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Editorial

Thought Disorder or Communication Disorder
Linguistic Science Provides a New Approach

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> "One way of looking at speech is to say it is a constant stratagem to cover nakedness." *Harold Pinter*

Kraepelin (1896) and Bleuler (1911) both regarded thought disorder (TD) as an important feature of schizophrenia. Kraepelin described a variety of abnormalities of communication, which he considered to be an important symptom of the illness. Bleuler went further. He believed that a disturbance in thinking (a disturbance in association) was one of the four fundamental symptoms of the disorder. It is not surprising, therefore, that psychiatrists both in America and Europe have regarded TD as one of the most important symptoms of schizophrenia. Willis & Bannister (1965) investigated the diagnostic habits of over 300 senior British psychiatrists. Over 70% rated TD as the single most important symptom in diagnosing schizophrenia. Edwards (1972) found that over 80% of American psychiatrists rated TD as the single most important symptom in diagnosing the condition.

Recent clinical approaches to thought disorder

More recent studies of TD have been undertaken by three groups: Harrow in Chicago, Holzman in Harvard and Andreasen in Iowa. Harrow stresses the importance of looseness of association and illogicality observed in subjects' responses to Gorham's proverb test, whereas Holzman's approach uses subjects' responses to the Rorschach ink-blot test. Andreasen's Thought Language and Communication Scale (TLC) (1979*a*) is slightly different. She makes no *a priori* assumptions about the nature of thought disorder, and simply describes a number of abnormalities of verbal behaviour commonly observed in psychiatric interviews. These three systems have been used extensively in recent research into the nature of thought disorder. One important finding to emerge is that TD is not specific to schizophrenia. Both Andreasen (1979*b*) and Harrow (1983) have found that so-called 'schizophrenic' thought disorder occurs in other conditions, especially mania and depression. For this reason modern diagnostic systems attach little importance to the symptom. Although there almost certainly is a disturbance of conceptual thinking in schizophrenia, we must be aware of the limitations of the clinical term 'thought disorder'. The main problem concerns assumptions about the relationship between thought, language and speech.

The relationship between thought, language and speech

Rochester & Martin (1979) have pointed out that attributing thought disorder to a speaker is tautological. We infer TD on the basis of disordered speech, but, when the patient's speech is disordered, we decide that the patient's thinking is disordered. This is a circular argument. The problem here is that we fail adequately to distinguish between thought and speech. We assume the two are the same thing. Chaika (1982) has argued convincingly for the separation of thought and speech. Not all speech conveys thought. This is supported by the fact that much of our utterance, such as greetings and introductions, serves the process of social bonding, rather than the process of communicating ideas. This is what Malinowski (1923) has called 'phatic communion'. Chaika considers that language is self-contained and has an independent structure of its own with no reference to thought or the outside world. Speech errors arise from errors in the application of linguistic rules, without reference to thinking processes. This is important given that we cannot observe thought directly whereas we can observe speech. The independence of linguistic rules from thought is exemplified by Lewis Carroll's poem 'Jabberwocky'.

> "'Twas brillig, and the slithy toves
> Did gyre and gimble in the wabe;
> All mimsy were the borogoves,
> And the mome raths outgrabe."

In this poem, nonsense words are used in such a way as to imply meaning. 'Slithy' suggests an adjective, and 'toves' a noun. This is because these meaningless words follow the rules of morphological transformation that specify how words are constructed.

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Classical approaches to TD presuppose that the locus of the disturbance is in the speaker's thinking processes. But we cannot access thought directly. Such a model disregards the fact that we can only make such judgements on the basis of the subject's speech. To overlook this results in the exclusion of the science of speech, that is, linguistics. So, what can we learn from linguistic approaches to TD? Thomas & Fraser (1994) have reviewed the general field of linguistics in relation to psychiatry. The important branches of linguistics relevant to TD are morphology (the rules that govern word formation), syntax (the rules that specify the organisation of elements within the sentence), discourse (which includes the rules that govern the organisation of sentences into coherent texts) and pragmatics (the rules that govern the social and interactional use of language in conversations). The potential value of linguistic science will become clearer if we examine familiar examples of TD taken from Andreasen's scale, and categorise them according to the level of linguistic disturbance they represent. All the examples and definitions are taken from Andreasen (1980).

Morphological

Four TLC items represent disturbances at the word level. These are word approximations, neologisms, clanging and paraphasias. According to Andreasen, word approximations are "old words that are used in a new and unconventional way, or new words which are developed by conventional rules of word formation". She specifically excludes aphasic disturbances from this category. Examples given include a 'paperskate' (for a ball-point pen) and 'time vessel' for watch or 'food vessel' for stomach. Neologisms, on the other hand, represent new word formations, whose derivation cannot be understood in terms of the rules of word formation for a given language.

Examples:

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

Syntactic

Only one TLC item involves a disturbance of sentence structure: incoherence. According to Andreasen, incoherence may arise from a number of mechanisms. They may be parts of coherent sentences fragmented and mixed up in a larger, incoherent whole; words or phrases may be substituted and mixed up; or cementing words like 'and', 'but' or 'so' (conjunctions) may be omitted. The essential features of these disturbances are violations of the rules of syntax.

Example:

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 any more now. It all happened a long time ago. It happened in aeons and aeons 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."

In this example the first sentence consists of a subordinate clause without a main clause. A detailed syntactic analysis would show that the structure of the remaining sentences is deviant in a number of ways.

Discourse, textual

Two TLC items represent disturbances at the level of discourse: derailment and loss of goal. Andreasen describes derailment as "a pattern of spontaneous speech in which the ideas slip off the track onto another one that is clearly but obliquely related, or onto one that is completely unrelated". The result is speech that sounds disjointed. Loss of goal occurs if the subject fails to return to the original topic or theme. Derailment and loss of goal are therefore closely related. In linguistic terms the description of such speech occurs at the level of textual coherence, which is an important aspect of discourse. Linguists make a distinction between texts and randomly organised sentences. For a text to be coherent, its sentences must be linked. There are two ways of establishing these links. According to Halliday & Hasan (1975) pronominal reference is one of five varieties of cohesion responsible for the coherence of texts. Reference occurs when the interpretation of one item in the text is dependent upon another. Two items, a pronoun and a noun phrase, are tied together. Deese (1978) has proposed another approach. He has shown that the hierarchical organisation of propositions (or ideas) within a text is important in order for a listener to be able to understand a speaker. Texts that are difficult to follow have a weak propositional hierarchy. This makes it difficult for listeners to organise the information contained in the text. The following example of derailment (from Andreasen, 1980) shows problems in pronominal reference and propositional hierarchy.

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Example:
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 operated on. They got infected and I wasn't able to do it. But they wouldn't let me at my tools. Well!"

Here, there is an example of unclear pronominal reference. Who does 'they' refer to in the final sentence? The speaker has not provided a clear noun phrase referent. Rochester & Martin (1979) and Wykes & Leff (1982) have shown that vague or unclear reference is an important feature of the speech of thought-disordered schizophrenic subjects. The propositions ("It's funeral age", "I had my toenails operated on", "They wouldn't let me at my tools") lack any sense of hierarchical organisation. Hoffman *et al* (1986) found that the hierarchical organisation of propositional structures in thought-disordered speech, both in schizophrenia and mania, is weaker than that of controls.

Pragmatic

Almost half the TLC sub-scales fall within this category. These include poverty of speech, poverty of content of speech, pressure of speech and distractible speech. The feature shared by these items is that they represent a failure to observe the rules that govern the interactional aspects of language use, or a failure of the speaker to recognise the needs of the listener. Grice (1975) has pointed out that for speakers to understand each other's contributions they must follow certain conventions. He described four conversational maxims: quantity (neither too much nor too little information), quality (truthfulness), manner (clarity), and relation (relevance). Poverty of speech is a "restriction in the amount of spontaneous speech". Replies to questions are brief and unelaborated. They may even be monosyllabic, or questions may remain unanswered. Such speech leaves the interviewer grasping the air for more information and violates the maxim of quantity, as does pressure of speech, in which too much information is provided.

Poverty of content of speech, in Andreasen's definition, is speech that is adequate in amount, but which conveys little information. There is much repetition, and a tendency to be over-abstract or over-concrete. The interviewer may recognise poverty of content because the patient may speak for some time without conveying much information. Much of what is said lacks conciseness.

Example:
Interviewer:

"Why is it, do you think, that people believe in God?"

Patient:

"Well, first of all, because he uh, he are the person that is their personal saviour. He walks with me and talks with me. And uh, the understanding that I have, um, a lot of people, they don't really, uh, know they own personal self. Because, uh, they ain't, they all, just don't know they personal self. They don't know that he uh . . . seemed to me, a lot of 'em don't understand that he walks and talks with 'em."

This segment shows abnormalities at a number of linguistic levels. It violates the maxims of quantity, manner and relevance. There are also problems at the level of discourse, in terms of the organisation of propositions, as well as syntax, as the structure of some of the sentences is deviant.

In distractible speech the subject suddenly stops talking in mid-sentence and changes the subject in response to a nearby stimulus. This violates the maxim of relevance.

Example:

"Then I left San Francisco and moved to . . . where did you get that tie? It looks like it's left over from the 1950s. I like the warm weather in San Diego. Is that a conch shell on your desk? Have you ever gone scuba diving?"

Conclusions

There is no doubt that there is something unusual and distinctive about the speech of many patients suffering from acute psychoses. Linguistic science provides a new approach that complements and augments traditional descriptive psychopathology in describing thought disorder. An examination of a widely used clinical scale for rating TD indicates that linguistic descriptions provide a useful way of categorising the psychopathological descriptions. The term 'thought disorder' is probably best replaced by 'communication disorder', for this makes no *a priori* theoretical assumptions about the type of model most appropriate for characterising the utterance of psychotic subjects.

Psychopathology and linguistics represent different conceptual languages, but it seems possible to integrate them. Langenbach (1993) has suggested that such attempts at integration are desirable if we remember that the common aim of all discourses in psychiatry is to help the individual patient. Future research in this area should focus on specifying in greater detail the linguistic level at which communication breakdown ocurs, and the way these correlate with psychopathology and disturbances

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in cognition. Psychiatrists would benefit from exposure to linguistic approaches to communication as part of their training.

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