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A critical reading of the text titled: The Original Seven Intelligences

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Titre	À propos de l'auteur : Une lecture critique du texte intitulé : Les Sept Intelligences Originelles
Mots clés	Lecture critique, intelligences multiples, voix, présuppositions, intertextualité, couverture et cohérence, théorie de Piaget.
Résumé	
La lecture critique est un processus d'analyse, d'interprétation et, parfois, d'évaluation d'un texte. Lire de manière critique signifie utiliser notre esprit critique pour répondre à des questions textuelles. L'analyse du texte s'est déroulée en trois étapes. La première étape est une analyse descriptive. Il s'agit d'une présentation de toutes les informations liées au texte. Le titre, « Les sept intelligences originelles », est tiré de l'ouvrage « Intelligence Reframed : Multiple Intelligences for the 21st Century », publié en 1999. L'auteur du texte est Howard Gardner. La deuxième étape est une analyse interprétative. Elle utilise des concepts de lecture critique tels que les personnages, les voix, les présupposés, l'intertextualité, la couverture et la cohérence. Les personnages sont tous des personnes, des symboles et des institutions du texte. L'analyse révèle également d'autres personnages cachés. Par exemple, dans ce texte, l'enseignant, l'inspecteur, le ministère de l'Éducation et le ministère de la Défense. Les voix sont les rôles joués par l'auteur pour convaincre les lecteurs. Gardner (1999) a adopté trois rôles : enseignant, psychologue et universitaire. La dernière étape est une analyse évaluative. De nombreux points et idées ont été analysés dans la partie principale de l'article, tels que la théorie de Piaget, les sept intelligences et le test d'intelligence. L'article conclut par des recommandations à l'intention des parents, des enseignants, des administrations, des universitaires et des gouvernements.	

Keywords	Critical reading, Multiple Intelligences, voices, Presuppositions, intertextuality, hedging, and coherence, Piaget theory.
Abstract	
Critical reading is a process of analyzing, interpreting, and, sometimes, evaluating the text. Reading critically means using our critical thinking skills to answer some textual questions. The analysis of the text was done in three stages. The first stage is a descriptive analysis. It was a presentation of all the information linked to the text. The title is 'The original seven Intelligences', taken from the book 'Intelligence Reframed: Multiple Intelligences for the 21st Century', published in 1999. The writer of the text is Howard Gardner. The second stage is an interpretive analysis. It used critical reading concepts, such as characters, voices, presuppositions, intertextuality, Hedging, and coherence. Characters are all persons, symbols, and institutions in the text. The analysis also makes out other hidden characters. For example, in this text, the teacher, inspector, the Ministry of Education, and the Ministry of Defence. Voices are the roles played by the writer to convince the readers. Gardner (1999) took three roles: teacher, psychologist, and academic. The last stage is an evaluative analysis. Many points and ideas were analyzed in the main part of the article, such as Piaget's theory, seven intelligences and the test of intelligence. The article concluded with recommendations for parents, teachers, administrations, academics and governments.	

1. Introduction

This paper offers a critical analysis of “The Original Seven Intelligences,” a section from Howard Gardner’s 1999 book *Intelligence Reframed: Multiple Intelligences for the 21st Century*. Gardner, a renowned American developmental psychologist born in 1943, has authored over thirty books and numerous research articles. He is best known for developing the theory of Multiple Intelligences (MI),

first introduced in his 1983 book, "Frames of Mind." The MI theory significantly challenged traditional views of intelligence and has had a profound impact on educational practices.

The analysed text spans pages 41 to 44 and comprises 764 words across six paragraphs. Gardner details seven distinct intelligences: linguistic, logical-mathematical, musical, bodily-kinesthetic, spatial, interpersonal, and intrapersonal, using examples from various professions. This analysis aims to examine how these intelligences can inform classroom classification and support diverse learners, ultimately helping them fulfil their potential. Gardner intends to nurture and develop every learner's ability.

The primary focus of this paper is to interpret the function of the text, seeking to understand the author's communicative intentions beyond the literal meaning. Drawing on Nord's (1991) framework, the analysis addresses questions about the sender's intended function, clues from the text's context and audience, potential alternative uses by readers, and insights from both extratextual and intratextual features. The target text answers the following questions proposed by Nord (1991):

1. What is the text function intended by the sender? Are there any hints as to the intended function in the text environment, such as text-type designations?
2. What clues as to the function of the text can be inferred from other extratextual dimensions (motive, medium, receiver, intention)?
3. Are there any indications that the receiver may use the text in a function other than that intended by the sender?
4. What conclusions can be drawn from the data and clues obtained about text function as regards (a) other extratextual dimensions (sender, intention, receiver, medium, time, place, and motive), and (b) the intratextual features? (pp. 82, 83)

The methodology is grounded in critical reading concepts, including characters, voices, presuppositions, intertextuality, hedging, and coherence, all of which are systematically applied throughout the analysis. The article concludes with recommendations for parents, teachers, administrators, academics, and policymakers.

2. Critical reading of the text

Text comprehension involves distinguishing between explicit (literal) meaning and implicit (inferred) meaning. According to Stafura and Perfetti (2015), readers must decode both what is stated and what is implied, drawing on knowledge beyond the text itself. This comprehensive approach is essential for uncovering the text's deeper significance.

There are two thin lines that separate descriptions of text comprehension. The first is the line between what a text says (i.e., its explicit or literal meaning)

and what is inferable from the text (i.e., its implicit meaning). The second thin line is one that separates two kinds of implicit meaning processes. On one side of this line is what text researchers refer to as inferences. Although these inferences can be further sorted into various types (e.g., Graesser, Singer, and Trabasso, 1994), they have in common the idea that the meaning that is obtained is not in the words and syntax of the text but is constructed by the reader based on knowledge that is largely independent of that particular text. (Stafura & Perfetti, 2015, p.1)

All these elements and factors must be treated for a global analysis. As mentioned previously, some critical reading concepts help in the process of implicit meaning. It is crucial to use them to achieve the planned purpose of this paper.

2.1. Characters in the text

Gardner, as the author, is the primary character, asserting ownership of his theory by employing the first-person pronoun "I." He utilised it four times to demonstrate that he is the innovator of a new theory detailed in the text entitled "The Original Seven Intelligences." The opening phrase of the text confirms his goal: "I proposed the existence of seven separate human intelligences." (Gardner, 1999, p.41). He employed the word "EXISTENCE," which denotes that they are a FACT.

On the other hand, there is an essential character that represents the audience; in other words, the receiver, addressee, or reader. In this type of text, the author targets many readers. Nord (1991) transfers the definition of the addressed audience in the text. According to him, "Wittich (1979, p. 769), for example, points out that the genre, 'popularising scientific text', can be addressed to various types of audiences: children, adolescents, adults, the latter group comprising scientists as well as non-scientists." (p. 57). The text under study contains multiple characters due to the roles assigned by the author. Gardner (1999) divides the seven intelligences into three groups, each relevant to different audiences or characters.

The first group consists of two intelligences: linguistic and logical-mathematical, which are typically assessed in schools. Gardner mentioned the term "School". It is an institution that comprises characters not found in the text, such as learners, teachers, parents, inspectors, administration, and the Ministry of Education. Furthermore, there are other direct characters, including lawyers, speakers, writers, poets, logicians, mathematicians, and scientists. The name "Piaget (1886-1980)" refers to followers of Piaget, students, psychologists, and academics. The character of "businesspeople" represents the Ministry of Economics, "politicians" denote the government, "entertainers" signify the Ministry of Culture, and "military personnel" correspond to the Ministry of Defence.

The second group is linked to the three intelligences: musical intelligence, bodily-kinesthetic intelligence, and spatial intelligence. For this group, Gardner (1999) conveys messages to certain hidden characters in musical intelligence, such as singers, composers, classical musicians, and so on. In bodily-kinesthetic

intelligence, the characters include "dancers", "actors", and "athletes"; other characters relevant to this intelligence are the Ministry of Sport, dance schools, and television. The characters associated with spatial intelligence include architects, navigators, pilots, sculptors, surgeons, chess players, and graphic artists.

The final group of characters is associated with two types of intelligence: interpersonal intelligence and intrapersonal intelligence. Interpersonal intelligence contains various personalities (characters) in society, such as teachers, salespeople, clinicians, actors, religious leaders, and political leaders. Intrapersonal intelligence encompasses jobs and people (characters) not detailed in the text. They exist in society, for example: diarists, Baptists, and authors.

2.2. Voices

Voices in the text manifest in various forms. "The writer has more than one role in the text for different strategic purposes, so his identity is not the same at every point." (Tuna, 2017, p. 137). A skilled author employs his abilities to convince and satisfy all members of his audience. In this text, the developmental psychologist Gardner knows how to underpin his ideas and effectively convey the message to the readers.

The first voice represents the role of an education expert. Gardner, as a knowledgeable teacher, discusses the classification of learners in a classroom. He advises teachers to give importance to all learners; in other words, they should engage with all students. Some learners possess abilities and skills in "spoken and written language." They should be encouraged and developed. He also reminds teachers that they are the producers of many personalities for the future, such as lawyers, speakers, writers, and poets. Additionally, some learners can resolve problems logically, perform mathematical operations, and debate issues scientifically.

The second voice symbolises the function of psychologists and scholars. He began to discuss and critique Piaget's theory, stating: "Piaget claimed that he was studying all types of intelligence, but I believe that he was actually focusing on logical-mathematical intelligence" (p.42). Subsequently, Gardner (1999) sought to persuade psychologists and most other academics, asserting, "Indeed, the fact that most psychologists and most other academics exhibit a reasonable amalgam of linguistic and logical intelligence made it almost inevitable that those faculties would dominate tests of intelligence." (p.42). He rejects intelligence tests and underscores their uselessness. He cites examples of prominent individuals who have never been subjected to testing, such as businesspeople, politicians, entertainers, and military personnel.

The third voice is the artist, specifically the musician, who is experienced in all kinds of music. This type of intelligence necessitates skill in playing, authorship, and appreciating musical patterns. He considers music as "a talent". The fourth role is kinesiologist. The writer speaks as a specialist in body movements. As he cited, it is like the dancers, actors, and athletes. In the fifth voice, Gardner speaks like an

experienced spatial thinker. According to him, spatial intelligence shows the ability to recognize and manipulate the types of vast space. This kind of person can mentally generate, transform, tamper with a visual image, understand, and recall spatial relationships between objects. He provided in the text some activities, such as sculptors, architects, graphic artists, and chess players.

At the end of the text, the author returns to his speciality, as mentioned in the second voice 'Psychologist'. He presented "the final two intelligences" and defined them. Interpersonal intelligence points to a person's capacity to understand the intents, impulses, and wishes of other people. Finally, he concludes his text by defining the last type of intelligence. Intrapersonal intelligence contains the capacity to see oneself and to have an efficient working model of oneself including his desires, fears, and abilities.

2.3. Presuppositions

According to Merriam-Webster, 'Presupposition' means "something taken as being true or factual and used as a starting point for a course of action or reasoning." Gardner's text contains several presuppositions, which are categorized in Yule's six types.

1- Existential presupposition: "The speaker is assumed to be committed to the existence of the entities named." (Yule, 1996, p. 27). In the text of Gardner's book (1999), a reader finds the following presuppositions:

"I proposed the existence of seven separate human intelligences." (p. 41): These seven intelligences exist in society.

"...linguistic and logical-mathematical are the ones that have typically been valued in school." (p. 41): The valuation exists in the classroom.

"Linguistic intelligence involves sensitivity to spoken and written language... ability... capacity to use language..." (p. 41): The verb "involve" means the existence of the following learners' qualities: sensitivity, ability, and capacity.

"Interpersonal intelligence denotes a person's capacity to understand..." (p. 43): The verb "denote" means that a person's capacity exists.

2- Factive presupposition is the presumption that the information after the verb "Know" is true and considered a fact. There are "other verbs, such as 'be' with 'aware', 'odd', and 'glad'" (Yule, 1996, p. 27). This passage is an example from the text.

"... the fact that most psychologists ..." (p. 42): The word "fact" means that the writer knows these psychologists.

3- Lexical presupposition is when we use "one form with its asserted meaning is conventionally interpreted with the presupposition that another (non-asserted) meaning is understood" (Yule, 1996, p.28). For instance:

"I believe that he was actually focusing on logical-mathematical intelligence." (p.42): Gardner supposes that Piaget tried to focus on this kind of intelligence.

4- Structural presupposition is when "certain sentence structures have been analysed as conventionally and regularly presupposing that part of the structure is already assumed to be true" (Yule, 1996, p. 28).

"...spatial intelligence is deployed in different cultures clearly shows how a biopsychological potential can be harnessed by domains that have evolved for a variety of purposes." (p. 43): From this passage, the reader realises that a biopsychological potential is essential for spatial intelligence.

5- Non-factive presupposition is when it "is assumed not to be true. Verbs like 'dream', 'imagine', and 'pretend'." (Yule, 1996, p.29).

"Piaget claimed that he was studying all of intelligence, but I believe that he was actually focusing on logical-mathematical intelligence." (p. 42): Gardner wants to show that Piaget did not study all of intelligence.

6- Counter-factual presupposition is "meaning that what is presupposed is not only not true, but is the opposite of what is true, or contrary to facts" (p. 29)

"I often wonder whether a different set of faculties would have been isolated if the test developers had been businesspeople, politicians, entertainers, or military personnel." (p. 42). As soon as Gardner puts this counterfactual condition, faculties will not be isolated.

2.4. Intertextuality

According to some scholars, "Intertextuality as a term was first used in Julia Kristeva's "Word, Dialogue and Novel" (1966) and then in "The Bounded Text" (1966, p.67), essays she wrote shortly after arriving in Paris from her native Bulgaria 2" (Jesus & Alfaro, 1996, p.268). This concept describes the relationships between texts that shape the meaning of a text. In other words, "Intertextuality is the presence of actual elements of other texts within a text quotation." (Fairclough, 2004, p.39). However, at times, the writer implies the meanings of other texts without using direct quotes. Gardner (1999) involved two other topics to persuade readers of the new theory of "Multiple Intelligences". These topics are references to other theories and ideas rather than quotations.

The first topic is Piaget's theory, which is discussed in various texts and books authored by Piaget. Gardner seeks to critique Piaget's theory, centred on cognitive development. This theory suggests that children progress through four distinct stages of mental development. The emphasis of this theory lies not only in understanding how children acquire knowledge but also in comprehending the characteristics of intelligence. The second topic concerns psychologists and other scholars who demonstrate a plausible combination of linguistic and logical intelligence, making it almost inevitable that these faculties would dominate intelligence tests. Gardner knows numerous psychologists and academics who have researched the subject of

intelligence. He aims to persuade them of his theory in the text. He presented a substantial amount of evidence to challenge the validity of intelligence tests.

2.5. Hedging

In academic writing, hedging serves several literary and social purposes. It has been defined by some researchers (Lakoff, 1972; Perkins, 1983; Hyland, 1998). Lakoff (1972) was the first to introduce the concept of hedges in linguistics. He defined them as “words whose job is to make things fuzzier or less fuzzy” (p.195). Conversely, Hyland (1998) highlights the academic purpose of using hedging. It is the reason “that a statement is based on plausible reasoning rather than certain knowledge and allows readers the freedom to dispute it” (p.4). According to Perkins (1983), hedging is expressed through modal auxiliary verbs such as can, could, will, would, may, and might, adjectival, adverbial, and nominal modal expressions (possible, perhaps, probability), modal lexical verbs (believe, assume), IF-clauses, question forms, impersonal phrases, and time references. In this text, the writer employs some hedges to facilitate an open discussion when presenting his theory of ‘Multiple Intelligences’ at conferences and universities.

The first hedging occurred when Gardner (1999) began to criticise Piaget’s theory. He employed the verb “believe” to steer the debate that would arise between him and the audience or the readers.

The second one appears in this sentence, “... it is almost inevitable ... faculties would dominate tests of ...” (p. 42). The adverb “almost” means ‘nearly’. The word “would” is a modal auxiliary verb. These two words indicate that the author is not entirely certain about what those psychologists and academics think.

The third one is in “I often wonder ... would have been...if the test developers had been ...” (p. 42). In this sentence, there are three indicators of hedging. The first is “wonder”, a verb that demonstrates the writer's uncertainty, particularly when used with “would” and “if”.

The fourth one is in “The next three intelligences are particularly notable in the arts, though each can be put to many other uses.” (p. 42) Gardner used the modal auxiliary verb “can” to demonstrate the ability of the three intelligences to be applied in various contexts. However, the content of this utterance may be rejected by researchers.

2.6. Coherence

In any written text, coherence is crucial for enabling readers to grasp the writer's purpose. Hyland (2006) defined coherence as: “The ways a text makes sense to readers through the relevance and accessibility of its configuration of concepts, ideas, and theories” (p. 311). What attracts readers most in a text is the contextual aspect of the words. If the utterances are logically organised, the ideas will automatically convey meaning. As a clear example of non-coherence in a text, Yule (2008, p. 126) presents the following example: “My father bought a Lincoln

convertible. The car driven by the police was red. That color does not suit her. She consists of three letters.” After reading Yule's example, one can develop a general understanding of the significance of coherence in a text.

The analysis begins with some concepts of words that are systematically organised in the text. For example, the words: 1- speakers, lawyers, poets, and writers. They are all suitable for linguistic intelligence. 2- Logicians, mathematicians, and scientists are relevant to logical-mathematical intelligence.

3- Performance, authorship, and appreciation of musical samples are pertinent to musical intelligence. 4- Actors, dancers, athletes, mechanics, craftspeople, surgeons, and scientists are appropriate with bodily-kinesthetic intelligence.

5- Pilots, navigators, sculptors, surgeons, architects, chess players, and graphic artists are compatible with spatial intelligence. 6- Teachers, salespeople, religious leaders, political leaders, actors, and clinicians are adequately aligned with interpersonal intelligence. 7- Personal desires, fears, and abilities to utilise such information are relevant to intrapersonal intelligence.

The second part to analyse is the ideas that are logically chained in the following list.

- 1- The introduction of the text: proposing seven intelligences.
- 2- The first two intelligences that are related to schools.
- 3- Criticising Piaget's theory that ignored multiple intelligences.
- 4- Criticising psychologists and academics who believe in intelligence tests.
- 5- The next three intelligences that are related to the arts.
- 6- The final two intelligences that are linked to personality.

What is noticeable is that all these ideas are well structured and compose a coherent text.

The final part of the analysis concerns the theories. The writer presented his theory of multiple intelligences (MI). Gardner (1999) divided the seven intelligences into three lists:

- 1-Linguistic and logical-mathematical for school
- 2- Musical, Bodily-kinesthetic, and spatial for the arts
- 3- Interpersonal and intrapersonal for personality

To sum up, it is crucial to note that the text under study is coherent. Gardner successfully presents his theory of Multiple Intelligences (MI), clearly articulating its principles and supporting his arguments with logical reasoning and relevant examples. The structure of the text allows readers to follow his ideas easily, making the overall presentation effective and persuasive.

3. Conclusion

Howard Gardner's theory of multiple intelligences is analysed through a critical reading approach in the text *The Original Seven Intelligences*. As an American developmental psychologist, Gardner proposed a framework that academics regard

as transformative for pedagogical methods, particularly in recognising diverse cognitive strengths. Jung and Haier (2008) emphasise intelligence as a cornerstone of educational philosophy, arguing that Gardner's theory necessitates a neuroscience-informed approach to teaching. They highlight the importance of tailoring education to individual differences, advocating for personalised student evaluation to accommodate varied learning profiles. This perspective aligns with Gardner's rejection of a one-size-fits-all model, reinforcing the theory's enduring relevance in modern didactics.

Critical reading strategies such as analysing characters, voices, presuppositions, intertextuality, hedging, and coherence help uncover deeper, implicit meanings in a text. By identifying the characters, the analysis highlights the range of personalities depicted, enabling readers to recognise themselves within one of the seven intelligences. The presence of multiple voices indicates that the author assumes various roles—teacher, psychologist, academic, artist, musician, kinesiologist, and spatial thinker, similar to an actor taking on different personas. Examining presuppositions shows that Gardner encourages readers to scrutinise each statement critically and to interpret beyond the literal, fostering a habit of reading between the lines. Intertextuality serves as a persuasive device, with Gardner referencing and critiquing Piaget's theory and challenging traditional intelligence tests. Hedging is employed to promote ongoing scientific dialogue, acknowledging that Gardner's theory is open to revision as new evidence arises. The text's coherence is demonstrated through its clear and accessible presentation of the seven intelligences. Collectively, these strategies enable Gardner to effectively communicate the transformative potential of the multiple intelligences theory.

After conducting a critical reading of the text, it is evident that Gardner seeks to convey the following key messages and recommendations to:

- Parents: Support children's interests rather than imposing preferences.
- Teachers: Recognise your pivotal role in shaping future generations.
- Administrators: Foster an environment that encourages all students.
- Academics: Revise curricula to address diverse learner needs.
- Government: Invest in institutions that nurture all forms of intelligence, including the arts, sports, and specialised fields, such as military schools and maritime.

References

- Fairclough, N. (2003).** *Analysing Discourse: Textual analysis for social research.* Routledge. London.
- Gardner, H. (1999).** *Intelligence Reframed: Multiple Intelligences for the 21st Century.* Basic Books. New York.
- Haier, R. J. & Jung, R. E. (2008).** *Brain Imaging Studies of Intelligence and*

Creativity: What is the Picture for Education?, Roeper Review, 30:3, 171-180, DOI:10.1080/02783190802199347

<https://www.tandfonline.com/doi/abs/10.1080/02783190802199347>

Hyland, K. (1998). Boosting, hedging and the negotiation of academic knowledge. TEXT, 18(3), 349-382. https://www.researchgate.net/publication/282599536_Hedging_in_Academic_Writing_A_Pedagogically-Motivated_Qualitative_Study

Hyland, K. (2006). *English for Academic Purposes*. Routledge. New York.

Jesus, M., & Alfaro, M. (1996). Intertextuality: Origins and Development of the Concept.

https://www.jstor.org/stable/41054827?readnow=1&refreqid=excelsior%3A5ae86f1a20de54aad06589a10f7b90b6&seq=1#page_scan_tab_contents

Lakoff, G. (1972). Hedges: A study in meaning criteria and the logic of fuzzy concepts. *Chicago Linguistic Society Papers*, 8, 183-228. https://www.researchgate.net/publication/242480333_Hedges_A_Study_in_Meaning_Criteria_and_the_Logic_of_Fuzzy_Concepts

Nord, C. (1991). Text Analysis in Translation.

<http://libgen.is/book/index.php?md5=43E66D5334EFFE8AF3D617516A1ACDF6>

Perkins, M. (1983). *Modal expressions in English*. Frances Pinter. London.

Stafura, J., & Perfetti. C. (2015). Comprehending implicit meanings in text without making inferences. https://www.researchgate.net/publication/280050646_Comprehending_implicit_meanings_in_text_without_making_inferences/stats

Synonyms of presupposition

<https://www.merriam-webster.com/thesaurus/presupposition>

Tuna, D. (2017). Revealing to Translate: The Intertextuality and Strategic Nature of Voices, Presuppositions and Metadiscourse in a Non-Literary Text.

https://www.researchgate.net/publication/320079759_Revealing_to_Translate_The_Intertextuality_and_Strategic_Nature_of_Voices_Presuppositions_and_Metadiscourse_in_a_Non-Literary_Text

Yule, G. (1996). *Pragmatics*. Oxford University Press. Oxford

Yule, G. (2008). *The study of language*. (3 rd ed). CUP. New Delhi.

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Appendix (01)

The Theory of Multiple Intelligences

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intelligence and increased their tools for measuring intelligence, psychometric evidence in favor of multiple intelligences has accrued. Thus, for example, studies of social intelligence have revealed a set of capacities different from standard linguistic and logical intelligences. Similarly, investigations of the new construct of emotional intelligence—roughly an amalgam of the two personal intelligences—have indicated that this phenomenon may well be independent of how one scores on the traditional intelligence-testing items.

The criteria I presented in 1983 do not represent the last word in the identification of intelligences. Today I might define them differently, and I would stress much more the relevance of cross-cultural evidence. Still, taken together, they constitute a reasonable set of factors to be considered in the study of human cognition. Indeed, I consider the establishment of these criteria to be one of the enduring contributions of multiple intelligences theory. Thus I have been surprised that commentators—whether well- or ill-disposed to the theory—have rarely called attention to the criteria. Perhaps because the criteria draw self-consciously from a number of disciplines, they fall outside the purview of many critics' interests and expertise.

THE ORIGINAL SEVEN INTELLIGENCES

In *Frames of Mind*, I proposed the existence of seven separate human intelligences. The first two—*linguistic* and *logical-mathematical*—are the ones that have typically been valued in school. *Linguistic intelligence* involves sensitivity to spoken and written language, the ability to learn languages, and the capacity to use language to accomplish certain goals. Lawyers, speakers, writers, poets are among the people with high linguistic intelligence.

Logical-mathematical intelligence involves the capacity to analyze problems logically, carry out mathematical operations, and investigate issues scientifically. Mathematicians, logicians, and scientists exploit logical-mathematical intelligence. (Piaget claimed that he was studying all of intelligence, but I believe that he was actually focusing on logical-mathematical intelligence.) Having a blend of linguistic and logical-mathematical intelligence is no doubt a blessing for students and for anyone else who must take tests regularly. Indeed, the fact that most psychologists and most other academics exhibit a reasonable amalgam of linguistic and logical intelligence made it almost inevitable that those faculties would dominate tests of intelligence. I often wonder whether a different set of faculties would have been isolated if the test developers had been business people, politicians, entertainers, or military personnel.

The next three intelligences are particularly notable in the arts, though each can be put to many other uses. *Musical intelligence* entails skill in the performance, composition, and appreciation of musical patterns. In my view, musical intelligence is almost parallel structurally to linguistic intelligence, and it makes neither scientific nor logical sense to call one (usually linguistic) an intelligence and the other (usually musical) a talent. *Bodily-kinesthetic intelligence* entails the potential of using one's whole body or parts of the body (like the hand or the mouth) to solve problems or fashion products. Obviously, dancers, actors, and athletes foreground bodily-kinesthetic intelligence. However, this form of intelligence is also important for craftspersons, surgeons, bench-top scientists, mechanics, and many other technically oriented professionals. *Spatial intelligence* features the potential to recognize and manipulate the patterns of wide space (those used, for instance, by navigators and pilots) as well as the patterns of more confined areas (such as those of importance to sculptors, surgeons, chess players, graphic artists, or architects). The wide-ranging ways in which

spatial intelligence is deployed in different cultures clearly show how a biopsychological potential can be harnessed by domains that have evolved for a variety of purposes.

In the original list, the final two intelligences, which I call the personal intelligences, raised the most eyebrows. *Interpersonal intelligence* denotes a person's capacity to understand the intentions, motivations, and desires of other people and, consequently, to work effectively with others. Salespeople, teachers, clinicians, religious leaders, political leaders, and actors all need acute interpersonal intelligence. Finally, *intrapersonal intelligence* involves the capacity to understand oneself, to have an effective working model of oneself—including one's own desires, fears, and capacities—and to use such information effectively in regulating one's own life.

In *Frames of Mind*, I devoted separate chapters to each of the first five intelligences, but I treated the personal intelligences in a single chapter, as if they were of a piece. I still believe it makes sense to speak of two forms of personal intelligence—and, indeed, recent evolutionary and psychological work has stressed the long history of interpersonal intelligence (as compared to the relatively recent emergence of intrapersonal intelligence, perhaps in conjunction with human consciousness). In the initial discussion of intrapersonal intelligence, I also stressed its origins in a person's emotional life and its strong alliance with affective factors. I continue to view emotional life as a key ingredient of intrapersonal intelligence, but now I stress the vital role of intrapersonal intelligence in a person's life-course decisions. Also, I now consider emotional facets of each intelligence rather than restrict emotions to one or two personal intelligences. In Chapters 11 and 12, I further discuss the growing importance of intrapersonal intelligence as the new millennium approaches.

From the first, I emphasized that the list of intelligences was provisional, that each of the intelligences housed its own area or subintelli-

gences, and that the relative autonomy of each intelligence and the ways the intelligences interact needed further study. Since *Frames of Mind* appeared, I have carefully examined works that might ultimately influence the cartography of the various intelligences. In fact, Chapter 4 is focused on the question of whether additional intelligences exist.

TWO ESSENTIAL CLAIMS

I am amazed that even though the theory was promulgated in the early 1980s, and even though I have spoken about it hundreds of times since then, it was only around 1997 that I fully appreciated the exact nature of my two fundamental claims about multiple intelligences. This theory presents two complementary claims. First, the theory is an account of human cognition in its fullness—I put forth the intelligences as a new definition of human nature, cognitively speaking. Whereas Socrates saw man as the rational animal and Freud stressed the irrationality of human beings, I (with due tentativeness) have described human beings as those organisms who possess a basic set of seven, eight, or a dozen intelligences. Thanks to evolution, each of us is equipped with these intellectual potentials, which we can mobilize and connect according to our own inclinations and our culture's preferences.

Given this perspective, it is instructive to consider how intelligences in other species compare with our own. Rats, for example, might best us in spatial and bodily-kinesthetic intelligence, though it seems adventurous to attribute to them any intrapersonal intelligence. The profiles of other primates—particularly chimpanzees—would be much closer to our own. The exercise can also be carried out with respect to artificial intelligence. While artificial-intelligence programs can no doubt trounce us logically—and may soon surpass us in many spatial and lin-