 500 Newton Road, Iowa City, IA 52242.

the speaker violates the syntactical and semantic conventions which govern language usage: incoherence, clanging, neologisms, and word approximations. The concept of thought disorder comprises only those disorders in which thinking alone seems aberrant: poverty of speech (aberrant because thought seems not to occur) and illogicality (aberrant inferential processes). These various disorders can be referred to collectively as thought-language-communication disorders, or TLC disorders.

Experience in using this scale has indicated that some TLC disorders are more suggestive of severe psychopathology than others. These have been grouped together at the beginning of the scale and consist of the first 11 items. The data collected to date concerning the frequency of these various TLC disorders in mania, schizophrenia, and depression are summarized in the appendix. As those data indicate, some TLC disorders considered to be very important in the past, such as neologisms or blocking, are in fact so infrequent as to be of little use in assessing most patients.

In choosing which disorders to cover in the scale and how to define them, decisions were sometimes made to redefine, combine, or delete older concepts in order to enhance reliability. For example, the term "loose associations" has not been used because it is based on an outdated associationist psychology and because it has been used so loosely as to be nearly meaningless. The term "derailment" has been substituted because it carries a minimum of baggage and because it is graphically descriptive. Four other terms which also may be at times equivalent to the older concept of associative loosening are used in the scale: tangentiality, incoherence, illogicality, and clanging. Since it is probably impossible to achieve good reliability when clinicians must make judgments on how close relationships are between various ideas, definitions which must turn on this judgment have generally been eliminated. Therefore, for example, the term "flight of ideas" has been dropped and is now subsumed under the concept of derailment. In order to permit an assessment of thought, language, and communication in a wide range of patients, the definitions have not been limited to disorders customarily considered to be characteristic only of schizophrenia. Definitions of two terms which are drawn from aphasiology, semantic and phonemic paraphasia, are also included so that they can be distinguished from incoherence.

Most of the ratings can be made after a patient has been evaluated with an ordinary psychiatric interview, since this is a good vehicle for eliciting typical patterns of speech using relatively standardized questions. During some time the patient should be permitted to talk as long as possible to observe his speech during this condition. The patient should be interrupted at some time in order to see how he responds to this.

Most of the ratings are described quantitatively, i.e., how often they occur during an interview. These ratings are based on the assumption that most interviews take about 50 minutes. For longer or shorter interviews, the values should be adjusted accordingly.

The interrater reliability of these definitions has been carefully evaluated and found to be very good. For a phenomenon such as TLC disorder, which depends on subjective judgments about phenomena which may change dramatically over a few days, interrater reliability is more meaningful than test-retest reliability. The data in the appendix concerning reliability are based on live interviews of 113 patients (32 manics, 36 depressives, 45 schizophrenics).

1. Poverty of Speech (Laconic Speech, Poverty of Thought)

Restriction in the *amount* of spontaneous speech, so that replies to questions tend to be brief, concrete, and unelaborated. Unprompted additional information is rarely provided. For example, in answer to the question, "How many children do you have?", the patient replies, "Two. A girl and a boy. The girl is 13 and the boy 10." "Two" is all that is required to answer the question, and the rest of the reply is additional information. Replies may be monosyllabic, and some questions may be left unanswered altogether When confronted with this speech pattern, the interviewer may find himself frequently prompting the patient in order to encourage elaboration of replies. To elicit this finding, the examiner must allow the patient adequate time to answer and to elaborate his answer.

Example: Interviewer: "Do you think there's a lot of corruption in government?" Patient: "Yeah, seem to be." Interviewer: "Do you think Haldeman and Erlichman and Mitchell have been fairly treated?" Patient: "I don't know." Interviewer: "Were you working at all before you came to the hospital?" Patient. "No." Interviewer: "What kind of jobs have you had in the past?" Patient: "Oh, some janitor jobs, painting." Interviewer. "What kind of work do you do?" Patient: "I don't. I don't like any kind of work. That's silly." Interviewer: "How far did you go in school?" Patient: "I'm

still in the 11th grade." Interviewer: "How old are you?" Patient: "Eighteen."

0 No poverty of speech. A substantial and appropriate number of replies to questions include additional information.

1 Slight poverty of speech. Occasional replies do not include elaborated information even though this is appropriate.

2 Moderate poverty of speech. Some replies do not include appropriately elaborated information, and many replies are monosyllabic or very brief ("Yes." "No." "Maybe." "Don't know." "Last week.").

3 Severe poverty of speech. Answers are rarely more than a few words in length. Questions may be left unanswered.

4 Extreme poverty of speech. Patient is essentially mute.

2. Poverty of Content of Speech (Poverty of Thought, Alogia, Verbigeration, Negative Formal Thought Disorder)

Although replies are long enough so that speech is adequate in amount, it conveys little information. Language tends to be vague, often overabstract or overconcrete, repetitive, and stereotyped. The interviewer may recognize this finding by observing that the patient has spoken at some length but has not given adequate information to answer the question. Alternatively, the patient may provide enough information, but require many words to do so, so that a lengthy reply can be summarized in a sentence or two. Sometimes the interviewer may characterize the speech as "empty philosophizing."

Exclusions. This finding differs from circumstantiality in that the circumstantial patient tends to provide a wealth of detail.

Example. Interviewer: "Ok. Why, why is it do you think that, people believe in God?" Patient: "Well, first of all because, he uh ly, he are the person that, is their personal savior. He walks with me and talks with me. And, uh, the understanding that I have, um, a lot of peoples, they don't really, uh, know they own personal self. Because, uh, they ain't, they all, just don't know they own personal self. They don't, know that he, uh, seemed like to me, a lot of 'em don't understand that he walks and talks with them. And, uh, show them their way to go. I understand also that every man and every lady, is just not pointed in the same direction. Some are pointed different. They goes in their different ways. The way that, uh, Jesus Christ wanted 'em to go. Me myself I am pointed in the ways of, uh, knowing right from wrong and doing it. I can't do no more, or no less, than that."

0 No poverty of content of speech.

1 Mild poverty of content of speech. Occasional replies are too vague to be comprehensible or can be markedly condensed.

2 Moderate poverty of content of speech. Replies which are vague or can be markedly condensed make up at least a quarter of the interview.

3 Severe poverty of content of speech. At least half the interview is composed of vague or incomprehensible replies.

4 Extreme poverty of content of speech. Most of the interview is vague, incomprehensible, or can be markedly condensed.

3. Pressure of Speech

An increase in the amount of spontaneous speech as compared to what is considered ordinary or socially customary. The patient talks rapidly and is difficult to interrupt. Some sentences may be left uncompleted because of eagerness to get on to a new idea. Simple questions which could be answered in only a few words or sentences are answered at great length so that the answer takes minutes rather than seconds and indeed may not stop at all if the speaker is not interrupted. Even when interrupted, the speaker often continues to talk. Speech tends to be loud and emphatic. Sometimes speakers with severe pressure will talk without any social stimulation and talk even though no one is listening. When patients are receiving phenothiazines or lithium, the speech is often slowed down by medication, and then it can be judged only on the basis of amount, volume, and social appropriateness. If a quantitative measure is applied to the rate of speech, then a rate greater than 150 words/minute is usually considered rapid or pressured. This disorder may be accompanied by derailment, tangentiality, or incoherence, but it is distinct from them.

0 No pressure of speech.

1 Slight pressure of speech. Some slight increase in amount, speed, or loudness of speech.

2 Moderate pressure of speech. Usually takes several minutes to answer simple questions, may talk when no one is listening, and/or speaks loudly and rapidly.

3 Severe pressure of speech. Frequently takes as much as 3 minutes to answer simple questions, sometimes begins talking without social stimulation, and/or difficult to interrupt.

4 Extreme pressure of speech. Patient talks almost continually, cannot be interrupted at all, and/or may shout to drown out the speech of others.

4. Distractible Speech

During the course of a discussion or interview, the patient stops talking in

the middle of a sentence or idea and changes the subject in response to a nearby stimulus, such as an object on a desk, the interviewer's clothing or appearance, etc.

Example. "Then I left San Francisco and moved to . . . Where did you get that tie? It looks like it's left over from the fifties. I like the warm weather in San Diego. Is that a conch shell on your desk? Have you ever gone scuba-diving?"

0 Absent.

1 Mild (is distracted once during an interview).

2 Moderate (is distracted from two to four times during an interview).

3 Severe (is distracted from 5 to 10 times during an interview).

4 Extreme (is distracted more than 10 times during an interview).

5. Tangentiality

Replying to a question in an oblique, tangential, or even irrelevant manner. The reply may be related to the question in some distant way. Or the reply may be unrelated and seem totally irrelevant. In the past tangentiality has been used as roughly equivalent to loose associations or derailment. The concept of tangentiality has been partially redefined so that it refers only to replies to questions and not to transitions in spontaneous speech.

Example. Interviewer: "What city are you from?" Patient: "Well, that's a hard question to answer because my parents . . . . I was born in Iowa, but I know that I'm white instead of black so apparently I came from the North somewhere and I don't know where, you know, I really don't know where my ancestors came from. So I don't know whether I'm Irish or French or Scandinavian or I don't, I don't believe I'm Polish but I think I'm, I think I might be German or Welsh. I'm not but that's all speculation and that, that's one thing that I would like to know and is my ancestors, you know, where did I originate. But I just never took the time to find out the answer to that question."

0 No tangentiality.

1 Mild (occurs once during an interview).

2 Moderate (occurs from two to four times).

3 Severe (occurs from 5 to 10 times).

4 Extreme (occurs more than 10 times, or so frequently that the interview is incomprehensible).

6. Derailment (Loose Associations, Flight of Ideas)

A pattern of spontaneous speech in which the ideas slip off the track onto another one which is clearly but obliquely related, or onto one which is completely unrelated. Things may be said in juxtaposition which lack a meaningful relationship, or the patient may shift idiosyncratically from one frame of reference to another. At times there may be a vague connection between the ideas, and at others none will be apparent. This pattern of speech is often characterized as sounding "disjointed." Perhaps the commonest manifestation of this disorder is a slow, steady slippage, with no single derailment being particularly severe, so that the speaker gets farther and farther off the track with each derailment without showing any awareness that his reply no longer has any connection with the question which was asked. This abnormality is often characterized by lack of cohesion between clauses and sentences and by unclear pronoun referents.

Although less severe derailments (i.e., those in which the relationship between juxtaposed ideas is oblique) have sometimes been referred to in the past as tangentiality or as flight of ideas when in the context of mania, such distinctions are not recommended because they tend to be unreliable. Flight of ideas is a derailment which occurs rapidly in the context of pressured speech. Tangentiality has been defined herein as a different phenomenon in that it occurs as the immediate response to a question.

Example. Interviewer: "Did you enjoy doing that?" Patient: "Um-hm. Oh, hey, well, I, I, oh, I really enjoyed some communities I tried it, and the next day when I'd be going out, you know, um, I took control like, uh, I put, um, bleach on my hair in, in California. My roommate was from Chicago and she was going to the junior college. And we lived in the Y.W.C.A. so she wanted to put it, um, peroxide on my hair, and she did, and I got up and looked at the mirror and tears came to my n eyes. Now do you understand, I was fully aware of what was going on but why couldn't I, why, why the tears? I can't understand that, can you?" Interviewer: "No." Patient: "Have you experienced anything like it?" Interviewer: "You just must be an emotional person, that's all." Patient: "Well, not very much I mean, what if I were dead? It's funeral age. Well, I, um? Now I had my toenails, uh, operated on. They're, uh, um, got infected and I wasn't able to do it but they wouldn't let me at my tools. Well."

0 No derailment.

1 Mild (occurs once during an interview).

2 Moderate (occurs from two to four times).

3 Severe (occurs 5 to 10 times).

4 Extreme (occurs more than 10 times, or so often that the interview is incomprehensible).

7. Incoherence (Word Salad, Jargon Aphasia, Schizophasia, Paragrammatism)

A pattern of speech which is essentially incomprehensible at times. The incoherence is due to several different mechanisms, which may sometimes all occur simultaneously. Sometimes portions of coherent sentences may be observed in the midst of a sentence which is incoherent as a whole. Sometimes the disturbance appears to be at a semantic level, so that words are substituted in a phrase or sentence so that the meaning seems to be distorted or destroyed; the word choice may seem totally random or may appear to have some oblique connection with the context. Sometimes "cementing words" (coordinating and subordinating conjunctions such as "and," "although"; adjectival pronouns such as "the," "a," and "an") are deleted.

Incoherence is often accompanied by derailment. It differs from derailment in that the abnormality in incoherence occurs *within* the level of the sentence or clause, which contains words or phrases that are joined incoherently. The abnormality in derailment involves unclear or confusing connections between larger units, such as sentences or clauses.

This type of language disorder is relatively rare. When it occurs, it tends to be severe or extreme, and mild forms are quite uncommon. It may sound quite similar to a Wernicke's aphasia or jargon aphasia, and in these cases the disorder should only be called incoherence (thereby implying a psychiatric disorder as opposed to a neurological disorder) when history and laboratory data exclude the possibility of a known organic etiology and formal testing for aphasia is negative.

Exclusions. Mildly ungrammatical constructions which occur when a person is searching for the right word, phrase, or idea should not be rated as incoherence. (For example, "My father, he, for a long time, well, he just started . . . he joined the church and became a, I say he's a Christian now because he used to lie and run around a lot.") Idiomatic usages characteristic of particular regional or ethnic backgrounds, lack of education, or low intelligence should also not be rated as incoherence. ("He ain't got no family." "That there was no good." "The lawn needs mowed." "He took the tools down cellar.")

Examples. Interviewer: "Why do you think people believe in God?" Patient: "Um, because making a do in life. Isn't none of that stuff about evolution guiding, isn't true anymore now. It all happened a long time ago. It happened in eons and eons and stuff they wouldn't believe in him. The time that Jesus Christ people believe in their thing people believed in, Jehovah God that they didn't believe in Jesus Christ that much."

Interviewer: "Um, what do you think about current political issues like the energy crisis?" Patient: "They're destroying too many cattle and oil just to make soap. If we need soap when you can jump into a pool of water, and then when you go to buy your gasoline, m-my folks always thought they should, get pop but the best thing to get, is motor oil, and, money. May-may as well go there and, trade in some, pop caps and, uh, tires, and tractors to grup, car garages, so they can pull cars away from wrecks, is what I believed in. So I didn't go there to get no more pop when my folks said it. I just went there to get a ice-cream cone, and some pop, in cans, or we can go over there to get a cigarette. And it was the largest thing you do to-to get cigarettes 'cause then you could trade off, what you owned, and go for something new, it w-it was sentimental, and that's the only thing I needed was something sentimental, and there wasn't anything else more sentimental than that, except for knick-knacks and most knick-knacks, these cost 30 or 40 dollars to get, a good billfold, or a little stand to put on your desk." Interviewer: "How do you think President Carter's doing?" Patient: "Far as I'm concerned he's probably doing all right as an individual but, he's making too many mistakes, uh, not intentional, he just, uh, w-searching for the right loopholes, when he claims a, *response*."

0 No incoherence.

1 Mild (occurs once during an interview).

2 Moderate (occurs from two to four times).

3 Severe (occurs 5 to 10 times).

4 Extreme (occurs more than 10 times, or so frequently that the interview is incomprehensible).

8. Illogicality

A pattern of speech in which conclusions are reached which do not follow logically. This may take the form of *non sequiturs* (= it does not follow), in which the patient makes a logical inference between two clauses which is unwarranted or illogical. It may take the form of faulty inductive inferences. It may also take the form of reaching conclusions based on faulty premises without any actual delusional thinking.

Exclusions. Illogicality may either lead to or result from delusional beliefs. When illogical thinking occurs within the context of a delusional system, it should be subsumed under the concept of delusions and not considered a separate phenomenon representing a different type of thinking disorder. Illogical thinking which is clearly due to cultural or religious values or to intellectual deficit should also be excluded.

Example. "Parents are the people that raise you. Anything that raises you can be a parent. Parents can be anything, material, vegetable, or mineral, that has taught you something. Parents would be the world of things that are alive, that are there. Rocks, a person can look at a rock and learn something from it, so that would be a parent."

0 No illogicality.

1 Mild (occurs once during an interview).

2 Moderate (occurs from two to four times).

3 Severe (occurs 5 to 10 times).

4 Extreme (occurs more than 10 times, or so frequently that the interview is incomprehensible).

9. Clanging

A pattern of speech in which sounds rather than meaningful relationships appear to govern word choice, so that the intelligibility of the speech is impaired and redundant words are introduced. In addition to rhyming relationships, this pattern of speech may also include punning associations, so that a word similar in sound brings in a new thought.

Example. "I'm not trying to make noise. I'm trying to make sense. If you can make sense out of nonsense, well, have fun." "I'm trying to make sense out of sense. I'm not making sense [cents] anymore. I have to make dollars."

0 No clanging.

1 Mild (occurs once during an interview).

2 Moderate (occurs from two to four times).

3 Severe (occurs 5 to 10 times).

4 Extreme (occurs more than 10 times, or so frequently that the interview is incomprehensible).

10. Neologisms

New word formations. A neologism is defined here as a completely new word or phrase whose derivation cannot be understood. Sometimes the term "neologism" has also been used to mean a word which has been incorrectly built up but with origins which are understandable as due to a misuse of the accepted methods of word formation. For purposes of clarity, these should be referred to as word approximations (q.v.). Neologisms are quite uncommon.

Examples. "I got so angry I picked up a dish and threw it at the geshinker." "So I sort of bawked the whole thing up."

0 Absent.

1 Mild (Using one neologism during an interview).

2 Moderate (using from two to four neologisms during an interview).

3 Severe (using more than five neologisms in an interview).

11. Word Approximations (Paraphasia, Metonyms)

Old words which are used in a new and unconventional way, or new words which are developed by conventional rules of word formation. Often the meaning will be evident even though the usage seems peculiar or bizarre (i.e., a ballpoint pen referred to as "paperskate," etc.). Sometimes the word approximations may be based on the use of stock words, so that the patient uses one or several words repeatedly in ways that give them a new meaning (i.e., a watch may be called a "time vessel," the stomach a "food vessel," a television set a "news vessel," etc.).

Exclusions. Semantic and phonemic paraphasias should be included in this category only if the results of formal testing for aphasia are negative. Sometimes incoherent speech may seem to be based on possible semantic paraphasias in the absence of positive results on formal aphasia testing. Such cases should be considered to represent incoherence if the substitutions occur frequently, and the category of word approximations should be restricted to cases where semantic substitutions occur relatively infrequently. Words used metaphorically should not be considered as word approximations (e.g., "I'm just a pin cushion or an ashtray to the rest of the world.").

Examples. "Southeast Asia, well, that's like Middle Asia now." "His boss was a seeover."

0 Absent.

1 Mild (using one word approximation during an interview).

2 Moderate (using from two to four word approximations during an interview).

3 Severe (using more than five word approximations during an interview).

12. Circumstantiality

A pattern of speech which is very indirect and delayed in reaching its

goal idea. In the process of explaining something, the speaker brings in many tedious details and sometimes makes parenthetical remarks. Circumstantial replies or statements may last for many minutes if the speaker is not interrupted and urged to get to the point. Interviewers will often recognize circumstantiality on the basis of needing to interrupt the speaker in order to complete the process of history-taking within an allotted time. When not called circumstantial, these people are often referred to as "long-winded."

Exclusions. Although it may coexist with instances of poverty of content of speech or loss of goal, it differs from poverty of content of speech in containing excessive amplifying or illustrative detail and from loss of goal in that the goal is eventually reached if the person is allowed to talk long enough. It differs from derailment in that the details presented are closely related to some particular idea or goal and in that the particular goal or idea must, by definition, eventually be reached.

0 No circumstantiality.

1 Mild (occasional circumstantial reply or description during an interview, but patient can get to the point quickly if interrupted and urged to do so).

2 Moderate (several circumstantial replies or descriptions during an interview, or single replies often last at least 5 minutes, or patient continues to use circumstantial pattern sometimes if interrupted).

3 Severe (many circumstantial replies or descriptions during an interview, or any single reply of a characteristic circumstantial nature lasting more than 15 minutes, or patient usually continues circumstantial pattern even when interrupted).

13. Loss of Goal

Failure to follow a chain of thought through to its natural conclusion. This is usually manifested in speech which begins with a particular subject, wanders away from the subject, and never returns to it. The patient may or may not be aware that he has lost his goal. This often occurs in association with derailment.

0 No loss of goal.

1 Mild (one failure to follow a topic through to a logical conclusion during an interview).

2 Moderate (two to four failures to follow a topic through to a logical conclusion during an interview).

3 Severe (five or more failures to follow a topic through to a logical conclusion during an interview).

14. Perseveration

Persistent repetition of words, ideas, or subjects so that, once a patient begins a particular subject or uses a particular word, he continually returns to it in the process of speaking.

Exclusions. This differs from "stock words" in that the repeated words are used in ways appropriate to their usual meaning. Some words or phrases are commonly used as pause-fillers, such as "you know" or "like"; these should not be considered perseverations.

Examples. "I think I'll put on my hat, my hat, my hat, my hat." Interviewer: "Tell me what you are like, what kind of person you are." Patient: "I'm from Marshalltown, Iowa. That's 60 miles northwest, northeast of Des Moines, Iowa. And I'm married at the present time. I'm 36 years old. My wife is 35. She lives in Garwin, Iowa. That's 15 miles southeast of Marshalltown, Iowa. I'm getting a divorce at the present time. And I am at presently in a mental institution in Iowa City, Iowa, which is a hundred miles southeast of Marshalltown, Iowa."

0 No perseveration.

1 Mild (has a persistent repetition of one set of words or ideas).

2 Moderate (has persistent repetition of two or three different sets of words or ideas).

3 Severe (has persistent repetition of four or more different sets of words or ideas).

15. Echolalia

A pattern of speech in which the patient echoes the words or phrases of the interviewer. Typical echolalia tends to be repetitive and persistent. The echo is often uttered with a mocking, mumbling, or staccato intonation. Echolalia is relatively uncommon in adults, but more frequent in children.

Exclusions. Some people habitually echo questions, apparently to clarify the question and formulate their answer. This is usually indicated by rewording the question or repeating the last several words (i.e., from "What did you wear yesterday?" to "What did I wear yesterday?" or "Wear yesterday?").

Example. The doctor says to the patient, "I'd like to talk with you for a few minutes." The patient responds with a staccato intonation, "Talk with you for a few minutes."

0 Absent.

1 Mild (echoes words or phrases once during an interview).

2 Moderate (echoes words or phrases from two to four times during an interview).

3 Severe (echoes words or phrases five or more times during an interview).

16. Blocking

Interruption of a train of speech before a thought or idea has been completed. After a period of silence, which may last from a few seconds to minutes, the person indicates that he cannot recall what he had been saying or meant to say. Blocking should only be judged to be present either if a person voluntarily describes losing his thought or if upon questioning by the interviewer, the person indicates that that was his reason for pausing.

0 Absent.

1 Mild (occurs once during an interview).

2 Moderate (occurs two to four times).

3 Severe (occurs five or more times).

17. Stilted Speech

Speech which has an excessively stilted or formal quality. It may seem rather quaint or outdated, or it may appear pompous, distant, or overly polite. The stilted quality is usually achieved through the use of particular word choices (multisyllabic when monosyllabic alternatives are available and equally appropriate), extremely polite phraseology ("Excuse me, madam, may I request a conference in your office at your convenience?"), or stiff and formal syntax ("Whereas the attorney comported himself indecorously, the physician behaved as is customary for a born gentleman").

0 No stilted speech.

1 Mild (one or two instances of stilted speech during an interview).

2 Moderate (frequent instances of stilted speech).

3 Severe (most answers to questions and spontaneous speech are stilted).

18. Self-Reference

A disorder in which the patient repeatedly refers the subject under discussion back to himself when someone else is talking and also refers apparently neutral subjects to himself when he himself is talking. This finding usually cannot be evaluated on the basis of a psychiatric interview, since the subject is then asked to talk about himself. It may be observed during the tests of the sensorium or informal conversation about neutral subjects and should be rated only in that context.

Example. Interviewer: "What time is it?" Patient: "Seven o-clock. That's my problem. I never know what time it is. Maybe I should try to keep better track of the time."

0 Absent.

1 Mild (self-reference occurs once during a 15-minute discussion of a neutral subject).

2 Moderate (self-reference occurs two to four times during a 15-minute discussion of a neutral subject).

3 Severe (self-reference occurs five or more times during a 15-minute discussion of a neutral subject).

19. Paraphasia, Phonemic

Recognizable mispronunciation of a word because sounds or syllables have slipped out of sequence. Severe forms occur in aphasia, but milder forms may occur as "slips of the tongue" in everyday speech. The speaker usually recognizes his error and may attempt to correct it.

Example. "I sipped on the lice and broke my arm while running to catch the bus."

0 Absent.

1 Mild (one instance of phonemic paraphasia during an interview).

2 Moderate (two to four instances of phonemic paraphasia during an interview).

3 Severe (five or more instances of phonemic paraphasia during an interview).

20. Paraphasia, Semantic

Substitution of an inappropriate word when trying to say something specific. The speaker may or may not recognize his error and attempt to correct it. This typically occurs in both Broca's and Wernicke's aphasia. It may be difficult to distinguish from incoherence since incoherence may also be due to semantic substitutions which distort or obscure meaning; when this differential decision must be made, it is suggested that formal testing for aphasia be completed; if the testing is positive, then the semantic substitutions may be considered due to semantic paraphasia, and if negative to incoherence.

Example. "I slipped on the coat, on the i-i-ice, I mean, and broke my book."

0 No instances of semantic paraphasia.

1 Mild (one instance of semantic paraphasia during an interview and aphasia testing positive.

2 Moderate (2 to 10 instances of semantic paraphasia during an interview and aphasia testing positive).

3 Severe (11 to 20 instances of semantic paraphasia during an interview and aphasia testing positive).

4 Extreme (more than 20 instances of semantic paraphasia during an

interview, or so frequently that the interview is incomprehensible, and aphasia testing positive).

Global Rating of TLC Disorder (Excluding Semantic and Phonemic Paraphasias)

The global assessment of the overall severity of the TLC disorder may be approached in two ways. It may literally be rated globally, using the rating scale provided below. This global rating should reflect the recognition that some TLC disorders are more pathological than others. Circumstantiality or stilted speech are not as likely to suggest severe psychopathology as are incoherence or derailment.

An alternative method is to use the illustrated listing to summate the scores on each of the TLC ratings. Using this method, the rating for each TLC variable should be multiplied by 2 in the case of the more pathological variables and by 1 in the case of the less pathological; summing of the resulting scores will give a more quantitative measure of the severity of the TLC disorder.

Listing to summate scores

More pathological	Less pathological
Poverty of speech	Circumstantiality
Poverty of content of speech	Loss of goal
Pressure of speech	Perseveration
Distractible speech	Blocking
Derailment	Echolalia
Tangentiality	Stilted speech
Incoherence	Self-reference
Illogicality	
Clanging	
Neologisms	
Word approximations	

0 No TLC disorder. Occasional instances of the less pathological forms and no more than one instance of the more pathological (which is felt in context to be clinically insignificant).

1 Mild TLC disorder. Occasional instances of TLC disorder which are felt in context to be mild but clinically significant.

2 Moderate TLC disorder. Significant and unquestionable impaired verbal output which leads to a moderate disturbance in communication at least from time to time.

3 Severe TLC disorder. Disorder significant enough to impair communication for a substantial part of the interview; many instances of the more pathological manifestations of TLC.

4 Extreme TLC disorder. TLC disorder so severe that communication is difficult or impossible most of the time.

TLC Score Sheet

1. Poverty of speech	0	1	2	3	4
2. Poverty of content of speech	0	1	2	3	4
3. Pressure of speech	0	1	2	3	4
4. Distractible speech	0	1	2	3	4
5. Tangentiality	0	1	2	3	4
6. Derailment	0	1	2	3	4
7. Incoherence	0	1	2	3	4
8. Illogicality	0	1	2	3	4
9. Clanging	0	1	2	3	4
10. Neologisms	0	1	2	3	
11. Word approximations	0	1	2	3	
12. Circumstantiality	0	1	2	3	
13. Loss of goal	0	1	2	3	
14. Perseveration	0	1	2	3	
15. Echolalia	0	1	2	3	
16. Blocking	0	1	2	3	
17. Stilted speech	0	1	2	3	
18. Self-reference	0	1	2	3	
Global rating	0	1	2	3	4

Appendix. Kappa values of definitions of thought, language, and communication disorders in psychiatric patients (n = 113)

	Full scale weighted Kappa	Present/absent unweighted Kappa
Poverty of speech	.81	.75
Poverty of content of speech	.77	.62
Pressure of speech	.89	.82
Distractible speech	.78	.78
Tangentiality	.58	.49
Derailment	.83	.71
Incoherence	.88	.91
Illogicality	.80	.69
Clanging	.58	.53
Neologisms	.39	.49
Word approximations	−.02	−.02
Circumstantiality	.74	.80
Loss of goal	.70	.65
Perseveration	.74	.46
Echolalia	.59	.42
Blocking	.79	.71
Stilted speech	.70	.32
Self-reference	.50	.36