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ABSTRACT

This paper presents a model of testing and assessment that has the potential to address the concerns of critics of standardized testing. The model differs from the traditional approach in several ways including, how it views human nature and the test taker; the purpose of testing; the testing process; the outcomes of testing; and who makes testing decisions. Specifics of the model are illustrated by a discussion of the view of human nature, the view of outcomes, and the locus of control. The Myers-Briggs Type Indicator and the Herrmann Brain Dominance Instrument are used to exemplify how both the established and emerging approaches differ. It is suggested that the established matrix of testing and assessment be augmented with this new model, which can be embraced by a growing diverse population. (Contains 20 references.) (JDM)

An Emerging Paradigm of Testing

By
Lorin Letendre

Chapter Two

An Emerging Paradigm of Testing

Lorin Letendre[1]

"You must be the change you wish to see in the world."
—Mahatma Gandhi

Abstract

This article presents an emerging approach to testing that has the potential to respond to the concerns of critics of standardized testing. This emerging approach differs from the traditional, or establishment, approach in how it views human nature and the test taker, the purpose of testing, the testing process, outcomes of testing, and who makes testing decisions. The Myers-Briggs Type Indicator and the Herrmann Brain Dominance Instrument are used to exemplify how the emerging and establishment approaches differ.

Let me move directly to the central thesis of this article, which is that the limits to the growth of testing and assessment, and to our overall testing market, stem more from our own attitudes in the test-development business than from the efforts of our critics or anti-testing opponents. If we are willing to change some of those attitudes and their attendant practices, we can expand the potential for testing and assessment, and thus our potential market, far beyond its present size. The attitudes that limit our growth potential are primarily elitist, despite being clothed in scientific respectability. Those attitudes both delimit and threaten our future, and only a paradigm shift is likely to change them.

I'd like to begin developing this thesis by citing a couple of surveys of attitudes toward testing among Americans. The first is an innovative Gallup survey conducted back in 1979, in which the "Gallup pollsters asked a national sample of American parents what they thought of standardized tests" (Nevo & Jager, 1993, p. 7). Before I give you the results, I want you to guess what percentage of the Americans surveyed believed that standardized tests were "very useful" or "somewhat useful," versus what percentage believed that tests were "not very useful." Here are your choices:

	Very Useful or Somewhat Useful	Not Very Useful
A.	33%	67%
B.	67%	33%
C.	83%	17%

You might be surprised to learn that the correct answer is *C*.

Now consider the second survey, which is a more recent survey of even more laypeople. Conducted between 1980 and 1986 by the King County Civil Service Commission, it asked 2,500 job applicants who were applying for both entry-level jobs and promotions to higher jobs whether or not they viewed the standardized employment test as "fair." Now that you know the results of the Gallup poll, no doubt you will guess more accurately the result of this much more extensive survey. Here are your choices:

	Employment Test Is Fair	Employment Test Is Unfair
A.	5%	95%
B.	50%	50%
C.	95%	5%

The correct answer is *C*, which flies in the face of what many of us in the testing industry perceive as decidedly negative public attitudes toward testing and certainly toward employment testing, which potentially has a huge impact on laypeople in terms of both money and status. Although they may or may not be representative of Americans' opinions toward testing in general, these two surveys suggest that public perceptions of testing are far more positive than we inside the testing industry perceive, as judged by all our efforts to address public criticisms of testing and assessment.

I'd like to define the term *paradigm,* which I use in my title. I am suggesting that the testing industry is undergoing a gradual paradigm shift from one set of attitudes toward a new set that could resolve many of the criticisms we have faced as an industry. Thomas Kuhn, who was one of the pioneers in writing about paradigm shifts, argues persuasively that the word *paradigm* is less clear and useful than the term *disciplinary matrix,* so I am opting to use his term. Kuhn defined *disciplinary matrix* as "a complex of generalizations, beliefs, values, and exemplars that direct the normal day-to-day activities of a given scientific group." Tim Rogers applied this term to test developers and asserts that "the ideas of validity, reliability, and utility; the technologies of test construction; the prevailing ethical standards—all are part of this matrix for the testing community" (Rogers, 1995, p. 768).

You may have recognized that there is a paradox inherent in the criticisms of standardized psychological tests. Tests—particularly tests

developed in ways that minimize bias—continue to be the most objective means of making high-stakes decisions, yet their visibility in such decisions and the fact that some test takers must lose in the decision-making process make tests vulnerable to criticism as the "bearers of bad news." Franklin Jenifer stated this case quite cogently: "I believe standardized achievement tests are not the problem; they serve only as the messenger bearing ill tidings. Instead of attacking and even attempting to 'kill' the messenger for bringing us news we do not want to hear or accept, it would be better to devote our attention to the message and, even more important, to the reasons why it is so bad" (Daves, 1984, p. 97).

This argument goes to the heart of our democratic belief system in America. One of the forces that underlies the criticism of standardized tests is egalitarianism, for the egalitarian complaint is that the tests discriminate among test takers and favor those with the best education and the most ability. But the force that makes standardized testing an omnipresent feature of our society is also egalitarianism, because "testing continues to be the most objective mechanism available to allocate benefits" (Daves, 1984, p. 59).

Tests are one of the few decision-making tools that has the potential to be blind to gender, ethnicity, sexual preference, age, religion, status, and other divisions in our society.

Diane Ravitch eloquently summarized another crucial point: "My own view is that the tests have become increasingly controversial because they have become increasingly indispensable" (Daves, 1984). Revulsion against standardized testing has come at a time when tests have become a fixture not only in educational decision making but in entry into the labor market. In researching this article, I considered both the critics' arguments and the rebuttals from testing experts and other professionals in the testing industry. My own conclusion is that we can have it both ways—we can continue to provide the most objective possible decision-making tools for high-stakes decisions in our economy and society, *and* we can nullify most of our critics' attacks. To do so, we must shift some of our resources to an emerging form of testing and assessment, which following Thomas Kuhn's terminology, I will name the *emergent matrix* or *emergent approach* (Rogers, 1995). I will contrast this new approach with what I will term the *established matrix* to testing, which has dominated our testing practices and unduly influenced our attitudes so as to bring down on our own heads many deserved as well as undeserved criticisms.

Our critics have argued that many mental and other ability tests have "labeled" or "diagnosed" the deficiencies or deficits of test takers, in order to justify their exclusion from educational or employment avenues down which other Americans have progressed. Stephen Jay

Gould (1996, p. 50) poignantly stated this case: "We pass through this world but once. Few tragedies can be more extensive than the stunting of life, few injustices deeper than the denial of an opportunity to strive or even to hope, by a limit imposed from without, but falsely identified as lying within."

My proposed new emergent model of testing and assessment can make a central contribution in blunting such damning criticisms. Let me outline the key features of this model, which I will do by contrasting its features with those of the established matrix. I use the term *established* for two reasons: first because over the past 90 years or so it has become a well-entrenched approach to testing, and second because it connotes the "Establishment," or the socioeconomic-political elite who occupy the top rung on the prestige ladder in the United States today. Table 2.1 compares the features of the two models.

Table 2.1. Comparison of Emergent and Established Matrices

Emergent Matrix	Established Matrix
View of Human Nature	
Emphasis on people's positive characteristics	Emphasis on people's deficits and potential deficiencies and limitations
View of the Person	
Holistic, integrative, people viewed as dynamic "wholes" or "systems"	Additive, people viewed as static mix of traits and abilities
View of the Purpose of Testing	
Serves the individual	Serves institutions
View of the Testing Process	
Open, communicative process	Closed, secretive process
View of Outcomes	
Test scores show "either-or" preferences	Test scores are right or wrong, good or bad
Locus of Control	
Test takers are decision makers	Testing professionals are decision makers

In order to illustrate the specifics of each of these models or matrices, I plan to focus on three of the features listed in Table 2.1: view of human nature, view of outcomes, and locus of control. In my examples I will use instruments that are promising examples of the emergent matrix and which are featured in a recent *Harvard Business Review* article: the Herrmann Brain Dominance Instrument (HBDI; Kramer & Conoly, 1992) and the Myers-Briggs Type Indicator® (MBTI®; Briggs Myers 1977/1999).[2]

View of Human Nature

The established matrix focuses its measurement power on the deficits, defects, and deficiencies of people, whereas the emergent matrix helps people identify their positive characteristics and build on these strengths. The established matrix is thus much more cynical and pessimistic about human nature, while the emergent matrix is optimistic about people and their ability to change and progress.

I now turn to some real-life examples, starting with the MBTI, a widely used measure based on Jung's work on psychological types. In their book on psychological types, Roger Pearman and Sarah Albritton cite its relevance to human nature: "At a minimum, psychological type provides models for two very important insights into human nature. First is a model for understanding human differences that provides hypotheses about people different from ourselves but that doesn't value one type over another. Second is a model that provides basic questions to help us solve problems in any situation or interaction" (Pearman & Albritton, 1997, p. 164). They emphasize the centrality of healthy human development: "Psychological type and type tools like the MBTI provide a very positive and constructive model to understand differences in the way individuals process and express information. . . . While it is valuable to know one's type and what some typical reactions and blind spots may be in a particular situation, it is for developmental rather than diagnostic or managerial use" (Pearman & Albritton, 1997, p. 172).

The MBTI community views all people as essentially normal, rather than seeing people as either "normal" or "abnormal." Pearman and Albritton state:

> Since its first publication in 1962, the MBTI is now the most widely used psychological instrument in the world. It has been translated into more than thirty languages, and to date an average of five million people per year take the MBTI in some setting or another. To our knowledge, Jung's model of psychological type, as embodied in the MBTI, is the only theory of human psychology that is based on normal populations and that

emphasizes the constructive use of differences, rather than simply classifying and defining differences as matters of good-better-best or normal-abnormal outcomes. Jung's notion, honored in Myers and Briggs' work, is that the different styles of perception, judgment, and energy flow are just that—different. One is not inherently better or worse than another. Society may not take kindly to a model in which everybody wins, but it is our contention that this model is the key to successfully navigating the future." (Pearman & Albritton, 1997, p. xiii)

Pearman and Albritton assert that we are all normal but with different expressions of what is normal: "So, who is 'normal'? In large measure, we all are. Our hope is that in these pages you will find the insights into yourself and others that will provide you with the courage to celebrate, in all its many forms, the normalcy of us all" (Pearman & Albritton, 1997, p. xvi).

The HBDI, by Ned Herrmann, "measures a person's preference both for right-brained or left-brained thinking and for conceptual or experiential thinking" (Leonard & Straus, 1997, p. 115). Neither cognitive style is viewed as superior, as both can contribute to the success of a person or organization. In fact if an organization does not have a mix of employees with different styles, and if employees do not respect each other's styles, the result can be quite destructive to the ability of that organization to innovate. As the authors of a recent *Harvard Business Review* article on cognitive styles state: "Preferences are neither inherently good nor inherently bad. They are assets or liabilities depending on the situation. . . . Understanding others' preferences helps people communicate and collaborate" (Leonard & Straus, 1997, p. 113).

Note the stated purpose of both instruments—to improve people and their organizations. Anne Anastasi and Susana Urbina, in their seventh edition of *Psychological Testing*, mentioned another instrument that illustrates this approach to testing:

> There is renewed emphasis on the need for assessment tools that are oriented toward positive mental health rather than psychopathology. . . . The Student Adaptation to College Questionnaire (SACQ-R; Baker & Siryk, 1989) is yet another tool which . . . typifies the application of psychological testing to individual self-understanding and self-enhancement, an application that is a direct outgrowth of the influence of counseling psychology and that is likely to expand greatly in the future. (Anastasi & Urbina, 1997, p. 532)

The established matrix takes a decidedly less positive view of human beings and has a tendency to focus on the abnormal or on people's deficiencies. Carol Tavris in *The Mismeasure of Woman* cuts through the pretense of the established matrix: "Yet when we peer beneath the surface, we find that the old attitude that transforms normal desires and deeds into pathology is alive and well" (Tavris, 1992, p. 177).

There is some empirical evidence that an emphasis on the positive rather than negative aspects of test takers' performance can actually enhance that performance: In a particularly well-designed investigation with seventh-grade students, Bridgeman (cited in Anastasi, 1988) found that "success" feedback was followed by significantly higher performance on a similar test than was "failure" feedback in students who had actually performed equally well to begin with. This type of motivational feedback may operate largely through the goals of the participants set for themselves in subsequent performance and may thus represent another example of the self-fulfilling prophecy (Anastasi, 1988).

View of Outcomes

Test scores historically have served to rank-order people, to establish cutoff points to determine who is "in" or "out," or to place positive or negative labels on people. Answer choices typically have been between a right answer and a wrong answer, or between two answers that result in a person scoring high or low on a scale in which the top or bottom had negative or positive connotations. The emergent matrix tends to report test scores that place the test taker along a continuum, with both ends of the continuum being equally acceptable or positive and with no right or wrong answers—just answers that identify a person's preferences, strengths, and areas for development. In a sense, the shift has been away from scores that yield an up or down ranking and toward ones that indicate right or left poles on a horizontal continuum—with no positive or negative valences assigned to either pole. In fact, the directions to the test taker in the MBTI standard form are: "There are no 'right' or 'wrong' answers to these questions. Your answers will help show you how you look at things and how you like to go about deciding things" (MBTI Form G Self-Scorable, p. 1).

The previously mentioned article in the *Harvard Business Review,* which reviews instruments that measure preferences, draws this key distinction between preferences and traits or abilities: "What we call cognitive differences are varying approaches to perceiving and assimilating data, making decisions, solving problems, and relating to

other people. These approaches are preferences (not to be confused with skills or abilities)" (Leonard & Straus, 1997, pp. 112–113). The authors cite the importance of using instruments that are well developed and well validated, and claim that "managers who use instruments with the credibility of the Myers-Briggs Type Indicator (MBTI) or the Herrmann Brain Dominance Instrument (HBDI) find that their employees accept the outcomes of the tests and use them to improve their processes and behaviors. . . . Instruments such as the MBTI and the HBDI will help you understand yourself and will help others understand themselves" (Leonard & Straus, 1997, p. 116).

Locus of Control

The right to privacy and to decide what will be done with one's test results—and who will do it—is equally crucial to the emergent matrix. In the established matrix, testing is conducted by assessment professionals who receive the results and may or may not provide an interpretation of the results to the test taker. In the emergent matrix, the testing is conducted on behalf of the individual, and the results are shared with the individual first. The individual then decides who else will have access to those results and whether he or she wants them shared at all. Anne Anastasi saw this trend back in 1988 when she wrote: "There is growing emphasis, too, on the use of tests to enhance self-understanding and personal development. Within this framework, test scores are part of the information given to the individual as aids to his or her own decision-making processes" (p. 4). . . . "There has been a growing awareness of the right of individuals to have access to the findings in their own test reports" (p. 57).

The ethos of the MBTI community is extremely clear about the centrality of test takers and the primacy of their rights as contrasted with those of the test administrator:

> When presenting type or being introduced to psychological type, it is imperative that the value of the right of self-determination is honored at each juncture of interpretation. By right of self-determination we mean that when you receive the results of the MBTI or any other psychological instrument, you are the expert that interprets it. Your years of feedback from others and reflection on your own behavior take precedence over any other interpretation. . . . Finally, you—the receiver of type-instrument data—should determine your type preferences. . . . You are the final judge. Anyone who says differently should be treated warily. (Pearman & Albritton, 1997, pp. 170–171)

The fact that the vast majority of administrations of the MBTI are given using the self-scoring form helps to ensure that the test taker retains control over who receives their results and what use is made of them.

A second aspect of this issue of centrality of the test taker is a discernible trend toward a focus on the effects of testing or assessment on the test taker, and on designing user-friendly—from the test taker's perspective—tests and assessment practices. For example, *Educational and Psychological Testing: The Test Taker's Outlook* (Nevo & Jager, 1993) examined test takers' perceptions of and attitudes toward psychological tests from a variety of perspectives and with a variety of methods: (a) public-opinion surveys about testing, (b) group interviews about test takers' views, (c) comparison of attitudes toward testing among middle-class and lower-class students based on situational bias, (d) comparison of test takers' views about essay versus multiple-choice exams, (e) the use of examinee feedback questionnaires to elicit their views, (f) comparison between employee selection by use of personal interviews versus by psychometric exams (examinees preferred the psychometric exam, by the way), (g) ideas on how to "humanize" the testing environment and improve the physical conditions of the testing environment, and (h) comparisons of employees' views about psychometric employment tests versus performance appraisals. The editors emphasize the value of focusing on test takers' views: "The contributors to this book share the common professional belief that the examinee's perspective on testing is both important and relevant, and, as such, should be incorporated into the improvement of specific tests and testing in general" (Nevo & Jager, 1993, p. 11).

Tim Rogers argues that testing can no longer be defended from a scientific perspective alone and that tests have a social consequence that cannot be ignored. He states, "Perhaps the most important and emancipating conclusion that can be drawn from the material in this text is that psychological testing is not scientific but is part-and-parcel of the sociopolitical world in which we live. The rhetoric of science is used to promote testing, but at root the enterprise is social and political. The scientific considerations are secondary" (Rogers, 1995, p. 19). This leads to his constructive recommendation to test developers:

> Test development may increasingly begin to reflect the cultural reality experienced by those being tested, rather than revealing the cultural experiences of the test makers. Theoretical constructs may be developed that are integrated into the ongoing cultural context of the group being tested. Tests may be developed to facilitate the manner in which members of a given group can articulate the nature of their problems and

concerns in their own language, rather than that of the professionals. (Rogers, 1995, p. 792)

He concludes that tests will be judged increasingly by their social impact or consequences: "in the final analysis, it will be the social success of the testing enterprise, not its scientific status, that will dictate the acceptance of the testing movement" (p. 771). "After all, if testing is fundamentally a social activity, then why not evaluate it directly in those same terms? The major bonus of this view is that tests that fulfill this 'new' criterion would have maximal social utility" (p. 788). Social utility to the test taker herself or himself is what Rogers is concerned about, a position that it is diametrically opposed to the focus in the established matrix on institutional and scientific utility.

Conclusion and Recommendations

It is not my intent to suggest that we abandon the established matrix of testing and assessment; rather, I suggest that we augment and enhance that approach with a newer and more promising approach that can blunt many of our critics' arguments and win the public and their representatives over to a favorable perception and stance toward testing. I am not asking that we shift all of our testing and assessment resources to this new type of testing, merely that we devote some of our research and development resources to exploring and experimenting with an approach that has deep roots in our political culture and thus is likely to be embraced instead of excoriated by the American public.

Standardized psychological and educational tests have proven their utility for making many societal decisions, and thus far no more accurate and reliable methods of assessment for decision making have been developed. Anne Anastasi made this claim eloquently and convincingly: "If tests were abolished, the need for making choices, by individuals as well as organizations, would remain. Decision making would have to fall back on such long-familiar alternatives as letters of recommendation, interviews, and grade-point averages. Today these alternative data sources are often used in conjunction with test scores, but not in place of tests. In fact, standardized tests were introduced as one means of compensating for the unreliability, subjectivity, and potential bias of these traditional procedures" (Anastasi, 1988, p. 68). These alternatives to testing have generally proved to be less accurate than tests in predicting school or job performance.

The emergent matrix to test development and use will ensure that testing will remain a thriving enterprise accepted by governmental representatives who have the power to destroy this enterprise we have all built and continue to augment and adapt to changing circumstances.

This emergent approach is founded on the same principles that motivated the American colonies to revolt and establish their independence: a respect for individual self-determination. As an industry and as an applied science, we have too often strayed from our democratic and egalitarian roots, serving instead the interests of the entrenched elite. We need to remind ourselves what led us to become a free country and a safe haven for the millions of oppressed people who left their homelands and came to America to put down new roots on freer soils.

Thanks to decades of continuous development of tests in accord with the established matrix, we have a solid base from which to experiment and innovate along the lines of the emergent matrix. It is my belief that if we succeed with the emergent approach to testing, we will reach and help develop hundreds of millions of people and expand the boundaries of the testing industry far beyond our wildest expectations.

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2. Myers-Briggs Type Indicator® instrument is a registered trademark of Consulting Psychologists Press.

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