

WORD WINDOWS ON PERSONALITY

Sentence syntax and speed of speech signal potent clues to personality in a study of verbal style

BY DEBORAH FRANKLIN

"The voice of intellect is a soft one, but it does not rest until it has gained a hearing. Ultimately, after endlessly repeated rebuffs, it succeeds."

— Sigmund Freud in *Future of an Illusion*, 1928

Armed with a tape recorder, a psychiatrist from the University of Maryland has devised a method of diagnosing human behavior from 10 minutes of speech. The technique can complement Rorschach inkblots and the psychoanalyst's couch in helping therapists understand personality disorders. Beyond looking at the meaning of words, Walter Weintraub probes the way patients string words together — the syntax of their sentences — as a quantifiable reflection of their thinking and behavior.

"Verbal behavior is representative of general behavior," says Weintraub, who has studied the relationship between verbal style and personality in nearly 250 people in the last 15 years. Linguists and clinicians realized long ago that the stutterings and stammerings of their patients, slips of the tongue and even the types of words they used might reveal clues to underlying personality traits. But fashioning an objective diagnostic tool from the subjective impressions of therapists has proved difficult.

"What I did that was really different," Weintraub told *SCIENCE NEWS*, "was to try to categorize what these people [therapists] were listening to and actually to quantify it and measure it rather than just rely on anecdotal evidence."

In his book *Verbal Behavior: Adaptation and Psychopathology* (Springer Publishing Co., New York, 1981), the psychiatrist divides speech characteristics into 14 cat-

egories that include the rate of speech, the number of references to "I" or "we," and the use of qualifying phrases, such as "I think" or "kind of" that add uncertainty to statements. Words such as "but," "although," "however" and "nevertheless" almost invariably cancel preceding remarks, so are recorded as "retractors" in the researcher's scheme.

"We believe that retractors reflect something close to the defense mechanism of 'undoing,'" Weintraub reports. "Their frequent use suggests difficulty in adhering to decisions already taken and imparts to the speaker's verbal style a flavor of impulsivity. Unlike qualification, which precedes and delays decision, retraction follows action already consummated."

While a moderate use of retractors might reflect a speaker's linguistic maturity and flexibility in judgment, heavier use of the words can indicate pathological impulsivity, the researcher says. When Weintraub compared 10-minute samples of the recorded speech of clinically impulsive, paranoid and depressed patients with the speech of "normal" volunteers, a distinct pattern of verbal behavior emerged for each psychiatric disorder.

While the impulsive patients used large numbers of retractive phrases and made many references to themselves and their feelings, paranoid patients distinguished themselves by their high use of explanatory expressions. Weintraub suggests that the heavy use of explanatory phrases beginning with words like "because," "as" and "since" may stem from the paranoid's need to rationalize farfetched beliefs.

"They come up with fanciful explanations of how the world works and a large part of their conversation is trying to con-

vince people that there really is a plot against them, that the Mafia really is out to destroy them," Weintraub suggests. "These are explanations, and in order to provide explanations you have to use explanatory conjunctions."

The speech of depressed patients was characterized by long pauses, many "feeling" phrases (from likes and dislikes to hope and despair) and a high number of negative words. The high frequency of "I" and particularly "me" in their speech reflects the depressives' preoccupation with self, and a passive resignation to their environment, the scientist claims.

Each speech sample was collected in the same slightly stressful situation: As each subject entered the testing room he was handed the microphone to a tape recorder and instructed to speak for 10 minutes on any topic of his choice. A few persons became tongue-tied, some noticeably anxious, and all demonstrated speech patterns that Weintraub says reflect defenses triggered by their psychological states.

"If you want to find out something important about the way a person copes with the environment, then you're obviously at an advantage if you put him in a situation where there is stress," says Weintraub. "That will mobilize his coping mechanisms. I assume that what distinguishes a deviant person from a normal person is how they act under stress." While patients might manipulate personality inventories or other tests to give the response they think a therapist wants, it is very difficult to control speech patterns.

"It's so automatic that you almost have to stop speaking and think of every word you'll say in order to change the way you put words together," says Weintraub.

Most traditional psychological measures of personality, such as the interpretation of Rorschach figures or the psychological interview, require the skills of a highly trained clinician to obtain useful information. But Weintraub says his method of speech analysis can be used successfully by someone minimally trained.

By developing a system where different clinicians can divide the transcribed speech into clear-cut categories, tally the types of words used and come up with the same conclusions about the speaker's psychological state, Weintraub has reduced the unintentional biases that can creep into data interpretation, says Hans Steiner, a Stanford University psychiatrist who has adopted the syntax analysis in his research with teenagers.

"We were looking for ways to measure defense and coping responses to stress in adolescents," says Steiner, who was frustrated with "cumbersome and time-consuming" traditional measures of personality whose results were subject to a wide range of interpretation.

"People generally buy [Weintraub's] no-

(continued on page 237)

Frequent use of "I" and "me" reflects the clinically depressed person's preoccupation with self, and a passive resignation to the environment, Weintraub claims. An excerpt from the monologue of one middle-aged man illustrates the depressive's feeling that instead of acting, he is "acted upon."

Got four grandchildren that I wanted to look up to *me*. And they don't have any more respect for *me* than the other ones did. My son has no respect for *me* at all. Talks to *me* worse than to his casual acquaintances. Even though I — he feels that coming into the hospital would make *me* see his way in a different light.

By suddenly shifting in his last sentence from active to passive voice, the speaker depersonalizes his speech, Weintraub says, and shifts responsibility for a belief from himself to his son.

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tion that syntax correlates well with defensive strategies." Steiner says, but adds that further tests that examine the themes of a person's speech as well as nonverbal behavior are also important in painting an accurate psychological portrait.

Weintraub is the first to admit that his technique usefully examines only one aspect of communication. "We must temper our enthusiasm for precise analysis of small segments of behavior with the realization that we easily can miss the forest for the trees," he writes. "In focusing narrowly upon one channel of communication, as we have done, we run the further risk of developing a fragmented view of human response to stress." Analysis of verbal style is meant to supplement rather than replace other personality tests, the scientist emphasizes.

In addition to studying deviant populations, Weintraub has studied developmental changes in the verbal style of normal school children and adults. While some aspects of a three-year-old's style will follow him into adulthood, Weintraub cites numerous changes in speech patterns as a person ages that seem to reflect various stages of psychological development.

"Kids about five or six almost never use the pronoun 'we,'" he reports. "They're certainly old enough to have heard it—it's in their vocabulary—but they don't use it." Coupled with a high use of "I" and "me," the low use of "we" quantitatively reflects Jean Piaget's observation that others serve primarily as objects of gratification for young children rather than as collaborators in work or play.

"Just by following the ratio of 'I' to 'we' as a child reaches pre-adolescence, you see some very interesting changes," Weintraub reports. " 'We' starts to go up and 'I' starts to go down. It's certainly understandable in terms of the child's beginning to form groups at that age." Older adolescents return to a relatively low use of "we" as they become less dependent on peers. A high use of evaluative language by the older teenagers may reflect a common tendency of members of the age group to "oscillate between savage self-criticism and attacks against society," the scientist says. After dramatic fluctuations in speaking style throughout childhood and adolescence, changes in syntax seem to level off around the age of eighteen and remain fairly constant throughout adulthood.

"We all use syntax to judge people, we just don't know that we do," Weintraub theorizes. "It should be interesting for people to find out what's at the basis of their hunches—why they say a certain person cannot be trusted or another person appears phony. A lot of it is simply the way we put words together. This is an attempt to deal in a more systematic way with those phenomena that we all deal with every day." □

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