

TESTING INTERNATIONAL

Vol. 17, June 2007 Editor: Jan Bogg



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AN OFFICIAL PUBLICATION OF THE INTERNATIONAL TEST COMMISSION

ITC PRESIDENT Jacques Grégoire

Jacques Grégoire, Ph.D., is Full Professor in the Faculty of Psychology and Educational Sciences at the Catholic University of Louvain, Belgium. His research interests include assessment of learning and learning disabilities, methods for psychological diagnostic, intellectual assessment, and relationship between learning and emotions. In collaboration with Catherine Van Nieuwenhoven and Marie-Pascale Noël, he developed a test for the diagnostic of mathematical disabilities, the TEDI-MATH, already adapted in Spanish, Dutch and German. He was scientific adviser for the French adaptation of several tests, including the WAIS-III, the WISC-IV and, currently, the K-ABC-III. He is also member of the scientific panel for the development of the future WAIS-IV and WMS-III. His academic publications include over 100 journal articles, book chapters, and books/monographs. He is author of two popular French books on intelligence assessment: *"Clinical assessment of child intelligence"* (2006) and *"Clinical assessment of adult intelligence"* (2004), and a reference book on the methodology of test development, written with Dany Laveault: *"Introduction to test theories in Psychology and Education"*. He is Consulting editor of several scientific Journals and Associate Editor of the *Journal of PsychoEducational Assessment*. He has also served as secretary of the International Test Commission (1995-2004). With the collaboration of Ron Hambleton, he organized the 5th ITC international conference in Brussels (July, 2006) on *"Psychological and Educational Test Adaptation Across Languages and Cultures"*.

International Journal of Testing

Call for Reviewers: the ITJ are continually looking for suitable reviewers for manuscripts submitted to the *International Journal of Testing (IJT)*. If you are interested in reviewing articles on a range of topics related to testing and assessment with international perspective, please e-mail your name, qualifications, CV and areas of expertise to the editor, John Hattie at ijt@auckland.ac.nz



ITC GUIDELINES HAVE YOUR SAY

Computer/Internet Testing

As part of its ongoing activities, the International Test Commission is reviewing the work it has done on developing the Guidelines on Computer-based and Internet-delivered testing.

Please provide us with your views from your countries perspective. This will be invaluable for the ITC in enhancing its activities and engaging with individuals around the world who have an interest in tests and testing. We would be grateful if you could spare 10 minutes to have your say.

Complete the questionnaire online by MAY 31st, 2007.

<http://www.surveymonkey.com/s.asp?u=395993312214>

Computerized Adaptive Testing

Internet and CBT Testing Guidelines

<http://www.intestcom.org/>

CAT Central a computerized adaptive testing site

<http://www.psych.umn.edu/psylabs/catcentral/>

CAT Publications

Williamson, David M., Mislevy, Robert J. and Bejar, Isaac (2006). *Automated Scoring of Complex Tasks in Computer Based Testing*. Mahwah, New Jersey: Lawrence Erlbaum Associates Publishers.

Van v van der Linden, W.J. (2005). *Linear models for optimal test design*. New York: Springer-Verlag.

Williams, David D., Howell, Scott L. and Hricko, Mary (2006). *Online Assessment, Measurement and Evaluation*. Hershey, PA: Information Sciences Publishing,

Bunderson, C.V., Olsen, J.B. and Greenberg, A. The Institute for Computer Uses in Education (1993). Computers in educational assessment: An opportunity to restructure educational practice" PB92-127604, Congress of the United States Office of Technology Assessment.

Bunderson, C. V., Inouye, D. K. and Olsen, J. B. (1989). Four generations of computerized educational measurement. In R.L. Linn (Ed.) Educational Measurement, 3rd Edition. New York: Macmillan.

Pioneer of ITC Jean Cardinet recalls early days



Modestly Dr Cardinet said *"Of course, I have no merit in its (ITC) success, since I left the baby into the hands of other psychologists soon after it was born. The reason for which I left the field is that my career took abruptly a different direction. I left the University of Neuchâtel to take a position as head of a research section in a newly created Institute of Education. I had to seize this sudden opportunity and I never regretted it."*

Dr Cardinet retired in 1990 and in recalling his early days he cited that his professors included Thurstone and Cronbach.

"From my first career, I kept an interest in Generalizability Theory, as I had worked with Lee Cronbach on that subject. I developed new methods for the exploitation of the symmetry of ANOVA designs. A special computer program has recently been offered on Internet to make such G and D Studies."

The **EduG program** and guide is available from the website. This program will be reviewed in the International Journal of Testing, at a later date.

EduG program and guide available from:
<http://www.irdp.ch/edumetrie/englishprogram.htm>

CAN YOU HELP? Research on cost of e-assessments

Ângela Guimarães Pereira, Action Leader: Quality of Scientific Information for EU policy formulation from the *European Commission* is enquiring to ITC members about studies on cost of e-assessments, including comparisons with traditional pencil and paper ones. They are particularly interested in Language testing.

Please write to: Ângela Guimarães Pereira, Action Leader: Quality of Scientific Information for EU policy formulation, European Commission DG Joint Research Centre IPSC, TP 361, 21020 Ispra (VA), Italy.
E-mail: angela.pereira@jrc.it

NEWS

Tests standards, development and use in Brazil

Solange Wechsler

Pontifical Catholic University of Campinas, Brazil and Past President of the Brazilian Institute of Psychological Assessment

Psychological assessment in Brazil is experiencing revolutionary changes. A decision in 2003 by the Federal Council of Psychologists, the national institution that regulates the practice of psychology, required all psychological tests used in Brazil to be evaluated and approved based on their scientific quality within the context of the Brazilian reality. In an effort to implement this decision, the Federal Council of Psychologists organized a national commission of 40 Brazilian researchers to establish and then apply standards to verify whether published psychological tests met at least minimal scientific requirements, which were: a) a description of its theoretical foundations, b) evidence of the test's validity and reliability based on recent studies with Brazilians, and c) recently acquired norms on Brazilians if the test is intended to be norm-referenced or the empirical foundation for tests when their interpretation procedures do not rely on norms (e.g., as with some projective techniques). The reaction to this decision among Brazilian psychologists was somewhat mixed. Many welcomed the imposition of higher standards to test development and use while others were surprised to learn that tests they had been using for several years in their practice were considered to not meet minimum standards. Three years after the 2003 decision, most Brazilian psychologists agree that the imposition of these standards was needed and have greatly enhanced the quality of psychological assessment in Brazil. Moreover, this decision strongly impacted the scientific basis of Brazilian psychology. For example, many new tests have been developed by Brazilians and normed and validated on Brazilians.

This progress toward best practices in test development has resulted in Brazil becoming preeminent in Central and South American in reference to test development and use. The formation of Brazilian Institute of Psychological Assessment (IBAP) in 1997, a

national professional association dedicated to the advancement of test development and use, also has been important to this success. More than one thousand psychologists have attended Brazilian Institute of Psychological Assessment sponsored conferences.

The next IBAP conference will be held July 25-28, 2007 in Joao Pessoa, in the northeast of Brazil. Information can be obtained from www.ibapnet.org.br

ISPA - The Israeli Psychometric Association

Avi Allalouf

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The Israeli Psychometric Association (ISPA) was founded recently as an initiative of the National Institute for Testing and Evaluation (NITE). The founding committee of ISPA includes the following members: Yoav Cohen (Chair), Naomi Gafni, Chanan Goldschmidt, Carmel Oren, Sara Shapira and Avi Allalouf.

The Israeli Psychometric Association consists of professionals from the areas of educational and psychological measurement and evaluation. It aims to:

- encourage activity in the development and application of standardized tests and performance assessment evaluation;
- promote research in the fields of educational and psychological measurement;
- improve assessment methods and measurement tools and facilitate their application in an erudite fashion;
- construct, evaluate and distribute updated methodological instruments and innovative assessment methods;
- warn about test misuse and incorrect interpretation of tests results; support the development of professional contacts, the dissemination of knowledge and collaboration among experts in the measurement and evaluation field.

ISPA members receive (and are invited to contribute to) the ISPA Newsletter, which is published twice a year. The newsletter presents short research notes, disseminates information about assessment projects, recently published books and articles, upcoming conferences and current issues in the field. ISPA has already held three scientific conferences, each of which attracted some 150 participants. For more information please visit www.ispa.org.il

Psychology International Newsletter

Psychology International, the newsletter of the APA office of international affairs is available online from: <http://www.apa.org/international/>

British Psychological Society Psychological Testing Centre

The British Psychological Society's Psychological Testing Centre (PTC) provides a focus for all Society activities in relation to psychological testing. The Psychological Testing Centre on-line provides access to information about tests and testing. Whether you are a psychologist, a test user or a member of the public interested in knowing more about testing, the PTC Online is a valuable resource.

Read best practice guidelines, link to other sources of information, access general information on tests and link to test distributors/publishers. In addition, you may subscribe to the complete test reviews, discuss good practice in relation to test development and read articles on issues in testing, research and ethics.

Visit the Psychological Testing Centre (PTC) at www.psychtesting.org.uk

ITC Q+A

Q. *Do you know what The Brazilian Federal Psychological Association rules are associated with the administration of psychological tests to Brazilian children if the use of such test results are limited to research purposes?*

Relana Fitzgerald, PhD, University of Virginia,
Center of Global Health

A. *Our regulation does not control any tests for research purposes. In this case, any tests can be used. The present regulation only controls the use of psychological tests for professional purposes. In these cases, only tests which have presented validity, reliability and norms to the Brazilian population can be used. A list of tests allowed to be used for professional purposes can be found at the following address:*

<http://www.pol.org.br/satepsi/sistema/admin.cfm>

Solange Wechsler, ITC member and former president of Brazilian Federal Council of Psychologists

Psychological tests and testing in Sweden

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The last two decades have seen steadily growing interest among psychologists and other behavioural scientists in their use of psychological tests within both the clinical and I/O fields. Various reasons account for this growth. Following a substantial decline in interest in assessments and clinical diagnostics during the 1970s and 1980s, Swedish psychologists to a large degree have resumed their central position as diagnosticians and recognize the value of test use to support their other services. The supply of psychological tests also has increased in line with the increase in demand for and interest in tests. The supply of psychological tests in Sweden is relatively good, relying somewhat heavily on Swedish versions of American and British tests. Very few tests developed by Swedish researchers achieve significant application. This is especially true for clinical tests and also applies in a somewhat lesser degree to tests for I/O purposes.

The development and use of psychological tests in Sweden has two tracks: one for clinical tests and another for work (i.e., I/O) psychology. This in turn has resulted in different tests, practices, and user groups. Although in many places they are parallel and partially overlapping, the two areas of application are regarded as being almost completely different. The description below mainly concerns psychological tests for clinical use yet also relates to the significant work in I/O psychology spearheaded by the Swedish Psychological Association (Sveriges Psykologförbund).

From the end of the 1950s onwards, the Swedish Psychological Association had played a prominent role in both the development and marketing of psychological tests. Between 1954 and 1991 the Association operated as Sweden's only test publisher, Psykologiförlaget. The Swedish Psychological Association's interest initially was a desire to control the use of psychological tests and to limit their access only to licensed psychologists. The Association also attempted through Psykologiförlaget (by means of collaboration with universities) to stimulate the development of new tests with the goal to provide psychologists with modern instruments. However, successes were fairly modest. The Association found it difficult to engage the university-based professionals. Test

development was not considered research, and both academic and economic incentives were lacking. Additionally, Swedish psychologists constituted a very small group and thus a small market. For example, in 1960, there were approximately 500 psychologists in Sweden. The total population in Sweden, Norway and Denmark approximates the population of the state of New York. However, Swedish psychologists were not completely lacking of tests. For example, in the 1960s, they had Swedish versions of the Stanford-Binet, Wechsler Intelligence Scale for Children, Griffiths' Mental Development Scale, and the Leiter International Performance Scale. In addition, a number of measures developed by Swedish researchers were used to assess cognitive functions in children and adults.

The 1970s saw a decline in clinical test development and interest for clinical test application in Sweden (as was true in Europe and the US). The low interest in assessment and diagnostics and therefore in psychological tests among psychologists continued until the latter part of the 1980s and had considerable consequences for Swedish test development and test sale. In 1991, Psykologiförlaget, still the only test publisher in Sweden, was on the edge of bankruptcy and thus had no money to invest in test development despite the fact that existing psychological tests were 20 or more years old. From the mid-1990s the development of psychological tests acquired renewed vigour in response to the increased interest in and demand for proper diagnostics as a basis for more effective treatment. Psykologiförlaget acquired a private owner and became successful in its efforts in part through successful collaborative efforts with individual researchers and clinicians to develop and publish a series of psychological tests for both the clinical and I/O markets. From the mid-1990s onwards, a large number of clinical tests have been adapted for use in Sweden, including the Wechsler scales, neuropsychological tests (e.g., Wisconsin Card Sorting Test, the Rey Complex Figure Test, the Delis-Kaplan Executive Functions Systems Test and NEPSY) personality tests (e.g., NEO PI-R and MMPI-2) as well as the classic Beck scales for depression.

Psychological tests intended for clinical use are reserved exclusively for psychologists. However, there are no official regulations governing access to tests or who may use tests in their professional capacity. Instead, access is controlled partly through the providers' sales regulations and partly through the successful efforts of the Swedish Psychological Association and psychologists to limit

(Continued on page 6)

their use to their own group, arguing that they alone hold unique abilities within the field of psychological assessment. The Swedish Psychological Association has adopted the International Test Commission (ITC) guidelines for test use. The intent of its use mainly has been to influence practices of groups who use tests outside the psychology profession. The psychologists' own professional ethics code, one that is common to psychologists in the three Scandinavian countries, concurs with the ITC guidelines in applicable parts. Approximately 8,000 professionally active psychologists serve Sweden, among whom approximately 3,500 work in various clinical settings with children and adults, 900 work in schools/preschools, 400 work within the employment service, and 500 are within higher education. Approximately 600 work as privately practising psychotherapists and 500 as I/O consultants.

Although the number of psychologists in Sweden is somewhat large, the market for test use remains relatively small. Thus, the economic base for test development in Sweden is relatively weak and the development of psychological tests for clinical application is not a high priority of the State or universities. These economic realities have influenced both the range and level of development work. The development of each test has been based on individual considerations that are determined by the fundamental nature of the test, the need for cultural adaptation and standardisation, possible interested parties to partner in their development, and a precise cost/benefit analysis associated with their development. As is true in other Scandinavian countries and elsewhere, Sweden experiences problems with unauthorised translations and multiple illegal versions of the same test. Unauthorised translations of tests can be found in clinical practice and university use. Also, there is a general lack of knowledge of and respect for copyright issues and a wide-spread belief that researchers are entitled to translate and use tests in their own research without proper permits from the copyright holder. On the other hand, individual researchers often play a very important role in disseminating results of their research, enhancing test use in clinical practice and thus the viability of tests.

Swedish tests have varying degrees of Swedish standardisation, ranging from pure translations, no adaptations to Swedish culture, and no Swedish norms to extensive development work that has resulted in tests with exhaustive documentation of their psychometric properties in different clinical and non-clinical populations with Swedish normative data. Test development often strides these two extremes. Practitioners and academics to-

gether with their professional associations generally agree on the need to find pragmatic methods that lead to the development of tests that satisfy high scientific standards, meet clinical needs, and reflect economic and practical reality.

During the last ten years a fairly large number of tests have been developed for use in work psychology, especially measures of personality. These include both Swedish developed and American and British versions of tests. However, the quality of I/O tests has varied greatly and, despite their widespread use, many lack documentation on their development and application. In the mid-1990s the Swedish Psychological Association recognized this shortcoming and, through the efforts of the Swedish Foundation for Applied Psychology, has been very successful in increasing the quality of available tests, the users' knowledge of tests, and psychological assessment in a broader sense. The standards for using tests in I/O tests generally are lower than those for clinical applications. For example, persons who complete a brief course on testing can access psychological tests from various providers.

The work of Swedish Foundation for Applied Psychology has been inspired by similar initiatives by the British Psychological Society. Sweden has an established system for establishing the quality control of tests in accord with guidelines issued by the European Federation of Psychological Associations. The Swedish Foundation for Applied Psychology also has supported the implementation of International Test Commission guidelines for test use and has produced an examination procedure for test users. Although the work of the Foundation has received criticism from both commercial and academic quarters, few dispute that the status of test development and use in the Swedish work psychology market has improved dramatically, in part through the Foundation's efforts. As the level of knowledge and demands generally have increased within this area, inadequate tests and test users are finding it more difficult to establish themselves in the marketplace. A number of clinical specialty groups continue to increase their knowledge and use of psychological tests in their practices. For example, there is a healthy interest among neuropsychologists engaged in both clinical practice and research who have actively contributed to the availability of a relatively large number of neuropsychological tests. In reference to children, successful collaborative projects between publishers and universities have contributed to the development of WISC-III, WPPSI-III, Leiter-R, Merrill-Palmer Scales of Development-Revised, and the Beck Youth Inventory.

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Today a single commercial player, Harcourt Assessment, established in Sweden since autumn 2006, carries out most clinical test development activities. The presence of Harcourt Assessment in Sweden can have a long-term positive impact, enabling Scandinavia as a whole to obtain faster access to updated and modern instruments, including collaborative efforts between the Scandinavian countries that will give rise to valuable synergy effects leading to large and comprehensive test development projects. From this point of view, the future of clinical test development in Sweden seems very promising.

All Nordic countries have national language translations of the International Classification of Functioning, Disability and Health (ICF). The Swedish National Board of Health and Welfare published it in 2003. Shorter versions as well as the more recent comprehensive International Classification of Functioning Disability, Functioning, and Health (ICF) core and brief core sets also have been developed. Swedish field trials for the preliminary Swedish version of ICF-CY, for children and youth, published in 2004, are managed by the research program Children-Health-Learning-Development.

Sweden also is participating in the Measuring Health And Disability In Europe project sponsored by the European Union, to measure health and disability in Europe. This project also will validate the IFC-CY for planning, implementing, and evaluating early childhood intervention and habilitation services. However, at present, neither the IFC nor the IF C-CY is being used in clinical practice. Hopefully, these instruments will prove to have various clinical applications and not be restricted only to academic interest.

Current advances in test adaptation in Romania

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Margareta Dincă, PhD

Professor, Titu Maiorescu University, Bucharest

Scientific psychology in Romania was established at the beginning of the 20th century through the efforts of Florian Stefanescu Goanga, a pupil of the German psychologist Wilhelm Wundt, and other pioneering psychologists. However, psychology was among the humanistic sciences banned by the communist regime, resulting in the

virtual destruction of the discipline. Thus, its more recent history is rather bleak. Psychology survived only by being implicitly tolerated by and embedded within other academic departments, including history, philosophy, education, as well as in few personnel departments (e.g. those with industrial and organizational orientations). Although psychology made a fresh start after 1990, it has not yet succeeded in bridging the serious professional gap (David, Moore & Domuta, 2002).

The lack of nationally developed measures to assess psychological and educational qualities exemplifies this gap. Many of the renowned measures used internationally (e.g., 16 Personality Factors, California Psychological Inventory, NEO Personality Inventory Revised, Myers-Briggs Type Indicator, Eysenck Personality Questionnaire, State-Trait Anxiety Inventory, and State-Trait Anger Expression Inventory, 2nd Edition) have been translated into the Romanian language. Most translations have been associated with the visionary work of a handful of psychometricians at the University of Babes-Bolyai at Cluj-Napoca, as well as the Bucharest University. On the positive side, the availability of these instruments has facilitated the teaching of these instruments in academic settings and their use in research. On the negative side, the tests do not reflect common professional standards. For example, test adaptations were not consistent with the International Test Commission guidelines on test adaptations, translations are sometimes poorly done, cultural adaptations occur marginally, tests rarely are validated, and normative samples either are too small or display seriously skewed distributions. Thus, reliable interpretations when making high-stake decisions is hazard. Additionally, copyright infringement occurs commonly by psychologists, an issue that constitute a serious problem.

An estimated 4000 and 5000 psychologists serve a population of 22 million. The number of psychologists is growing. During the last four to five years a small number of Romanian test companies have formed. The principle purpose of this article is to describe the work of one.

TestCentral™ (www.testcentral.ro) this was founded in 2003 as a private initiative, forming relationships between a major local research company (D & D Research, Ltd.), many academic and professional psychologists and researchers, as well as international test companies, thus rapidly establishing itself as the main Romanian publisher of psychological tests. The company displays acceptable standards for adapting psychological tests in Romania that are widely regarded nationally and internationally. TestCentral™ pub-

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lishes a large variety of tests from such publishers as Psychological Assessment Resources, Sigma Assessment Systems, Mindgarden, Hogrefe, Organizzazioni Speciali, Management Research Institute, and Robertson-Cooper. Tests include those that assess personality, educational, clinical and quasi-clinical, values and social axioms, and work/industrial/organizational qualities. TestCentral™ used the University of California, Berkeley's Institute of Personality Assessment and Research efforts during the early 1950s as a model for its work. Within this model, the company attends to financial goals and other issues keenly important to international publishers who look upon Romania and other small national emerging markets with both interest and scepticism. The company also is committed to engage in scholarly activities that lead to high quality products. These activities recognize the importance of making suitable cultural adaptation, adequate norming, and conducting post-norming validation studies. Cultural adaptation and norming of tests at TestCentral™ always have been consistent with professional standards for test development and adaptation, including those from the International Test Commission (www.intestcom.org).

Translation

Translations use consecutive and back-translations methods with dyads of translators, sometimes also coupled with panels of subject matter experts. Consistent with the International Test Commission guidelines for test adaptation, the objective of this phase is to ensure the retention of the original meaning of the test items when translating them into Romanian and to work to ensure the translated items are suitable for use in the Romanian culture and reflect the same trait as in that found in the culture in which the test first was developed. These translations are fairly straightforward for some tests, including the Nonverbal Personality Questionnaire (Paunonen, Jackson & Ashton, 2002) and the Five-Factor Nonverbal Personality Questionnaire (Paunonen, Jackson & Ashton, 2002). Their items use nonverbal stimuli and drawings that do not need translation. Moreover, research with these measures in Romania (Iliescu, Minulescu & Nedelcea, 2006a, 2006b) and in other countries (e.g. Korea; Lee, Ashton, Sungjin & Park, 2000) found them to be fairly free of cultural content. Qualities found in other tests published by TestCentral (e.g., California Psychological Inventory, Gough, 1987, 1996; State-Trait Anger Expression Inventory, 2nd Edition, Spielberger, 1988, 1996; NEO Personality Inventory, Revised, Costa & McCrae, 1992) require more attention because their cultural adaptation is more complex.

Establishing Test Norms

TestCentral™ follows two major principles when norming tests: the sample should be nationally representative and stratified as well as sufficiently large. All normative research during the last three years has involved randomised samples of Romanians, stratified by gender, age, education, urban/rural residence and ethnic group member in light of the most recent national census data.

Additionally, the standardization samples are large. For example, the California Psychological Inventory-260 was normed on 3200 (50% males); the State-Trait Anxiety Inventory (Spielberger, 1983) on 1400; the State-Trait Anger Expression Inventory -2 on 1200; the Survey of Work Styles (Jackson & Mavrogiannis-Gray, 1988) on 1500 (750 males and 750 females), with a supplementary sample of 150 Romanian top managers; the Nonverbal Personality Questionnaire and the Five-Factor Nonverbal Personality Questionnaire on 1800 subjects (50% males); the Social Axioms Survey (Leung & Bond, 1989) on 1600; and the Student Style Questionnaire (Oakland, Glutting & Horton, 1996) on 2400 students (100 boys and 100 girls from each of the age groups from 7 through 18 years) .

Validation

Romanian psychologists generally strongly distrust tests that only have been translated. The origins of their reservations stem, in part, from copyright infringement and illegal usage, the poor quality of the translations, and the circulation of many forms of the same test. Due to these and other reservations, TestCentral™ was committed to the broader issue of working to ensure the tests were properly validated, not merely suitably translated and normed. Given the limited resources of TestCentral™ and the relatively small market for tests, extensive validation that may have been used on tests developed in the host counties (e.g. the hundreds of research designs that have been used to validate the California Psychological Inventory or the NEO Personality Inventory, Revised) is not possible. Nevertheless, every test is subject to a thorough criterion-validation process using observer-evaluations of the targeted behaviour and additional empirical research in order to determine whether the results of a test and its scales are consistent with predicted behavioural outcomes. For example, in Romania, extensive studies have provided strong support that in relation the California Psychological Inventory's Achievement via Conformance and Achievement via Independence scales predict academic achievement, the Social Conformity and Self-control scales predict frequency and intensity of delinquency, and its work-related scales predict leadership behaviour (Pitariu, Pitariu & Ali Al Mu-

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tairi, 1998, Pitariu & Iliescu, 2004 etc.). Other research has investigated challenging issues in reference to the reliability of the Nonverbal Personality Questionnaire (Iliescu, Minulescu & Nedelcea, 2006) and the Student Style Questionnaire (Iliescu, Dincă & Dempsey, 2006) to establish the minimum acceptable age of administration. Research with the Freiburger Persönlichkeitsinventar, Revised (Fahrenberg, Hampel & Selg, 2002) correlated data from the Somatic complaints and Health concerns scales with self-reports and objective measures of physical well-being and behaviours such as medication intake (Pitariu, 1986). This research also demonstrates the value of using this test for professional selection in the military (Pitariu & Ieranu, 1984).

Research with the State-Trait Anger Expression Inventory-2 has demonstrated its ability to detect patterns of unsafe and endangering driving behaviours (Tureanu & Iliescu, 2006). Data from the Survey of Work Styles and the Shortened Stress Evaluation Tool (Cooper & Cartwright, 2002) predict Type A behaviour pattern (Tureanu, 2006). Data from the Social Axioms Survey has also been validated using cultural anthropological data and large-sample analyses (Mihalcea, Dincă & Iliescu, 2006). The inclusion of social axioms data increases the prediction of stress coping patterns and job effectiveness when coupled with value graphic research (Gheorghe, Dincă & Târziu, 2001). Mountains of test data await analysis and publication. TestCentral conceptualizes validation studies in terms of long-term perspectives. One year ago it established its own panel of subjects on whom longitudinal research is being conducted. Data from this panel of about 250 individuals are used to examine the co-occurrence of personality traits assessed concurrently by two or more personality tests as well as measures of various behavioural outcomes and indicators (e.g., health and health-related behaviours such as coronary heart disease and Type A behaviour pattern; smoking; medication ingestion; frequency of medical visits; frequency and duration of hospitalization and therapy, including psychotherapy and counselling), safety in various environments and situations, work and work-related behaviours, including tenure and work performance, family and social relationships, quality of life, and academic achievement.

Further Test Development Efforts

At times, research needs require one to not simply adapt and norm tests and instead to make major changes, including the development of new scales that best reflect Romanian culture and needs. This work occurs with the permission and assistance of the original test authors. Some ex-

amples are provided.

The Romanian Anxiety Scale on the California Psychological Inventory better fits Romanian culture than the Anxiety secondary scale originally contained in the inventory (Albu & Pitariu, 1999). The revision of the Romanian Female/Male scale of the California Psychological Inventory also improves the scale (Pitariu, 1981; Albu & Pitariu, 1991). The Jackson Vocational Interest Survey (Jackson, 2000) assessment of vocational interests has been combined with Holland's codes. The Fleishman Job Analysis Survey is used in research that examines the development of occupational profiles in Romania and could easily become the backbone of a national occupational network, mirroring the O*Net used in the United States.

Issues Associated with Fairness

Fairness is an ongoing concern in Romania, especially given the emergence of the profession of psychology. Issues associated with fairness warrant special care when adapting tests and later when selecting and using them. For example, the California Psychological Inventory-462 has been reworked and republished in 1996 as a 434 item version because of legal pressures in light of the Americans with Disabilities Act (Gough & Bradley, 1996). However, the test infringes only marginally in light of Romanian law. Nevertheless, the 462 item version of the California Psychological Inventory was dropped, even though this is the most researched version of the famous measure in Romania. The attempt to maximize fairness when using psychological and educational tests represents a main goal when adapting, developing, selecting, and using tests. Due to the large number of the Hungarian ethnic minority within Romania (>7% of the population), TestCentral has begun translating tests reports and other test materials in Hungarian. Supplementary special norms on special samples for this ethnic population are under development.

Conclusions

National test publishers can take an active role in the development of psychology within their country. This is occurring in Romania. Although some may believe locally developed measures may better fit Romanian culture, evidence to support this belief is sparse in countries in which test development is being born. Proof of a better fit must be based on comparisons with existing and widely used measures. Judgements as to whether new locally developed measures are superior to adaptation of widely used measures should be based on research findings. Tests that are internationally

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renowned constitute a resource that, when properly adapted, normed, and validated, serve the interests of the Romanian people and those who serve them, including Romanian psychologists.

The development of indigenous measures at this point in Romania's history would require the development of international perspectives and technology, qualities that may be in somewhat short supply. In addition, measures developed there are unlikely to find acceptance among the international community. The example of other European countries such as in Germany where the *Freiburger Persönlichkeitsinventar* (Fahrenberg, Hampel & Selg, 1970) was developed in the early 1970s, or in Italy where the Big Five Questionnaire (Caprara, Barbanelli & Borgogni, 1993) was developed in the late 1980s are striking: both countries had at least 20 years of valuable research with validated international measures behind them—conditions that lead to the development of measures that gained international acceptance and acknowledgement and thus were able to further spark the development of indigenous psychological research in psychometrics at an effective world-class level. Although Romania is not yet at this level, it aspires to achieve this in the foreseeable future.

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