

**NATURAL LANGUAGE DRIVEN TESTS TO ASSESS KNOWLEDGE, PERSONALITY AND DECISION MAKING ABILITY. M Anbar, A Anbar, M Raulin. School of Medicine and Biomedical Sciences and Faculties of Educational Studies and of Social Sciences, SUNY, Buffalo, NY.**

The computer can be made to engage sensibly in a natural language dialog with a person in appropriately set scenarios, as long as the topic of discussion is defined. Under these conditions the computer can emulate a person, e.g., a patient, a supervisor, a fellow student, a policeman, an applicant to medical school, or an interviewer of such an applicant. Such dialogs can be used for testing of interview or interpersonal communicative skills.

Using CASIP (Computer Assisted Socratic Instruction Program) as authoring language, we have produced several such tests. These include emulated oral exams in biophysics, tests of history taking skills, interview-tests of medical school candidates on their knowledge and opinion on various health care delivery issues, and psychological tests of handling common personal confrontations. The validity of the latter two types of tests, in combination with a verbal Rorschach associative test, also written in CASIP, is being assessed on groups of volunteers from among the interviewed candidates for medical school. The computer scores each answer of the subjects tested and this score has been compared with that of a panel of psychologists. There was an excellent correlation between the two groups of scores. The findings of the tests have then been compared with those of conventional personal interviews of the same subjects.

Preliminary findings show that the computerized dialogs can reveal personality attributes, such as excessive combativeness, selfishness or antisocial behavior, fuzzy thinking or low threshold of frustration. These attributes, which are undesirable in physicians, can be readily missed in a conventional interview. Several of the scenarios, make the computer emulate a non-cooperative person with the tested subjects being in a relatively lower, equal or higher social status. Handling of such interpersonal situation is analogous, but not similar, to situations in medical practice.

It will take several years to validate the predictive value of these tests. It will be necessary to compare the predictions of this battery of psychological tests with the behavior of the tested subjects in their clerkships or even during the first year of residency. If found valid these tests will improve the selection of candidates for admission to medical school and thereby improve the quality of medicine in general.