

A SCHOOLMAN'S GUIDE TO MARSHALL McLUHAN

By JOHN M. CULKIN, S.J., *director of the Center for Communications, Fordham University.*

EDUCATION, a seven-year-old assures me, is "how kids learn stuff." Few definitions are as satisfying. It includes all that is essential—a who, a what, and a process. It excludes all the people, places, and things which are only sometimes involved in learning. The economy and accuracy of the definition, however, are more useful in locating the problem than in solving it. We know little enough about *kids*, less about *learning*, and considerably more than we would like to know about *stuff*.

In addition, the whole process of formal schooling is now wrapped inside an environment of speeded-up technological change which is constantly influencing kids and learning and stuff. The jet-speed of this technological revolution, especially in the area of communications, has left us with more reactions to it than reflections about it. Meanwhile back at the school, the student, whose psyche is being programmed for tempo, information, and relevance by his electronic environment, is still being processed in classrooms operating on the postulates of another day. The cold war existing between these two worlds is upsetting for both the student

and the schools. One thing is certain: It is hardly a time for educators to plan with nostalgia, timidity, or old formulas. Enter Marshall McLuhan.

He enters from the North, from the University of Toronto where he teaches English and is director of the Center for Culture and Technology. He enters with the reputation as "the oracle of the electric age" and as "the most provocative and controversial writer of this generation." More importantly for the schools, he enters as a man with fresh eyes, with new ways of looking at old problems. He is a man who gets his ideas first and judges them later. Most of these ideas are summed up in his book, *Understanding Media*. His critics tried him for not delivering these insights in their most lucid and practical form. It isn't always cricket, however, to ask the same man to crush the grapes and serve the wine. Not all of McLu is nu or tru, but then again neither is *all* of anybody else. This article is an attempt to select and order those elements of McLuhanism which are most relevant to the schools and to provide the schoolman with some new ways of thinking about the schools.

McLuhan's promise is modest enough: "All I have to offer is an enterprise of investigation into a world that's quite unusual and quite unlike any previous world and for which no models of perception will serve." This unexplored

world happens to be the present. McLuhan feels that very few men look at the present with a present eye, that they tend to miss the present by translating it into the past, seeing it through a rear-view mirror. The unnoticed fact of our present is the electronic environment created by the new communications media. It is as pervasive as the air we breathe (and some would add that it is just as polluted), yet its full import eludes the judgments of commonsense or content-oriented perception. The environments set up by different media are not just containers for people; they are processes which shape people. Such influence is deterministic only if ignored. There is no inevitability as long as there is a willingness to contemplate what is happening.

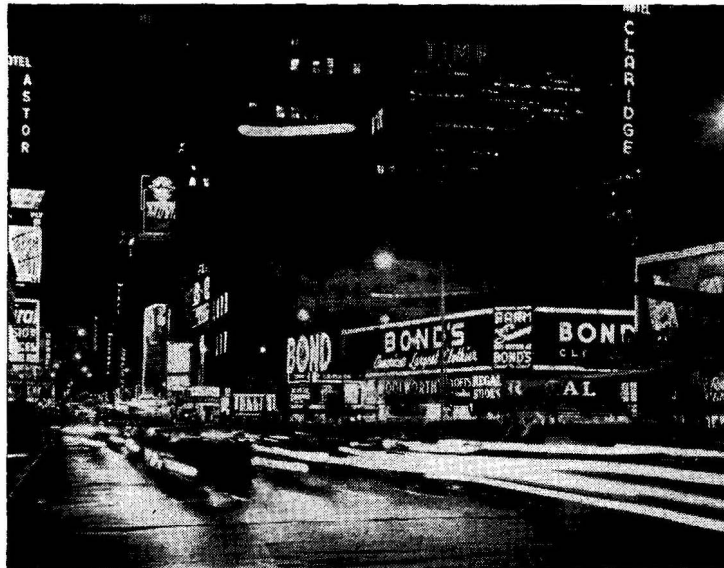
Theorists can keep reality at arm's length for long periods of time. Teachers and administrators can't. They are closeted with reality all day long. In many instances they are co-prisoners with electronic-age students in the old pencil box cell. And it is the best teachers and the best students who are in the most trouble because they are challenging the system constantly. It is the system which has to come under scrutiny. Teachers and students can say, in the words of the Late Late Show, "Baby, this thing is bigger than both of us." It won't be ameliorated by a few dashes of good

"The environments set up by different media are not just containers for people; they are the processes which shape people. There is no inevitability as long as there is a willingness to contemplate what is happening."

—Fujihira (Monkmeyer).



—White (Monkmeyer).





The changing media: Egyptian hieroglyphics, a page from the Gutenberg Bible, and the television monitor—
 “The individual’s modes of cognition and perception are influenced by the culture he is in, the language he speaks, and the media to which he is exposed. Each culture provides its constituents with a custom-made set of goggles.”

E. R. R.

Locutus est autem saul ad yonathan filium suum et ad omnes suos suos: ut occideret dauid. Porro yonathas fili⁹ saul diligebat dauid valde. Et indicavit yonathas dauid dicens Querit saul pater meus occidere te. Quapropter obsecra te quod mane: et manebis clam et abscondens Ego autem egrediens stabo iuxta patrem meum in agro ubicumque fuerit: et ego loquar de te ad patrem meum: et quodcumque videro nuntiabo tibi. Locutus est ergo yonathas de dauid bona ad saul patrem suum. Dixitque ad eum. **Ae**

—Culver.

will or a little more hard work. It is a question of understanding these new kids and these new media and of getting the schools to deal with the new electronic environment. It's not easy. And the defenders of the old may prove to be the ones least able to defend and preserve the values of the old.

For some people, analysis of these newer technologies automatically implies approbation of them. Their world is so full of *shoulds* that it is hard to squeeze in an *is*. McLuhan suggests a more positive line of exploration:

At the moment, it is important that we understand cause and process. The aim is to develop an awareness about print and the newer technologies of communication so that we can orchestrate them, minimize their mutual frustrations and clashes, and get the best out of each in the educational process. The present conflict leads to elimination of the motive to learn and to diminution of interest in all previous achievement: It leads to loss of the sense of relevance. Without an understanding of media grammars, we cannot hope to achieve a contemporary awareness of the world in which we live.

We have been told that it is the property of true genius to disturb all settled ideas. McLuhan is disturbing in both his medium and his message. His ideas challenge the normal way in which people perceive reality. They can create a very deep and personal threat since they touch on everything in a person's experience. They are just as threatening to

the establishment whose way of life is predicated on the postulates he is questioning. The establishment has no history of organizing parades to greet its disturbers.

His medium is perhaps more disturbing than his message. From his earliest work he has described his enterprise as “explorations in communication.” The word he uses most frequently today is “probe.” His books demand a high degree of involvement from the reader. They are poetic and intuitive rather than logical and analytic. Structurally, his unit is the sentence. Most of them are topic sentences—which are left undeveloped. The style is oral and breathless and frequently obscure. It's a different kind of medium.

“The medium is the message,” announced McLuhan a dozen years ago in a cryptic and uncompromising aphorism whose meaning is still being explored. The title of his latest book, an illustrated popular paperback treatment of his theories, playfully proclaims that *The Medium Is the Massage*—a title calculated to drive typesetters and critics to hashish and beyond. The original dictum can be looked at in four ways, the third of which includes a massage of importance.

THE first meaning would be better communicated orally—“The *medium* is the message.” The *medium* is the thing to study. The *medium* is the thing you're missing. Everybody's hooked on content; pay attention to form, structure, framework, *medium*. The play's the

thing. The medium's the thing. McLuhan makes the truth stand on its head to attract attention. Why the medium is worthy of attention derives from its other three meanings.

Meaning number two stresses the relation of the medium to the content. The form of communication not only alters the content, but each form also has preferences for certain kinds of messages. Content always exists in some form and is, therefore, to some degree governed by the dynamics of that form. If you don't know the medium, you don't know the message. The insight is neatly summed up by Dr. Edmund Carpenter: “English is a mass medium. All languages are mass media. The new mass media—film, radio, TV—are new languages, their grammars as yet unknown. Each codifies reality differently; each conceals a unique metaphysics. Linguists tell us it's possible to say anything in any language if you use enough words or images, but there's rarely time; the natural course is for a culture to exploit its media biases. . . .”

It is always content-in-form which is mediated. In this sense, the medium is co-message. The third meaning for the M-M formula emphasizes the relation of the medium to the individual psyche. The medium alters the perceptual habits of its users. Independent of the content, the medium itself gets through. Pre-literate, literate, and post-literate cultures see the world through different-colored glasses. In the process of delivering content the medium also works over the sensorium of the consumer. To get



—Monk Meyer.

this subtle insight across, McLuhan punned on message and came up with *message*. The switch is intended to draw attention to the fact that a medium is not something neutral—it does something to people. It takes hold of them, it jostles them, it bumps them around, it massages them. It opens and closes windows in their sensorium. Proof? Look out the window at the TV generation. They are rediscovering texture, movement, color, and sound as they retribalize the race. TV is a real grabber; it really massages those lazy, unused senses.

The fourth meaning underscores the relation of the medium to society. Whitehead said, "The major advances in civilization are processes that all but wreck the societies in which they occur." The media massage the society as well as the individual. The results pass unnoticed for long periods of time because people tend to view the new as just a little bit more of the old. Whitehead again: "The greatest invention of the nineteenth century was the invention of the method of invention. A new method entered into life. In order to understand our epoch, we can neglect all details of change, such as railways, telegraphs, radios, spinning machines, synthetic dyes. We must concentrate on the method in itself: That is the real novelty which has broken up the foundations of the old civilization." Understanding the medium or process involved is the key to control.

The media shape both content and consumer and do so practically undetected. We recall the story of the Russian worker whose wheelbarrow was

searched every day as he left the factory grounds. He was, of course, stealing wheelbarrows. When your medium is your message and they're only investigating content, you can get away with a lot of things—like wheelbarrows, for instance. It's not the picture but the frame. Not the contents but the box. The blank page is not neutral; nor is the classroom.

McLuhan's writings abound with aphorisms, insights, for-instances, and irrelevancies which float loosely around recurring themes. They provide the raw materials of a do-it-yourself kit for tidier types who prefer to do their exploring with clearer charts. What follows is one man's McLuhan served up in barbarously brief form. Five postulates, spanning nearly 4,000 years, will serve as the fingers in this endeavor to grasp McLuhan:

1) 1967 B.C.—*All the senses get into the act.* A conveniently symmetrical year for a thesis which is partially cyclic. It gets us back to man before the Phoenician alphabet. We know from our contemporary ancestors in the jungles of New Guinea and the wastes of the Arctic that preliterate man lives in an all-at-once sense world. The reality which bombards him from all directions is picked up with the omni-directional antennae of sight, hearing, touch, smell, and taste. Films such as *The Hunters* and *Nanook of the North* depict primitive man tracking game with an across-the-board sensitivity which mystifies Western, literate man. We mystify them

too. And it is this cross-mystification which makes inter-cultural abrasions so worthwhile.

Most people presume that their way of perceiving the world is *the* way of perceiving the world. If they hang around with people like themselves, their mode of perception may never be challenged. It is at the poles (literally and figuratively) that the violent contrasts illumine our own unarticulated perceptual prejudices. Toward the North Pole, for example, live Eskimos. A typical Eskimo family consists of a father, a mother, two children, and an anthropologist. When the anthropologist goes into the igloo to study Eskimos, he learns a lot about himself. Eskimos see pictures and maps equally well from all angles. They can draw equally well on top of a table or underneath it. They have phenomenal memories. They travel without visual bearings in their white-on-white world and can sketch cartographically accurate maps of shifting shorelines. They have forty or fifty words for what we call "snow." They live in a world without linearity, a world of acoustic space. They are Eskimos. Their natural way of perceiving the world is different from our natural way of perceiving the world.

Each culture develops its own balance of the senses in response to the demands of its environment. The most generalized formulation of the theory would maintain that the individual's modes of cognition and perception are influenced by the culture he is in, the language he speaks, and the media to which he is exposed. Each culture, as it were, provides its constituents with a custom-made set of goggles. The differences in perception are a question of degree. Some cultures are close enough to each other in perceptual patterns so that the differences pass unnoticed. Other cultural groups, such as the Eskimo and the American teen-ager, are far enough away from us to provide esthetic distance.

2) *Art imitates life.* In *The Silent Language* Edward T. Hall offers the thesis that all art and technology is an extension of some physical or psychic element of man. Today man has developed extensions for practically everything he used to do with his body: stone axe for hand, wheel for foot, glasses for eyes, radio for voice and ears. Money is a way of storing energy. This externalizing of individual, specialized functions is now, by definition, at its most advanced stage. Through the electronic media of telegraph, telephone, radio, and television, man has now equipped his world with a nervous system similar to the one within his own body. President Kennedy is shot and the world instantaneously reels from the impact of the bullets. Space and time dissolve un-

(Continued on page 70)

the object of ridicule and fear outside the state's borders." It appears likely, however, that Unruh and Miller will persuade the legislature to vote higher appropriations for the university and the state colleges, but if Reagan decides to blue-pencil those increases there seems to be only a slim chance that a two-thirds vote can be mustered to override his veto. The outcome is not likely to be known before June.

Figures provided by the State Coordinating Council for Higher Education indicate that California's "public higher education tax effort" ranks behind that of Wisconsin, Michigan, Minnesota, and other states. Clark Kerr often argued that California ranked twelfth among the thirteen Western states in percentage of per capita income devoted to support of public colleges and universities. Since the state apparently can afford to continue its "college for everyone" policy, it may be that such a policy does not fit within the framework of Reagan's conservative Republican political philosophy.

Reagan denied a report by James Reston of *The New York Times* that he favors private higher education, at the expense of public institutions, but there is some evidence that this is so. Most of his advisers are from the private University of Southern California. USC administrators and faculty members surely are wise enough to realize that holding back public higher education means holding back all of higher education, but this perception may not extend to the university's alumni and trustees, some of whom are vigorous Reagan supporters.

Academic people who have talked to Reagan report that he resents the "free ride" he believes California students enjoy (though it costs about \$2,000 to finance a year on a UC campus) and attaches great importance to the virtues of working one's way through college. "I went the dishwashing route myself," he told the Board of Regents recently, referring to his experience at Eureka College in Illinois. So far there have been only these tantalizing hints of a conservative's approach to public higher education, but they help to explain why Governor Reagan can contemplate reducing the rolls of the university and the state colleges by several thousand students without noticeably flinching.

The problem, said a faculty member at Santa Barbara, is whether the public will support higher education: "Do we degrade the university and the state colleges or don't we? Do we believe in maximum fulfillment of talent and ability for those members of the society who have proven themselves capable or don't we? Do we believe that society has the potential to transcend the mundane or not? It isn't a question of money, it's a question of values."

McLuhan

Continued from page 53

der electronic conditions. Current concern for the United Nations, the Common Market, ecumenism, reflects this organic thrust toward the new convergence and unity which is "blowing in the wind." Now in the electric age, our extended faculties and senses constitute a single instantaneous and coexistent field of experience. It's all-at-once. It's shared-by-all. McLuhan calls the world "a global village."

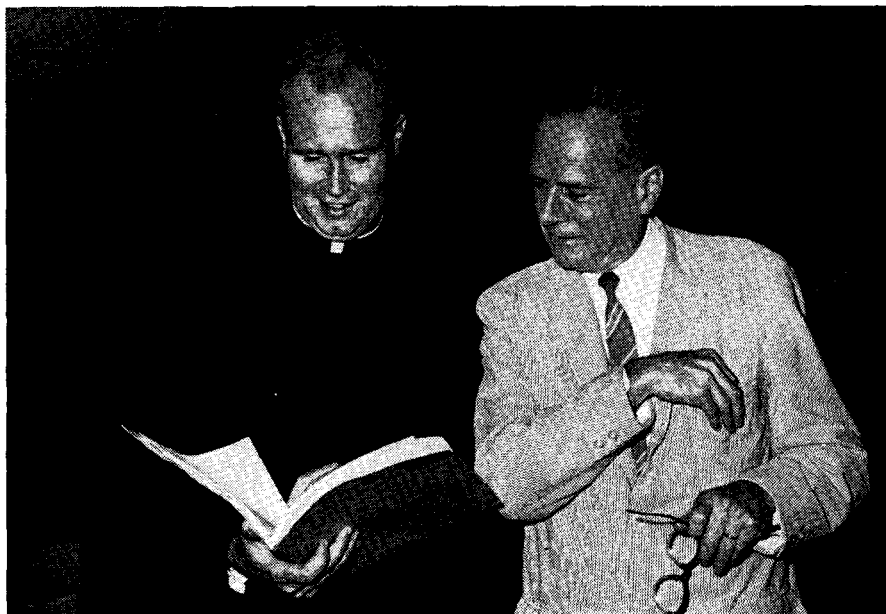
3) *Life imitates art. We shape our tools and thereafter they shape us. These extensions of our senses begin to interact with our senses. These media become a massage. The new change in the environment creates a new balance among the senses. No sense operates in isolation. The full sensorium seeks fulfillment in almost every sense experience. And since there is a limited quantum of energy available for any sensory experience, the sense-ratio will differ for different media.*

The nature of the sensory effect will be determined by the medium used. McLuhan divides the media according to the quality or definition of their physical signal. The content is not relevant in this kind of analysis. The same picture from the same camera can appear as a glossy photograph or as a newspaper wirephoto. The photograph is well-defined, of excellent pictorial quality, hi-fi within its own medium. McLuhan calls this kind of medium "hot." The newspaper photo is grainy, made up of little dots, low definition. McLuhan calls this kind of medium "cool." Film is hot; television is cool. Radio is hot; telephone is cool. The cool medium or person invites

participation and involvement. It leaves room for the response of the consumer. A lecture is hot; all the work is done. A seminar is cool; it gets everyone into the game. Whether all the connections are causal may be debated, but it's interesting that the kids of the cool TV generation want to be so involved and so much a part of what's happening.

4) *We shaped the alphabet and it shaped us.* In keeping with the McLuhan postulate that "the medium is the message," a literate culture should be more than mildly eager to know what books do to people. Everyone is familiar enough with all the enrichment to living mediated through fine books to allow us to pass on to the subtler effects which might be attributed to the print medium, independent of the content involved. Whether one uses the medium to say that *God is dead* or that *God is love* (--- -- ---), the structure of the medium itself remains unchanged. Nine little black marks with no intrinsic meaning of their own are strung along a line with spaces left after the third and fifth marks. It is this stripping away of meaning which allows us to X-ray the form itself.

As an example, while lecturing to a large audience in a modern hotel in Chicago, a distinguished professor is bitten in the leg by a cobra. The whole experience takes three seconds. He is affected through the touch of the reptile, the gasp of the crowd, the swimming sights before his eyes. His memory, imagination, and emotions come into emergency action. A lot of things happen in three seconds. Two weeks later he is fully recovered and wants to write up the experience in a letter to a colleague. To communicate this experience through print means that it must first be broken down into parts



The medium and the message—author John Culkin and subject McLuhan.

and then mediated, eyedropper fashion, one thing at a time, in an abstract, linear, fragmented, sequential way. That is the essential structure of print. And once a culture uses such a medium for a few centuries, it begins to perceive the world in a one-thing-at-a-time, abstract, linear, fragmented, sequential way. And it shapes its organizations and schools according to the same premises. The form of print has become the form of thought. The medium has become the message.

For centuries now, according to McLuhan, the straight line has been the hidden metaphor of literate man. It was unconsciously but inexorably used as the measure of things. It went unnoticed, unquestioned. It was presumed as natural and universal. It is neither. Like everything else it is good for the things it is good for. To say that it is not everything is not to say that it is nothing. The electronic media have broken the monopoly of print; they have altered our sensory profiles by heightening our awareness of aural, tactile, and kinetic values.

5) 1967 A.D.—*All the senses want to get into the act.* Print repressed most sense-life in favor of the visual. The end of print's monopoly also marks the end of a visual monopoly. As the early warning system of art and popular culture indicates, all the senses want to get into the act. Some of the excesses in the current excursions into aural, oral, tactile, and kinetic experience may in fact be directly responsive to the sensory deprivation of the print culture. Nature abhors a vacuum. No one glories in the sight of kids totally out of control in reaction to the Beatles. Some say, "What are the Beatles doing to these kids?" Others say, "What have we done to these kids?" All the data isn't in on what it means to be a balanced human being.

Kids are what the game is all about. Given an honest game with enough equipment to go around, it is the mental, emotional, and volitional capacity of the student which most determines the outcome. The whole complicated system of formal education is in business to get through to kids, to motivate kids, to help kids learn stuff. Schools are not in business to label kids, to grade them for the job market or to babysit. They are there to communicate with them.

Communication is a funny business. There isn't as much of it going on as most people think. Many feel that it consists in saying things in the presence of others. Not so. It consists not in saying things but in having things heard. Beautiful English speeches delivered to monolingual Arabs are not beautiful speeches. You have to speak the language of the audience—of the *whom* in the "who-says-what-to-whom" communications diagram. Sometimes the language is lex-

McLuhan Migrates South

IN SEPTEMBER Dr. Marshall McLuhan will go to Fordham University in New York to assume the Albert Schweitzer chair in the humanities. He will be working with a team of media researchers, including the author of this article, who has been studying and interpreting McLuhan for more than ten years. McLuhan's theories will be analyzed in depth by media specialists at Fordham's two summer film study conferences in New York, July 5-8, and in Los Angeles, August 16-19.

cal (Chinese, Japanese, Portuguese), sometimes it is regional or personal (125th Street-ese, Holden Caulfield-ese, anybody-ese). It has little to do with words and much to do with understanding the audience. The word for good communication is "Whom-ese"—the language of the audience, of the "whom."

All good communicators use Whom-ese. The best writers, film-makers, advertising men, lovers, preachers, and teachers all have the knack for thinking about the hopes, fears, and capacity of the other person and of being able to translate their communication into terms which are *relevant* for that person. Whitehead called "inert ideas" the bane of education. Relevance, however, is one of those subjective words. It doesn't pertain to the object in itself but to the object as perceived by someone. The school may decide that history is *important* for the student, but the role of the teacher is to make history *relevant* to the student.

If *what* has to be tailored to the *whom*, the teacher has to be constantly engaged in audience research. It's not a question of keeping up with the latest slang or of selling out to the current mores of the kids. Neither of these tactics helps either learning or kids. But it is a question of knowing what values

are strong in their world, of understanding the obstacles to communication, of sensing their style of life. Communication doesn't have to end there, but it can start nowhere else. If they are tuned in to FM and you are broadcasting on AM, there's no communication. Communication forces you to pay a lot of attention to other people.

McLuhan has been paying a great deal of attention to modern kids. Of necessity they live in the present since they have no theories to diffract or reflect what is happening. They are also the first generation to be born into a world in which there was always television. McLuhan finds them a great deal different from their counterparts at the turn of the century when the electric age was just getting up steam.

A lot of things have happened since 1900 and most of them plug into walls. Today's six-year-old has already learned a lot of stuff by the time he shows up for the first day of school. Soon after his umbilical cord was cut he was planted in front of a TV set "to keep him quiet." He liked it enough there to stay for some 3,000 to 4,000 hours before he started the first grade. By the time he graduates from high school he has clocked 15,000 hours of TV time and 10,800 hours of school time. He lives in a world which

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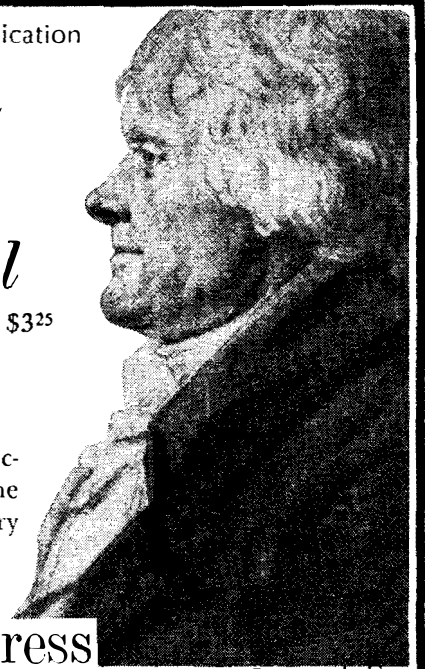
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bombards him from all sides with information from radios, films, telephones, magazines, recordings, and people. He learns more things from the windows of cars, trains, and even planes. Through travel and communications he has experienced the war in Vietnam, the wide world of sports, the civil rights movement, the death of a President, thousands of commercials, a walk in space, a thousand innocuous shows, and, one may hope, plenty of Captain Kangaroo.

This is all merely descriptive, an effort to lay out what is, not what should be. Today's student can hardly be described by any of the old educational analogies comparing him to an empty bucket or a blank page. He comes to the information machine called school and he is already brimming over with information. As he grows his standards for relevance are determined more by what he receives outside the school than what he receives inside. A recent Canadian film tells the story of a bright, articulate middle class teen-ager who leaves school because there's "no reason to stay." He daydreams about Vietnam while his teacher drones on about the four reasons for the spread of Christianity and the five points such information is worth on the exam. Only the need for a diploma was holding him in school; learning wasn't, and he left. He decided the union ticket wasn't worth the gaff. He left. Some call him a dropout. Some call him a pushout.

The kids have one foot on the dock and one foot on the ferryboat. Living in two centuries makes for that kind of tension. The gap between the classroom and the outside world and the gap between the generations is wider than it has ever been. Those tedious people who quote Socrates on the conduct of the young are trying vainly to reassure themselves that this is just the perennial problem of communication between generations. "Tain't so. "Today's child is growing up absurd, because he lives in two worlds, and neither of them inclines him to grow up." Says McLuhan in *The Medium is the Massage*. "Growing up—that is our new work, and it is *total*. Mere instruction will not suffice."

Learning is something that people do for themselves. People, places, and things can facilitate or impede learning; they can't make it happen without some cooperation from the learner. The learner these days comes to school with a vast reservoir of vicarious experiences and loosely related facts; he wants to use all his senses in his learning as an active agent in the process of discovery; he knows that all the answers aren't in. The new learner is the result of the new media, says McLuhan. And a new learner calls for a new kind of learning.

Leo Irrera said, "If God had anticipated the eventual structure of the

school system, surely he would have shaped man differently." Kids are being tailored to fit the Procrustean forms of schedules, classrooms, memorizing, testing, etc., which are frequently relics from an obsolete approach to learning. It is the total environment which contains the philosophy of education, not the title page in the school catalogue. And it is the total environment which is invincible because it is invisible to most people. They tend to move things around within the old boxes or to build new and cleaner boxes. They should be asking whether or not there should be a box in the first place.

THE new learner, who is the product of the all-at-once electronic environment, often feels out of it in a linear, one-thing-at-a-time school environment. The total environment is now the great teacher; the student has competence models against which to measure the effectiveness of his teachers. Nuclear students in linear schools make for some tense times in education. Students with well developed interests in science, the arts and humanities, or current events need assistance to suit their pace, not that of the state syllabus. The straight line theory of development and the uniformity of performance which it so frequently encourages just don't fit many needs of the new learner. Interestingly, the one thing which most of the current educational innovations share is their break with linear or print-oriented patterns: team teaching, nongraded schools, audio-lingual language training, multimedia learning situations, seminars, student research at all levels of education, individualized learning, and the whole shift of responsibility for learning from the teacher to the student. Needless to say, these are not as widespread as they should be, nor were they brought about through any conscious attention to the premises put forward by McLuhan. Like the print-oriented and linear mentality they now modify, these premises were plagiarized from the atmosphere. McLuhan's value is in the power he gives us to predict and control these changes.

There is too much stuff to learn today. McLuhan calls it an age of "information overload." And the information levels outside the classroom are now higher than those in the classroom. Schools used to have a virtual monopoly on information; now they are part-time competitors in the electronic informational surround. And all human knowledge is expanding at computer speed.

Every choice involves a rejection. If we can't do everything, what priorities will govern our educational policies? "The medium is the message" may not be bad for openers. We can no longer teach kids all about a subject; we can teach them what a subject is all about.

We have to introduce them to the form, structure, gestalt, grammar, and process of the knowledge involved. What does a math man do when a math man does do math? This approach to the formal element of a discipline can provide a channel of communication between specialists. Its focus is not on content or detail but on the postulates, ground rules, frames of reference, and premises of each discipline. It stresses the modes of cognition and perception proper to each field. Most failures in communication are based on disagreement about items which are only corollaries of a larger thesis. It happens between disciplines, individuals, media, and cultures.

The arts play a new role in education because they are explorations in perception. Formerly conceived as a curricular luxury item, they now become a dynamic way of tuning up the sensorium and of providing fresh ways of looking at familiar things. When exploration and discovery become the themes, the old lines between art and science begin to fade. We have to guide students to becoming their own data processors to operate through pattern recognition. The media themselves serve as both aids to learning and as proper objects of study in this search for an all-media literacy. Current interest in film criticism will expand to include all art and communication forms.

And since the knowledge explosion has blown out the walls between subjects, there will be a continued move toward interdisciplinary swapping and understanding. Many of the categorical walls between things are artifacts left over from the packaging days of print. The specialist's life will be even lonelier as we move further from the Gutenberg era. The trends are all toward wholeness and convergence.

These things aren't true just because Marshall McLuhan says they are. They work. They explain problems in education that nobody else is laying a glove on. When presented clearly and with all the necessary examples and footnotes added, they have proven to be a liberating force for hundreds of teachers who were living through the tension of this cultural fission without realizing that the causes for the tension lay outside themselves. McLuhan's relevance for education demands the work of teams of simultaneous translators and researchers who can both shape and substantiate the insights which are scattered through his work. McLuhan didn't invent electricity or put kids in front of TV sets; he is merely trying to describe what's happening out there so that it can be dealt with intelligently. When someone warns you of an oncoming truck, it's frightfully impolite to accuse him of driving the thing. McLuhan can help kids to learn stuff better.