Audiences for the Theory of Multiple Intelligences*

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In his closing comments, Howard Gardner discusses the various audiences that have emerged over the years for the theory of multiple intelligences. Under that rubric, he places the various papers in this issue and speculates about future lines of work on MI theory.

When an author commits a book to paper, he or she generally has no idea of its immediate or ultimate impact. To be frank, authors (myself included) typically overestimate the impact of the book—a (hopefully positive) review in the New York Times, copies profusely displayed in the window of Barnes and Noble bookstores, maybe even free trips to exotic places to plug, explain, or defend the book.

When I wrote Frames of Mind over 20 years ago, I had already published half a dozen books. And so I had a general expectation of its possible reception. In this particular case, I underestimated the attention that it would receive—as it happens, more attention than my previous books and more attention than my subsequent 10 books. I also misjudged its audience. Writing about intelligence as a psychologist, I anticipated that my chief audience would be other psychologists, as well as that segment of the general public that follows discussions of key psychological concepts. In fact, however, even though the book contained only a few pages about educational implications, the chief audience by far turned out to be educators—in the United States, initially, and eventually in many other regions of the world. In 1983 I would never have predicted that a 400-page, rather technical book, filled with definitions and footnotes, would have had its principal impact in classrooms. And today, two decades later, I am still surprised—and flattered—that educators continue to discuss the theory, as evidenced in the volume that you are now holding in your hand (or peering at on your computer screen).

* Dedicated to Patricia Bolanos, a gifted and courageous pioneer in the application of multiple intelligences.
In these remarks, I note the various audiences that have reacted to the book and the theory. Probably the most ardent readers have been classroom teachers and administrators, many of whom find that its discussion of human intellect comports with their own experiences and their own aspirations. Within the group of educators, the work has long been of special interest to those who work with nonmainstream students: the gifted (especially those with unusual gifts); students with learning difficulties (extending beyond reading problems to selective difficulties with mathematics or motor activities or the understanding of other people); students with a special flair for the arts (because several of the intelligences have a distinctly artistic flavor); and those who work with multicultural populations, which characteristically represent a wide range of intellectual strengths and distinctive profiles. I am pleased to have included in this volume Schirduan and Case’s article on students with attention deficit and hyperactive disorders; Diaz-Lefebvre’s on community college students, Kallenbach’s work with adult learners who did not complete school, and Shore’s work with future teachers—four groups that were not, to my knowledge, among the initial audiences for the theory.

A second sector with interest in the theory consists of individuals with an entrepreneurial frame of mind. Especially among Americans, an initial impulse is to ask about whether one can assess the various intelligences. Indeed, leading testing companies approached me in the middle 1980s with just such a request. I have avoided creating a test battery for various reasons, though I did work for nearly a decade on creating an approach to early childhood assessment; the results of that work can be seen in the Project Spectrum books to which Jackie Chen was a principal contributor (Gardner et al., 1998). But I am gratified that others have been more resolute in pursuing the assessment angle, including Branton Shearer, the editor and catalyst behind the collection of articles gathered here. Shearer also reports instructive empirical work using the MIDAS, to which he has devoted years of research and development.

Those involved in the development of curriculum or learning environments have also found yeast in MI theory. Hickey describes projects used by teachers of social studies, while Haley portrays promising MI applications with teachers of second languages. MI theory has also attracted individuals who seek to create innovative learning environments, such as those in found in children’s museums or at the Ross School in East Hampton, Long Island. Represented in this collection are the two schools with which I have had the longest affiliation: the New City School in St Louis, which began to explore MI ideas in 1988, and the Key School in Indianapolis, which first started to consider MI applications in 1984, opened its door in 1987, and graduated its first high school class in June 2003. I dedicate this essay to the late Patricia Bolanos, the visionary architect and principal of the Key School.
Of course, behavioral and natural scientists have also had their say about the theory of multiple intelligences. Truth to tell, MI theory has few enthusiasts among psychometricians or others of a traditional psychological background. These individuals continue to be attracted to “g” or general intelligence, either because they read the current evidence as supporting “g” or because they seek psychometric or experimental evidence that allows one to prove the existence of the several intelligences that I have posited. I would be delighted were such evidence to accrue, but I have never considered it my assignment to create new tests or carry out crucial experiments. MI theory is a synthesis of the extant literature from several disciplines, and even though details of the theory may need to be changed, I believe that evidence secured after 1983 continues to be hospitable to the theory. Chen’s essay represents an elegant effort to describe the scientific approach that I take and to show how its basic paradigm clashes with that of psychometrics.

MI theory has proved more congenial to those from the biological or neurosciences. One reason might be my own extensive reliance on evidence about brain development and organization. Another is that my theory derives from an evolutionary perspective, and that way of thinking is consistent with how most biologists think about the mind and the brain. Also, neuroscientists lack the vested interest in the standard view of intelligence that has tended to cloud the perspective of many psychologists. Posner acknowledges MI’s unusual dual focus on universal psychological processes on the one hand and on individual differences on the other. And his own path-breaking work on attention anticipates the time when cognitive, neurological, and genetic approaches will converge—quite possibly yielding enormous educational dividends.

If a new theory is to be properly evaluated, it is important to identify its defining features, to relate it to other seemingly similar efforts, and to explore the ways in which it may differ from or complement these other efforts. Admittedly, I did not do much of this comparative analysis in my early writing on MI. I appreciate Noble’s effort to relate MI theory to Bloom’s taxonomy, Denig’s study of MI’s connection to the Dunns’ approach to learning styles, and Wu’s intriguing examination of the personal intelligences, in the light of Sternberg’s complementary approach to intelligence. Such comparisons cannot fail to be of help to consumers who are seeking to make sense of the dizzying array of educational approaches on the scene today.

A final audience for the work consists of individuals who are concerned with educational policy—including in recent years the various approaches to school reform. Perhaps not coincidentally, my two colleagues at Stanford, Eisner and Cuban, both focus on the fate of MI in a climate that is politically complex and, at present, decidedly unsympathetic to progressive ideas,
such as those that my associates and I have developed in curriculum, assessment, and pedagogy. Eisner pushes for an educational atmosphere that encourages individuality, while Cuban helps us understand why schools are so adept at resisting new ideas and practices, be they well-advised ones or foolish ones.

I should underscore that I have never had a desire to impose MI ideas on any school or community. I want only enough flexibility so that those educators who want to try out MI approaches have the space to do so. Indeed, I don’t expect that MI approaches will ever win a popularity contest, though I have found enthusiasts in every region that I have visited. Alas, finding space for MI work may be difficult in the American public system in the coming years. However, the continuing interest in these ideas in other countries, and in American schools that are somehow able to escape the current testing pressures, suggests that the present zeal for uniform curriculum and frequent short answer examinations may not prevail.

One element of the current essays that I found particularly instructive was the portrayal of the various resistances to MI theory. In addition to the systemic resistances identified by Eisner and Cuban, I was intrigued to learn that adult learners may feel that projects and hands-on kinds of learning reflect condescension on the part of their instructors; that some “ordinary” teachers and students are more comfortable with standard lecturing and teacher-centered instructions, while reluctant to take the risks involved in using a range of intelligences or engaging in more open-ended kinds of projects; that individuals may misjudge their own intellectual strengths and so select projects or activities for which they have little aptitude or flair; and that MI curricula risk scoring higher on the enjoyment dimension than on the dimension of complex thought processes. Needless to say, the vast amount of time now dedicated to meeting local, state, and national mandates makes it very difficult for even the most ingenious practitioners to devote much time to MI activities. The challenge, at least in the short run, is to absorb MI thinking into the daily routine, rather than to devote extra time—that few have—to such pursuits.

As I consider the MI events of the past 20 years, a few points stand out. The first is the sheer number of schools that claim to be influenced by MI theory. I am grateful to Mindy Kornhaber for having carried out the first systematic study of schools using MI theory and for having identified their crucial features and compass points, and I am pleased that her book on this topic has now appeared (Kornhaber, Veenema, & Fierros, 2004). I have never wanted to initiate official MI or Gardner schools but am delighted when such efforts are studied and available for inspiration. I have been bemused by the number of institutions and individuals who have created workshops, courses, or even full-blown curricula in MI—some of these are quite wonderful, but others make me scratch my head. I wonder whether
some of the creators have actually read my work or are depending entirely on secondhand accounts or even creating out of thin air their own version, based simply on hearing the buzzword **multiple intelligences**. I get a kick out of unexpected mentions of MI—in crossword puzzles in the *New York Times*, cartoons in the *New Yorker*, a novel by Richard Powers, a television episode of *ER*, a board game, a Sunday school course, and the like. And occasionally I am horrified. This is what happened when an educational program in Australia claimed to be based in part on MI theory. When I examined the curriculum, I found that it included a list of the various racial and ethnic groups in Australia, complete with a tally of the intelligences that each exemplified and the intelligences that were lacking. Along with others, I appeared on Australian television to denounce the program, and I was pleased when the program was soon cancelled.

Looking forward, I hope that many of the persons and institutions with interest in MI theory will continue to explore its implications—leading it along new as well as well-trodden paths. As I ponder future work in this area, I need to reveal one additional audience for the theory—and that is the author himself. I cannot anticipate how much time and energy I will devote personally to MI theory in the years ahead, but I can identify a number of lines of work that I hope will be pursued, either by me or by other scholars or practitioners.

A first and most obvious line of work is updating the theory itself. I have always felt that the most innovative part of the theory consists of the eight criteria that I invoke in evaluating a candidate intelligence (Gardner, 1983/1993a). I may well be persuaded that there are additional intelligences to be added to the list—and perhaps sufficient evidence will accrue to deem existential intelligence as a separate frame of mind (Gardner, 1999). It is also possible that some of the boundaries between the intelligences might have to be reconsidered or reconceptualized. Recently, I have become interested in a third nuance of the term **intelligence**. Until now I have focused chiefly on intelligence as a universal trait (e.g., human intelligence) and intelligence as an individual difference (John has more musical intelligence than Joe). But it is also germane to understand what it means to act intelligently (or stupidly). Such a determination can only be made in terms of the goals and values of the particular individual operating in a particular society (Gardner, 2002).

It may be timely to reconsider the relationship between IQ (general intelligence) and multiple intelligences theory. Having established the legitimacy of a multiple intelligences approach, I would like to understand better the differences between individuals who have the standard high IQ (for scholastic intelligence) and those who stand out in other respects, perhaps by having a notably scattered profile of intelligences. While the causes of these different prototypes have eluded me, I am persuaded of the
reality of these two classes. I think now of high IQ individuals as having a mental searchlight, which allows them to scan wide spaces in an efficient way, while those with a more jagged profile employ a mental laser, which allows them to focus intensely on a more specific area. Politicians, businesspersons, leaders of various sorts are more likely to stand out for their high IQs; those who go into the arts, the sciences, or some kind of craft or trade are more likely to display a laser-form of intelligence. The smooth running of society may be depend on having individuals with reliable searchlights; the advances (as well as the catastrophes) of society may reflect individuals with highly beamed lasers.

Several related lines of scholarship are of interest to me, and each might ultimately impact specific facets of the theory. Without doubt the most important are advances in neuroscience and genetics, of the sorts described by Michael Posner. We will undoubtedly know a great deal more about the evolution, development, and organization of the human brain in general, and about significant differences across individuals, in both neural structure and neural processing. And these findings cannot fail to deepen and complexify our understanding of human intellectual capacities. In complementary fashion, our increased understanding of the human genome will, for the first time, allow us to make meaningful statements about what causes individual differences in cognition, be they of the IQ or the multiple intelligences variety.

Closer to my own specialty of developmental psychology, I am struck by the advances in our understanding of early forms of cognition in children and in other primates. Pivotal discoveries have been made about the abilities of very young human beings to process numbers, make spatial discriminations, classify linguistic strings, differentiate among human beings, and effect other intellectual tasks that reflect the initial operations of intellect (Gopnik, Meltzoff, & Kuhl, 1999). Higher primates share many of these intellectual capacities. Researchers are in the process of homing in on the nature of core operations for each of the intelligences and perhaps as well determining what is distinctive about human intellect. Recently, Hauser and colleagues (Hauser, Chomsky, & Fitch, 2002) proposed that human beings differ most pointedly from other primates in their capacity for recursion—roughly, the capacity to embed one element within another, and to do so cumulatively. It is possible that the various intelligences—or some of them—are also distinguished by their potential for such recursive activity, and this possibility opens up promising lines of inquiry as well as opportunities for assessment.

Despite my own background in the social and natural sciences, I am equally interested in approaching issues of intellect from the perspective of the humanities—for example, historical and cultural studies. I am convinced that our current views of intellect, and our reliance on certain
instrumentation, reflect the priorities of Western society over the last century or so. The IQ test was devised by Binet and his associates to help ascertain which students were likely to have trouble in the French schools of 1900. This question was important because France had a large colonial empire to administer, and it wanted to use its schools to train future bureaucrats and field officers. The intelligence test was normed and standardized in the United States in the succeeding decades so that one could efficiently determine placements in the military and in the school and, perhaps not coincidentally, so as to reinforce a certain view of which groups in society were intellectually meritorious (Gould, 1981). As we enter the 21st century, our society has different needs and wholly new forms of technological instrumentation. I expect that our views of intellect and measurement will reflect these enormous changes; I hope to be able to assist—or at least observe—the corresponding changes in the “intelligence intelligentsia” (Battro & Denham, 2002; Gardner, 1999).

In touching on new forms of measurement, I move from the world of scholarship to the world of practice. My own relationship to the world of practice has always been modest; as I have said about Harvard Project Zero, where I have worked for over 35 years, our mode of operation is to develop ideas and to give them a push in the right direction. With respect to the many forms of educational innovation alluded to in the articles collected here, I see my continuing role as trying to be helpful to individuals who contact me, calling attention to work that I find particularly meritorious, and, on the very rare occasions where it seems warranted, blowing the whistle on work that I find disturbing or destructive. I do harbor the hope for two new lines of more practical work: 1) applications of multiple intelligences in the workplace (Gardner, 2004; Martin, 2000) and 2) the use of high speed, multimedia computers, virtual realities, and other kinds of simulations to allow more effective presentation of lessons and more veridical forms of assessment. In this context I should note that many technologically oriented experts have considered how computers and other modern media might address or embody the multiple intelligences. My own guess is that the chief educational applications of MI theory lie in the construction of powerful new technologies and that this initiative has yet to coalesce.

Finally, let me mention my own current collaborative research on GoodWork. With Mihaly Csikszentmihalyi and William Damon (2001), I have been focusing on the relationship between admired human capacities, such as intelligence, creativity, and leadership on the one hand and actions that are responsible, moral, and ethical—that is, contributing to the wider good of society—on the other. Our focus has fallen on the work of skilled professionals; we ask how such professionals succeed or fail in carrying out work that is both excellent (technically good) and ethical (socially good) at a
time when market forces are very powerful, there are few if any competing forces of equal power, and our senses of time and space are being radically altered by technology. While our research is still very much in progress (see www.goodworkproject.org), we have already determined that it is difficult to do good work in turbulent times, but that many individuals and institutions are making the requisite efforts. I make no apology for having spent decades in the study of intelligence; it is and remains an important topic. But if at the end of the day, our intelligences are not yoked to a sense of responsibility, then we will not have a world in which most of us would like to live, and perhaps we will not have a world at all. I hope that one dividend of this new work will be a better understanding of how to nurture young people capable of work that is equally distinguished in terms of its excellence and its ethical dimensions.

References


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Mihaly Csikszentmihalyi and William Damon, Gardner has embarked on a study of GoodWork—work that is at once excellent in quality and also socially responsible. The GoodWork Project includes studies of outstanding leaders in several professions—among them journalism, law, science, theater, and philanthropy—as well as examination of exemplary institutions and organizations. In 2001, Basic Books published Good Work: When Excellence and Ethics Meet, the first book to issue from Gardner and colleagues’ current research study; related publications and information may be found at www.goodworkproject.org.