The dramatic art of mime can be viewed through a theory of multiple intelligences. Mime is a mode of the bodily-kinesthetic intelligence which is characterized as the ability to integrate body movement and to use the body in highly differentiated and skilled ways, for expression as well as directed goals. Mime is the language of the body, the silent component of an otherwise spoken language—strong enough with its own symbolic system so that words are not needed. Mime is a silent song, the controlled movement of silence in time, at times staccato, at times flowing, anchored by rhythm. The mathematics of mime primarily deals with long chains of logical reasoning which must be integrated by the mime in the moment of the performance. Mime creates space by making visible the invisible, by learning to use the empty space of the stage area to create and sustain visual and spatial forms. Mime is intrapersonal in the respect that it is about humanity, about fate. It is a freely given gift created expressly for the people in the audience. By implication, it is eminently worthwhile to investigate the practical applications of mime in the field of education. The bodily-kinesthetic energy within each student may prove to be one of the vast untapped resources available to educators everywhere. (MG)
My purpose is to share with you some fascinating implications of mime as a mode of intelligence. These ideas have practical applications for the educator and for the professional mime artist to more fully understand how the art form works and to apply that knowledge to other fields of inquiry, while maintaining the integrity of mime as an art with its fullness of cultural significance.

My work in Los Angeles has been actively involved in applying the art of mime to the field of education. Traditionally, all subjects in school are transmitted by spoken and written language. To the extent that the child has a well-developed frame of reference for the realities behind the meanings of words, the child maintains interest. But many children do not have a well-developed frame of reference for learning, and are to various extents lost in a labyrinth of words that do not relate to their realities.

Mime is the language of the body, a symbolic system that encodes information in the bodily-kinesthetic intelligence. This means that subjects in school can be taught through the communication made available by the art of mime when the content is properly constructed. Mime can become the golden thread that leads children out of their darkened confusion. This is not to say that mime replaces the traditional
use of spoken and written language, but that it adds another dimension to classroom instruction. The physical and emotional activity of the mime motivates children to want to participate on all levels of intelligent activity.

*M.I.M.E. WRITING: The Art of Mime Applied to the Teaching of Language Arts Skills* (Mime Media, Marina del Rey, California, 1986) is a curriculum and interactive video series devoted to the analogy between mime concepts and language concepts building the skills of writing and oral expression--as well the basic techniques of pure mime in the classical Marceau tradition. Further lessons have been applied to the teaching of biology, physics, mathematics, as well as the more closely related drama, history and the fine arts.

In the spring of 1987, the California Association for the Gifted invited me to present these ideas at a conference focused on the education of Hispanic gifted children, held at the University of the Americas in Mexico City. At the conference, Dr. June Maker, prominent in the field of curriculum development at the University of Arizona, spoke of her current research devising a series of measuring instruments to correspond with the ideas postulated by Howard Gardner in his book *Frames of Mind: The Theory of Multiple Intelligences* (Basic Books, New York, 1985). Much to my delight, Chapter 9 on the subject of the bodily-kinesthetic intelligence opens up with a detailed description of Marcel Marceau as the exemplary genius of this mode of intelligence!
Here, I wish to summarize the overall theory with some specific commentary amplifying its usefulness for us.

The Problem:

I.Q. tests purport to give an accurate indication of an individual's intelligence. The purpose for measuring has most often been to direct an individual's educational development, or to indicate career suitability. But what do I.Q. tests actually test? Traditional instruments emphasize verbal and mathematical problem-solving. In the past twenty years, such tests have gradually come under fire on at least two main fronts: 1) they failed to take into account other aspects of clearly recognizable expressions of intelligence, such as creativity; and 2) they failed to reflect cultural diversity. These anomalies raise fundamental questions:

What is Intelligence?

Intelligence is behavior which: 1) solves a problem or 2) creates a product. A problem may be on a survival level (how do I procure food?) or on a technological level (how do I send a man to the moon?), or on any of a myriad of levels where decisions are made in life. A product may be crafted by hand (pottery), may be a performance (mime), may be a scientific theory (Einstein's relativity) or may be any conceivable construct physical or ideal.

Gardner postulates eight "signs" of intelligence, based on a synthesis of brain research, biological evidence, experimental
psychological studies, and communications theory. Whether there exists one or several, an autonomous intelligence would fit the following criteria:

1) Potential isolation by brain damage;
2) The existence of savants, prodigies and other exceptional individuals;
3) An identifiable core operation or set of operations;
4) A distinctive developmental history, along with a definable set of expert performances;
5) An evolutionary history and evolutionary plausibility;
6) Support from experimental psychological tasks;
7) Support from psychometric findings;
8) Susceptibility to encoding in a symbolic system.

How does intelligence interact with cultural experience?

Because of the psychic unity of humankind, the definition and the criteria for intelligence must hold true cross-culturally. Cultural diversity of the expression of intelligence stems from the variations of three primary conditions for the development of a mode of intelligence:

1) The opportunity to learn must exist;
2) The culture must place a value on the development;
3) The individual must place a value on the development.
Is there one intelligence or are there several intelligences?

Historically, philosophers, psychologists, and neurologists have engaged in an ongoing discussion of whether the mind is essentially one unified whole, centrally controlling its various functions or a collection of several nuclei of separate functions. Is there a rational central processor which makes decisions or a committee of experts, with inputs which result in a response?

Gardner proposes:

THE THEORY OF MULTIPLE INTELLIGENCES

The main body of Howard Gardner's book describes seven intelligences and how they fit within the criteria based on scientific evidence. He emphasizes several intelligences rather than a single central intelligence. Each intelligence, while coordinated with one another, is nevertheless a discrete, autonomous phenomenon (much as the heart and lungs are autonomous organs, yet coordinated together).

Gardner stresses that no hierarchical order of intelligences exist. No single intelligence is inherently "in charge" over all the others. While different values may be placed culturally or individually, affecting the opportunity for developing particular strengths, the intelligences are biologically "separate, but equal." The intelligences work in concert together depending on the problem to be solved or the product to be created and within limitations imposed by nature, the culture or the individual.
Some activities require higher development of a single intelligence, while others require development in more than one mode. Gardner observes: "Nearly all cultural roles exploit more than one intelligence; at the same time, no performance can come about simply through the exercise of a single intelligence." Thus all of our activities can be considered a blending of our several intelligences. To the extent that we consciously choose to develop the potential of each intelligence, we increase our capacity to solve the problems we encounter in life and to create the works we choose to produce.

If our goal is to prepare ourselves, and as educators to prepare our students, for an uncertain future, it is to our advantage to emphasize attention to the broad sweep of the intelligences, while recognizing that certain subjects fall more neatly into particular realms. In the course of such development of potential, the ability to integrate these aspects of intelligence becomes highly important.

**LINGUISTIC:** All areas of the language abilities: speech, auditory decoding (listening for meaning), writing with symbolic systems (phonetically or ideogrammatically), visual decoding (reading), perception of semantics (the examination of meaning), phonology (the sounds of words and their musical interactions upon one another), syntax (the rules governing the ordering of words and their inflections), and pragmatics (the uses to which language can be put). Important aspects of linguistic knowledge include: rhetoric, the ability to use language to convince other individuals of a course of action; mnemonic, the capacity to use language to remember information; explanatory, the
capacity to teach and learn through language; and reflective, the capacity of language to explain its own activities.

**MUSICAL:** The abilities to perceive and to use the principal constituent elements of music (the controlled movement of sound in time): rhythm, the organization of musical elements in time; pitch, melody as tones unfold over time, and harmony or dissonance, the combination of two or more tones emitted at the same time; and timbre, the characteristic qualities of a tone.

**LOGICAL-MATHEMATICAL:** The abilities to handle skillfully chains of reasoning: to appreciate the actions one can perform upon objects, the relations that obtain among those actions, the statements (or propositions) that one can make about actual or potential actions and the relationships among those statements. While these abilities issue from the basic activity of ordering and reordering objects, over the course of development, one proceeds from the realm of the sensorimotor to the realm of pure abstraction, dealing with concepts of number (counting, arithmetic), algebra (logical patterns), functions (relating systems of logical constructs, real or abstract), and chains of reasoning (the scientific method)—whether expressed numerically or in some other form.

**SPATIAL:** The abilities to perceive and to organize visual and spatial forms. The capacities to perceive the visual world accurately, to perform transformations and modifications upon one's initial perceptions and to be able to re-create aspects of one's visual experience, even in the absence of relevant physical stimuli.
BODILY-KINESTHETIC: The ability to integrate body movement. The ability to use one's body in highly differentiated and skilled ways, for expressive as well as for goal-directed purposes. The capacity to work skillfully with objects, both those that involve the fine motor movements one's fingers and hands and those that exploit gross motor movements of the body.

INTRAPERSONAL: The development of the internal aspects of human nature, access to one's own feeling life, one's range of affects or emotions, the capacity instantly to effect discriminations among these feelings and eventually, to label them, to enmesh them in symbolic codes, to draw upon them as a means of understanding and guiding one's behavior. To know thyself.

INTERPERSONAL: The development of the perception of the outward aspects of human nature, the ability to notice and make distinctions among other individuals, among their moods, temperaments, motivations and intentions. To relate to others.
MIME: THE COMPLETE ART

'Mime is a complete art in that it tends toward an all-embracing definition of the human being.'

--MARCEL MARCEAU

PROBLEM: Why is it so difficult to learn and to teach mime? Why is mime so rare, compared to other performing arts? Why is mime so effective as an educational tool?

PROPOSITION: The art of mime demands a high level of development within all seven intelligences.

In this section, I will demonstrate that this proposition is no hyperbolic claim, but a basic fact that we mime artists must come to grips with as we seek our own path toward virtuosity. My method is to view mime through the prism of Howard Gardner's theory of multiple intelligences, incorporating instructive commentary drawn from Marcel Marceau's observations in the course of the 1987 summer seminar at the World Centre of Mime in Ann Arbor, Michigan. Unless otherwise noted, all quotes are from Marcel Marceau, in the midst of his teaching.
White Marceau recognizes himself as both a participant in the great tradition of mime and as a pioneer in the establishment of a universal mime style, he remains humble with respect to his genius. He refers to the future of mime, in that it should be respected as a complete art with its own poetics. "We have to make clear what mime is all about in the theatre today." By virtue of his commitment to teach and his concern for the future legacy of the art, he clearly feels that young mime artists can be nurtured toward their own expression of genius, for "creations will come from the genius of the mind." This discussion approaches the task of describing mime as a mode of all seven intelligences.

MIME: EXEMPLAR OF THE BODILY-KINESTHETIC INTELLIGENCE

Mime is a mode of the bodily-kinesthetic intelligence, which is characterized in Gardner's theory as "the abilities to integrate body movement" and "the ability to use one's body in highly differentiated and skilled ways, for expressive as well as for goal-directed purposes." Gardner's Chapter 9, which describes the bodily-kinesthetic intelligence, opens with a detailed description of Bip on a train ride. His purpose is to highlight Marcel Marceau as a expert example of an art form that obviously requires a high level of development of the bodily-kinesthetic intelligence. Gardner focuses on the aspects of how the mime creates "the appearance of an object, a person, or an action." He recognizes the importance of facial expression, bodily actions, emotional effects, "even abstract concepts such as freedom, bondage, good or evil, ugliness or beauty." He expresses admiration of Marceau's technique: "More amazingly, still, he often creates a number of these illusions simultaneously."
Gardner goes on to observe: "Nearly all cultural roles exploit more than one intelligence; at the same time, no performance can come about simply through the exercise of a single intelligence. In fact, Marcel Marceau's capacity to use his body with such precision may well involve contributions from several intellectual domains." [My emphasis] Gardner has taken a tremendous first step in appreciating the art of mime, but he does not pursue the subject far enough. For our purposes, we must take six further steps....

THE LINGUISTICS OF MIME

Mime is frequently described by what it is without: without words, without sound, but it would be a grave mistake to suggest that mime is without language. Mime is the language of the body, the silent component of our otherwise spoken language. "What we bring to theatre is a poetry of silence." As poetry is subject to the laws of language, the silence of mime has a structure of syntax as well. "Yet there are rules, a grammar. Freedom comes from the knowledge of the rules."

With respect to the use of spoken or literary language, "you don't need to translate the words." Mime is strong enough with its own symbolic system. "Gestures need to become symbols of life," the units of semantics. "Words don't make a play, the meaning makes the play; manipulations don't make a mime, the meaning makes the mime. Every gesture has its own significance. It is as difficult as theatre with
words. We can stumble with our words; we can stumble through our gestures."

The striving for authentic expression of emotion through the conventions of attitude are designed rhetorically to persuade the audience of the performer's sincerity. "They laugh, because through your attitude, you reveal your soul."

Mime releases remembrances. The contents of memories of experiences of the mime artist can be encoded in gestures, both to draw upon for creative purposes and then to project to the audience to evoke the release of memories and then to encode them within the context of the feeling of the memory now associated with the performance. "The public has not the same emotions [as the mime]; we must give an image [that evokes the same emotions]."

Mime has a capacity to explain itself in its own terms. While much is explained in words while teaching, the primary information is transmitted systematically through the example of gestures, directly from teacher to student. Because mime is in itself linguistic, its use with words is problematic: "I do not object to words with mime as long as the mime does not just follow the words. Do not mime the words directly. Use words like music, the movement as metaphor."

THE MUSIC OF MIME

Mime has a definite musicality: "the mime must sing from within." Mime is a silent song, the controlled movement of silence in
time, at times staccato, at times flowing, anchored by rhythm. "Play the rhythm, don't play it real. You have to play real, sincere, tragic, but the rhythm must be stylized...Breathe in the rhythm of the piece...Try to give the inside, but give it outside in a flow. You make the music. We need to feel the flow of the music inside you."

Because mime is itself musical, music for mime must be chosen carefully. "Music should have an abstract relationship to mime, not realistic, or it becomes too much like a film." Music must not attempt to help the mime, but accentuate the emotional experience.

THE LOGIC AND MATHEMATICS OF MIME

"I am a scientist. I create time and space and make it universal for the public." Does mime "create" time and space? Should we not say create an image of time and space? Before we allow our minds to dismiss this question too quickly, we must remember that although Einstein's theory of relativity has superseded Newtonian concepts of space and time, we have yet to update our intuition to appreciate the statement: Mime is a four-dimensional art form. "We have the mathematics to land on the moon. When we reach beyond our planetary system, our mathematics will change."

The mathematics of mime primarily deals with long chains of logical reasoning which must be integrated by the mime in the moment of performance. Mime begins with the problem of ordering and reordering ideas as imaginary objects, proceeds to actions which can be performed upon these objects, observing the relations that obtain among
those actions, asserting statements about the actual or potential actions, and clarifying the relationships among those statements.

Although mime has not developed a notation for its logical operations, the artist must study the pattern to learn the structure, to execute the piece, concealing the appearance of mathematics. "We should not see the work." We should not see the scaffolding, the logical chains of reasoning. Illusion works "when we do not see the moment of change."

A deceptively simple example: Youth, Maturity, Old Age & Death. The mime begins by depicting the figure of Youth walking, confident, naive, long arms reaching; the figure of Maturity emerges in the subtle transformation of head, arms and torso, to convey a determined, experienced presence; Old Age emerges by the further bending of the back, foreshortening of the arm movements to show a wizened appearance; finally, Death is suggested by a suspended drawing together of the hands, a closing of the eyes, and an inclination of the head.

Is this mime a wonderful, lyrical piece or a mathematical equation presented with an economy of movement as elegant as the simplicity of Einstein's famous E=mc²? Both! What is not visible to the audience, Marceau has made visible to his students. Such simplicity is very difficult to perform.

We are playing with four relative concepts of time: 1) the duration of the whole piece in stage time, three minutes; 2) the duration of each figure, equally divided relative to stage time; 3) the duration of each figure relative to its symbolic representation, Youth, age 15-30;
Maturity, age 30-70; Old Age, 70-?; Death; and 4) the duration of time as each section coalesces and becomes fully exposed relative to each member of the audience.

So far, we are simply concerning ourselves with duration! Many other lines of thought must be worked out before such a sketch is ready for performance. Interestingly, the rhythm is a constant throughout the entire piece. The face does not actually transform until the final moments of the allusion to death. The final moment does not stop, but drifts imperceptibly into an infinity. An observer would be hard pressed to find a static moment of transition between figures, yet the performer can count out the moves.

"A mime brings a certain mystery....Marcel Marceau does in three minutes what we cannot do in sixty years. For the real scientist, sixty years is three minutes compared to eternity." Now informed by the relativistic union of space and time, perhaps our intuition can begin to know how mime does indeed create time and space. At the very least, we know that mime operates definitively within the logical-mathematical intelligence.

**THE SPACE OF MIME**

"We can understand only what we see." **Mime makes visible the invisible.** The mime achieves this by learning to use the "empty space" of the stage area to create and sustain visual and spatial forms. "Each gesture must dominate the space." This requires an ability to perceive the visual world accurately, to perform transformations and
modifications upon one's initial perceptions, and to be able to re-create aspects of one's visual experience, not only for oneself, but for the audience.

Another deceptively simple example: *Creation of the World*. The mime shapes a sequence of images: waves of water, fish swimming, land emerging, birds flying, a tree growing. Flowing musically, the movements convey a whole panorama, evoking in the audience an image of the act of creation. The mime, still moving with simplicity, begins to shape a second sculptural form that transforms out of the first: the germinating tree of knowledge that grows to magnificence and then metamorphoses into the figure of a sleeping man, in whose dream, a great hand draws a rib from his side, and alludes to the figure of a woman--we see Adam and Eve in Paradise. A new metamorphosis: a serpent, the mime's undulating hand, plucks the apple and offers it; tempted, they eat of the apple. Then in a merging of the two characters, the man and the woman embrace, the mime's arms lift, he arches completely back, touching his head behind him. But then they experience the wrath of God.

Exile is expressed by a suggestion of the two figures walking side by side, griefstruck. His arms then lift, as his body stands erect. The image now comes to represent Man and Woman, entering history, entering into a representation of ourselves--unmistakably, the mime succeeds in evoking the images of the two creation stories in the Book of Genesis.

The piece is in essence as simple and elegant as the lines in a Rodin sculpture, or a Leonardo da Vinci fresco. The visual and spatial forms
that the mime must consider are abundant: the symbols of nature, the essence of paradise, the vision of original sin, presented in a living tapestry of visual elements.

Such visual transformations have to be conceived dynamically. "We have to learn to build up visual rhythm." To achieve this the mime "has to be the substance of the character." The mime not only depicts, but becomes. Mime "is about identifying with what you are doing." If Youth, Maturity, Old Age, and Death evokes a lifetime in three minutes, in Creation of the World, Marceau evokes eternity itself.

MIME AND THE INTRAPERSONAL

As mimes we bear the necessity of self-evaluation."There are few mimes, so that when the art is compared to other arts, we must be of the highest quality." "Mime is philosophical. Mime is psychological. Mime is about us, about man, about fate. It is not under Shakespeare. To compare mime to Shakespeare is important. We have to know how to measure our possibilities." This inner searching not only refers to mime technique, but to the mantle we wear when we profess to become mime artists. "Progress comes from the understanding, from the incubation of ideas. You cannot do it without thinking about it-- it is not instinct." "The only profession you have no right to lie is a mime--and especially not to lie to yourself." "Talent can be learned, but it must be there. We cannot categorize. We have to do what we do well. The more a performer knows and demonstrates knowledge, the greater respect it will bring to the art." "Technique is necessary for the preparation of
concentration. I aim for a universal technique in mime." "A feeling that has to be true. Yet, the moment you play it, you have to be completely cold. You have to be your own double. No artist who is a master is entranced when he is onstage. Emotion has to be controlled— not the emotion of sentimentality, but a science of emotion. The weight of thought gives suspension. Instinct is the the worst thing. A mime has to be suspended all the time." Ultimately, Marceau encourages us: "Once we do the necessary, we can go beyond the necessary. Go beyond your possibilities! Risk!"

**MIME AND THE INTERPERSONAL**

One fact above all facts regarding Marcel Marceau as a human being, attested to by his friends, students, and the public, is that he is a tremendously giving man. He gives his total energy and concentration in performance. He gives personal and loving attention to each individual student. And he conveys the example of love in his teaching style and in his personal dealings with other people.

His critique of student work is frank, truthful, yet always kind and constructive. "It takes courage to present difficult material, to make it easy for students by challenging them to strive for the highest achievement. I want to explain how to progress in their creation. When a student has a problem, I want to take the time to explain. Here, we must learn from our mistakes. If others get bored, this I cannot help. I must give the time." In one moment in class, Marceau expressed
amazement at a general problem among students, "I don't understand, why do you play for yourselves?"

The amazement was real, because in the deepest sense mime is a freely given gift, a labor of love, created expressly for the people in the audience. "The mime must reach out to the audience. Don't look directly down or away when dealing with objects; show the public." "What you keep in your heart, we cannot see; symbolic action must be projected out. Projection is the gift of what you have inside yourself." This interpersonal awareness of mime as a gift drives and shapes the technical delivery and the emotional quality. It also indicates an enlightened attitude of humility.

CONCLUSIONS

The verdict is still out among researchers and educators regarding the virtues of Gardner's theory of multiple intelligences. Some would prefer to call them gifts, abilities, talents, or aspects of intelligence. Some educators have adopted the theory as a model to redesign the traditional curriculum in order to include all of the seven intelligences, with the idea to provide students the opportunity to develop in all areas on a regular basis. Dr. June Maker, at the University of Arizona, is developing practical procedures to translate Gardner's theory into measurable psychometric data, which will undoubtedly provide more research-based information in the near future.

For now, even if we accept the notion of several intelligences, our intuition still informs us that we also exist individually as single, unified
beings. Whether this unity originates in a center of our intelligence, or is the result of the several intelligences working together synchronously, as the heart and lungs are separate but synchronous organs, we continually integrate and re-integrate our knowledge, our feelings, our thoughts and ideas into a whole.

One function of each intelligence is to integrate knowledge in order to solve a problem or create a product. The bodily-kinesthetic intelligence functions to inform the person by integrating knowledge on the bodily-kinesthetic level in communication with the other intelligences. Mime, as an aspect of this function, can be viewed as a form of movement integration mirroring experience: movements of the body that integrate thoughts, feelings and ideas reflecting the experiences of everyday life. Movement integration is the bodily-kinesthetic process of assimilating and accommodating thoughts, feelings and ideas. Our bodies are constantly reflecting and regenerating our inner thought processes. Movement integration is composed of all movements of the body as they relate to processing experiential information or emotions generated from within the self and from encounters with the surrounding environment.

For the mime artist, this explains why the art is such a difficult, time-consuming task. Mime demands proficiencies in all aspects of intelligence to achieve virtuosity. Any element lacking will cause the artist to fall short of the goal.

For the educator, this theory helps explain the dynamic role that the bodily-kinesthetic can play in the cognitive and affective
development of the student. In general, inadequate attention has been paid to the value of the bodily-kinesthetic intelligence. Bodies by their very nature need to move. Minds are part of the body. Minds are stimulated by bodily-kinesthetic activity. Educating the bodily-kinesthetic intelligence is education in the complete Aristotelian sense of informing the whole person. By focusing on this aspect in the classroom integrated into the context of specific content, the overall atmosphere improves affectively and provides greater motivation to develop cognitively as well.

The main point is that mime is an invaluable instructional tool for the educator. By implication, it is eminently worthwhile to investigate the practical applications of mime in the field of education. The bodily-kinesthetic energy within each student may prove to be one of the vast untapped resources available to educators everywhere.

Maker, June, Lecture delivered at the Conference on the Gifted Hispanic Child, at the University of the Americas, Mexico City, 1987.

