

MULTIPLE INTELLIGENCES THEORY: REFLECTIONS FROM PROF. HOWARD GARDNER

Compiled by: Aylin Buran '02

Multiple Intelligences Theory tells us that humans can have different intelligence types, which presents a quite different perspective with regard to individual potential and the things s/he could achieve and succeed. The theory, which was developed by Prof. Howard Gardner, has been welcomed, especially by educators. MI gives hope to educators with regard to personal development, and it contributes to the advancement of different learning and teaching methods.

What does Multiple Intelligences Theory tell us literally? What are the reflections of it in educational field? What are the scientific reflections in terms of looking at multiple intelligences aspects? It is possible to find the answers to these questions in this article.

Much of this interview was originally published in Educational Echoes. The questions (4th and 5th questions) regarding to what Prof. Gardner's theory means from the viewpoint of educators, and how this theory can be evaluated in the context of the relation between the human and the environment, was replied to for our readers.

We would like to express our sincere thanks and appreciation to Prof. Howard Gardner for his contributions to this article and his responses to questions for our magazine. Now, we leave you alone with this important information about Multiple Intelligences Theory.

Can you summarize "multiple intelligences" (MI) theory briefly?

*I developed MI theory in the late 1970s and early 1980s. In doing so, I drew on evidence from a wide variety of sources, disciplines, and research tradition. I presented the theory for the first time in 1983, in my book *Frames of Mind: The Theory of Multiple Intelligences*.*

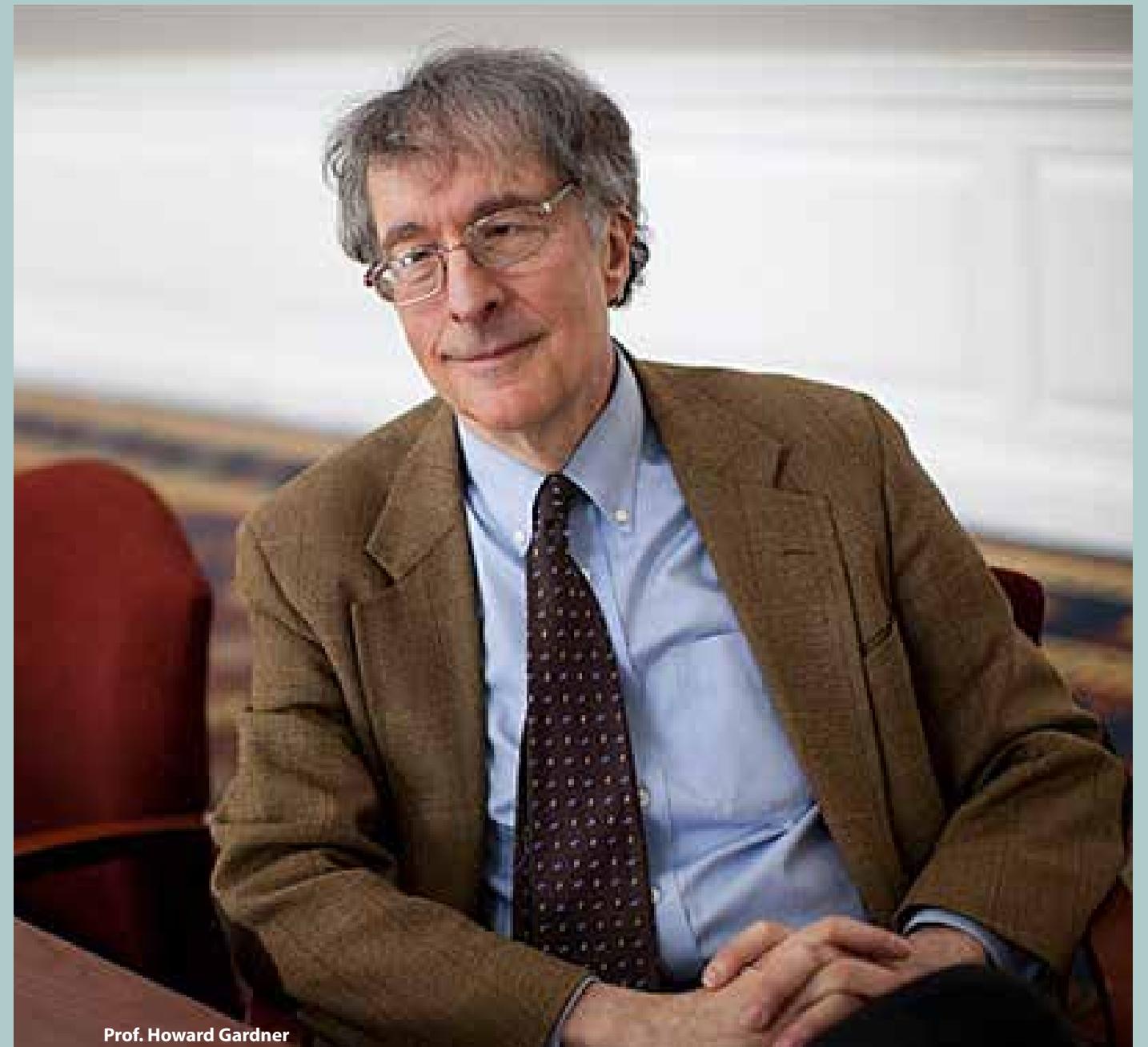
The theory is a critique of the standard psychological view of intellect: that there is a single intelligence, adequately measured by IQ or other short answer tests. Instead, on the basis of evidence from disparate sources, I claim that human beings have a number of relatively discrete intellectual capacities. IQ tests assess linguistic and logical-mathematical intelligence, and sometimes spatial intelligence; and they are a reasonably good predictor of who will do well in a 20th (note: NOT 21st) century secular school. But humans have several other significant intellectual capacities. In my original book, I described musical intelligence, bodily-kinesthetic intelligence, interpersonal (social) intelligence, and intrapersonal intelligence (understanding of self). A few years later, I added the naturalist intelligence: the capacity to make consequential distinctions in the world of nature. I also have speculated about two other possible intelligences: existential intelligence, the intelligence of 'big questions'; and pedagogical

*intelligence, the intelligence that allows human beings to convey knowledge or skills to other persons. For something to qualify as an intelligence, it has to satisfy the eight criteria laid out in chapter 4 of *Frames of Mind*.*

In comparing MI to traditional psychological view of intelligences, I find it useful to invoke the metaphor of the computer. Belief in a singular intelligence implies that humans possess a single general purpose computer, which can perform well (hi IQ), average (normal IQ) or poorly (low IQ). Belief in multiple intelligences theory implies that human beings possess several relatively independent computers; strength in one computer does not predict strength (or weakness) with other computers. Put concretely, one might have high (or low) spatial intelligence and yet that does not predict whether one will have high (or low) musical or interpersonal intelligence.

What are the major scientific implications of the theory?

Two interesting implications. The intelligences constitute the human intellectual toolkit. Unless grossly impaired, all human beings possess the capacity to develop the several intelligences. At any one moment, we will have a unique profile, because of both genetic (heritability) and experiential factors. Identical twins will have similar cognitive profiles. But the profiles



Prof. Howard Gardner

will not be identical; even though the genetic constitution is the same, identical twins have different experiences (even in utero!) and once born, they can be motivated to distinguish themselves from their genetic clone.

What are the major educational implications of the theory?

It is important to stress that MI theory began as a psychological theory, one that also drew on brain and genetic knowledge in the early 1980s. I was surprised that the principal interest in the theory came not from psychologists but from educators. And that has remained largely true until today. Initially, I did not have strong ideas about how to apply MI theory to education. And indeed, no scientific theory can be translated directly into educational applications because education is suffused with values.

That said, I think that there are two principal educational implications: Individuation and Pluralization. The first, individuation (also termed personalization), suggests that since human beings have their own unique configuration of intelligences, we should take that into account when teaching, mentoring or nurturing. As much as possible we should teach individuals in ways that they can learn and we should assess them in a way that allows them to show what they have understood and to apply their knowledge and skills in unfamiliar contexts. Traditionally, individuation was possible only for families with means. Nowadays, with the easy accessibility of

powerful digital devices, it is possible to individualize education for everyone.

If you think that this description is a critique of standardized testing, you are correct! As for pluralization, that is a call for teaching consequential materials in several ways. Whether you are teaching the arts, the sciences, history, or math, you should decide which ideas are truly important and then you should present them in multiple ways. If you can present the art works of Michelangelo, or the laws of supply and demand, or the Pythagorean Theorem in several ways, you achieve two important goals. First of all, you reach more students, because some students learn best from reading, some from building something, some from acting out a story, etc. Second, you show what it is like to be an expert—to understand something really well. Think about anything with which you have a deep familiarity: your family, your neighborhood, your work, your hobby. Presumably you can describe and convey it in several ways. Indeed, if you are limited to only one way of conveying an important concept or topic, your own understanding is probably tenuous. We teachers discover that sometimes our own mastery of a topic is tenuous, when a student asks us to convey the knowledge in another way and we are stumped.

You mentioned that educators are interested in MI theory more than the psychologists. How do you interpret this case? I believe that you give hope to educators regarding to human capacities. Do you agree with that?

Yes, both educators and parents resonate to MI theory. Teachers know intuitively that students can be smart in various ways. And parents whose children do not resemble the parents stimulate the parents to think more broadly about what it means to be smart. Psychologists are wedded to a certain definition of intelligence and, even more, to certain ways of measuring it. My conception of intelligences and the ways that I would measure it involve too much of a stretch for most psychologists. My colleague Robert Sternberg's work is a bit closer to "mainstream psychology," but he also falls outside of most psychologists' views of "intelligence."

How do you interpret the role of the environment within MI Theory? From a Vygostkian perspective for instance, humans are shaped by their surroundings and their history. How do you interpret the role of the social milieus from MI perspective?

A certain proportion of our intellectual profiles comes from our genetic heritage. I could practice playing the cello every day of my life, and I would never sound like Yo-Yo Ma. But the actual performance of one's intelligences depends upon the environment in which one is born, what one's parents are like, what is valued in a culture, what is transmitted by the media and—most importantly—what is taught and rewarded in schools.

I actually make use of Vygotsky's work all the time when I am describing MI theory. If you want to know whether young people have potential in a given intelligence,

provide scaffolding and then gradually remove that scaffolding. Individuals who are strong in an intelligence will be able to perform well even when the scaffolding has been removed; others are far more dependent on scaffolding over a long period of time. Young people who are more able in a particular intelligence have a larger "zone of proximal development."

As a psychologist I have learned more from Piaget. As an educator, I have learned more from Vygotsky.

Suppose you are the minister of education, what would be your main lines of educational policy?

Anyone who knows me knows that I would and could never be a minister of education. I am basically a thinker who tries to push things in a positive direction and not someone involved in politics or in full-time action.

That said, I think a good minister needs to:

Have a clear set of goals and values (including what the educated person should know and be able to do).

Identify examples, in the country or in the world, of places and persons who embody quality in goals and values.

Scan the world for the most effective ways to achieve these examples. In the case of the United States, we often assume that we have nothing to learn from other places. This is completely wrong, and we have paid a high price for arrogance etc.?

Could you describe the contours of a

good school – its goals, curriculum, pattern of teaching, method of assessment, organizational structure, culture and climate, etc.?

I think that there are many kinds of good schools, and I would avoid the trap of outlining a single good school. In *The Disciplined Mind*, I argue that in any sizeable country, there should be 6-12 educational tracks, extending from Kindergarten through secondary school, each with a distinctive set of goals, philosophy, and means of assessment. Citizens should be able to choose the track for their children and the choices should be available across the country. And so, for example, one track might be more progressive (e.g focusing on good questions and how to tackle them), while another track might emphasize cultural literacy (the books that everyone should read and be able to discuss).

And so, referring to the previous question, I don't think that the minister of education should embrace a single "best school," not even in a country much smaller than the U.S. The goals, values, and methods to which I refer should be available across a suite of choices.

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Photo: Stephanie Mitchell/ Harvard Staff Photographer