Because an English teacher's work involves communication at the highest level with the past, present, and future, he must be more sensitive than other men to changes in the communicative process. The communication approaches of the classical period, dialogue and argumentation, gave way to a more "manuscript culture" in the Middle Ages, and, by modern times, books had almost completely replaced oral communication. Today, however, communication by sound is enjoying a revitalization. This trend is illustrated in the new emphasis on spoken language, in the audio-visual resources available in libraries and homes, and in the enormous influence of radio and television. The heightening of the oral/oral element has subtly enlarged the personalist element in American culture. The TV discussion show, the emphasis on personality problems, and the perpetual search for personal identity reflect this self-conscious personalism. For language and literature study, the cultural change has shifted the focus from rhetoric back to dialogue and has underlined the importance of voice in human activities. To respond today to literature and culture, the teacher must seriously reflect on contemporary communications media. (LH)
Wired for Sound:
Teaching, Communications, and Technological Culture

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I

From the time of ancient Greece, communication processes have always been at the center of Western education. Early academic study focused on grammar, which gave birth to rhetoric. Rhetoric formed a matrix for dialectic and logic, and all these conjointly help shape physics and medicine, and ultimately modern science. Through the Middle Ages, the Renaissance, and into the nineteenth century, education began with grammar, rhetoric, and dialectic or logic, the artes sermonicales or communication arts.

Teachers are still especially interested in communication, not merely because they are incidentally involved with the process but because their work itself is communication par excellence. At the point where teaching is going on, the knowledge which men have accumulated and communicated to one another out of the past thousands or hundreds of thousands of years is being communicated again to inexperienced youth, to give this youth that experience reaching far back beyond one's own years which sociologists call culture. But as teachers channel this knowledge to succeeding ages, they do so by talking it over, rethinking it and recommunicating it among themselves. In the person of the teacher, who is the depository and communicator of knowledge, mankind constantly reviews what it knows, revalues its knowledge, revises it, detects its deficiencies, and sets up the framework for new discoveries.

The teacher's work involves him in a constant interior dialogue with the past, the present, and the future. Since the only source of knowledge is the experience we have had up to the present time, or in other words past experience, he has to communicate with the past, to raid it for what it has to tell him. With his students, he puts out feelers into the future to orient his knowledge effectively. And he has to bring his knowledge of past and future into focus within the present system of communication, the one in which he has actually to do his teaching.

Hence it is not strange that teachers are sensitive more than other men to changes in communication processes. And teachers in the field of language and literature are most sensitive of all. In these fields a great deal of restlessness is observable today. The furore about why Johnny can or cannot read, the agitation concerning foreign language programs, the tendency of structural linguistics to replace older grammar, and the general overhauling of language-teaching and literature-teaching processes which has been taking place for the past thirty years or more are symptoms that something is stirring. What is it?
PROBABLY A GREAT MANY THINGS ARE STIRRING; BUT IT IS CERTAIN THAT MANY OF THEM CAN BE SUMMED UP BY SAYING THAT WE ARE LEAVING THE GUTENBERG ERA BEHIND US. AS WE MOVE FURTHER INTO A TECHNOLOGICAL CIVILIZATION, WE MEET WITH ABUNDANT SIGNS THAT THE RELATIONSHIP BETWEEN THE TEACHER AND THE PRINTED WORD AND HENCE THOSE BETWEEN THE TEACHER AND A LARGE AREA OF COMMUNICATION, WHICH INCLUDES PRACTICALLY ALL OF WHAT WE GENERALLY MEAN BY "LITERATURE," ARE NO LONGER WHAT THEY USED TO BE. THESE RELATIONSHIPS WERE SET UP IN THE RENAISSANCE WHEN A TYPOGRAPHICAL CIVILIZATION APPEARED, CLIMAXING THE INTENSE DEVELOPMENT OF A MANUSCRIPT CULTURE WHICH HAD MARKED THE PRECEDING MIDDLE AGES. THE PRESENT SWING IS TO ORAL FORMS IN COMMUNICATION, WITH RADIO, TELEVISION (ORAL IN ITS COMMITMENTS AS COMPARED TO TYPOGRAPHY), PUBLIC ADDRESS AND INTER-COM SYSTEMS, OR VOICE RECORDINGS (TO REPLACE OR SUPPLEMENT SHORT-HAND, LONG-HAND TYPING, OR PRINT). AS A RESULT OF THIS SWING, OLDER RELATIONSHIPS ARE UNDERGOING A PROFOUND, IF NOT OFTEN PERCEPTIBLE, REALIGNMENT.

EVALUATING CONTEMPORARY EDUCATIONAL INSTITUTIONS

EARLY TEACHING WAS AURAL AND ORAL IN CAST. SOPHISTICS TAUGHT BY MEANS OF PERSON-TO-PERSON DIALOGUE. ALTHOUGH PLATO IN GREAT PART EXTINCTION THIS DIALOGUE WHEN HE AND HIS FOLLOWERS CAPTURED, STIFFENED, AND MOUNTED IT ON THE WRITTEN PAGE, HE NEVERTHELESS THOUGHT OF HIMSELF AS PRESERVING DIALOGUE ITSELF BY PRESERVING ITS FORM OR "IDEA." AND ALTHOUGH ARISTOTLE SEEMS TO HAVE MOVED FURTHER AWAY FROM THE DIALOGUE FORM THAN PLATO, A CAREFUL AND ASTUTE READING OF HIS WORKS BY WERNER JAEGGER, JOSEPH OWENS, AND OTHERS HAS SHOWN HOW STRONGLY THE DIALOGIC APPROACH PERSISTED IN THEM. CICERO'S WHOLE FRAMEWORK OF CULTURE WAS ORAL IN A WAY IN WHICH THE TEXT-ORIENTED RENAISSANCE CICERONIANISM COULD NEVER BE. TO BRING GREEK CULTURE TO ROME, CICERO DID NOT SIMPLY READ BOOKS BUT WENT TO ATHENS TO LISTEN TO THE ORAL EXPOSITION OF PHILOSOPHY THERE AND THUS TO LEARN WHAT TO TRANSMIT VIA VOICE TO HIS COMPANIONS. IT IS WELL KNOWN THAT CICERO FIRST SPOKE WHAT HE HAD TO COMMUNICATE, DELIVERING HIS ORATIONS FIRST AND WRITING THEM AFTERWARDS. ST. AUGUSTINE REMAINS SIMILARLY ORIENTED. HE WAS DISILLUSIONED LESS BY MANICHHEAN WRITINGS THAN HE WAS AT THE ORAL PRESENTATION OF MANICHHEAN TEACHING BY FAUSTUS, WHO, AFTER EXCITING THE HIGHEST HOPES, EXPLAINED SO LITTLE AND SO UNCONVINCINGLY. WHEN AUGUSTINE HEARD THE FATEFUL WORDS, "TOLE ET LEGE," WE KNOW FROM WHAT HE HAS TO SAY ELSEWHERE ABOUT READING HABITS IN HIS DAY--HE TOOK UP THE SCRIPITRES AND READ TO HIMSELF ALOUD.

BY CONTRAST WITH THE ANCIENT WORLD, THE MIDDLE AGES PRODUCED A MORE PURELY MANUSCRIPT CULTURE. BUT THEIR TEACHING METHODS RETAINED MASSIVE ORAL-AURAL COMMITMENTS. SOPHISTICS' DIALOGUE, TO BE SURE, WAS REDUCED TO THE UNIVERSITY MASTER'S MONOLOGUE, EVENTUALLY STYLED A "LECTURE" OR "READING," SINCE IT WAS TYPICALLY A COMMENTARY ON A WRITTEN WORK AND ITSELF REGARDED AS SOMETHING COMMITTED OR TO BE COMMITTED TO WRITING. YET THE PRACTICE OF TESTING INTELLECTUAL PROWESS BY ORAL METHODS ALONE, SUCH AS DISPUTATIONS, WAS RETAINED. WRITTEN ASSIGNMENTS OR WRITTEN EXAMINATIONS AFTER GRAMMAR SCHOOL REMAINED UNKNOWN AND APPARENTLY UNTHought OF. A THESIS WAS NOT SOMETHING ONE WROTE BUT SOMETHING ONE ASSERTED AND DEFENDED ORALLY AS ONE'S INAUGURAL ACT UPON INDUCTION INTO THE TEACHING PROFESSION. MEDIEVAL CULTURE IS THUS A TRANSITIONAL CULTURE, ORAL-AURAL AT ROOT BUT SCRIPTURAL IN BENT.

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among thousands of textbook authors whose works are published and read more than those of almost any "literary" writer.

The connection between printing and teaching was from the beginning as subtle and profound as it was financially successful. The notion of "storing" unassembled letters (and consequently dismantled words and books) in "fonts" of prefabricated type, which lies at the heart of the typographical developments of the fifteenth century, exhibits a close psychological connection with the doctrine of the loci communes ("commonplaces" or simply "places") taught in rhetoric and dialectic or logic classes in fifteenth-century schoolrooms. One "drew arguments" from the places as one drew type from a font. As the printed book took over, and with it faster and faster silent reading habits, the commitment to eloquence and oral presentation lingering as a heritage from the Renaissance devotion to classical antiquity became, more and more, lip service. The "elocution contests" of a generation or two ago were the dying gasps of the old tradition. It seemed that the printed book had won the day.

It still seems so in the sense that it is unlikely that printing (or its recent manifold variants such as mimeographing or planographing) will ever be done away with in teaching or elsewhere generally. It is incontestably convenient to have the spoken word frozen in space, and frozen in exactly the same space for everyone among one's auditors. The teacher is not likely to forego the luxury of being able to say, "Everyone now turn to page 83, line 4 from the top, and look at the third word from the left." This luxury is too hard-won.

For such a directive was entirely impossible before the invention of printing, when, if the students had manuscript books, every book would have every word in a different place from every other book. Except in certain academic horror stories, no one really seems convinced that the modern world is going to regress into a pretypographical or a preliterate culture. What is happening is more complicated than this. If students are losing their hold on reading and on grammar, this is in great part because, in their relationship to the other items involved in communication, reading and grammar are not what they used to be.

They are still there, and will be, but the constellation in which they exist is shifting its formation.

III

One of the principal causes of the shift in status of reading and grammar is the increased importance of oral-aural communication in our technological society. It is paradoxical that a society given so much to the use of diagrams and to the maneuvering of objects in space (from giant aircraft to atoms) should at the same time develop means of communication which specialize not in sight but in sound. Yet the signs of a shift are everywhere. Grammar, which was originally the study of written language (gramma in Greek means a letter of the alphabet) and which, as normative grammar, has rules based less upon what speaking people do when they talk than upon what literate people do when they write, is yielding to linguistics, which, while it includes grammar, is rooted in the study of oral performance. The trend toward discussion groups has been under way for a long time. It manifests itself not only in the classroom under such guises as "Deweyism," but also in business, where meetings of all sorts have multiplied beyond calculation in the course of the recent managerial revolution. The same elaborate business organizations which solve many of their problems by computing machines have found that back of the Univac there must be large-scale and deliberate confrontation of person with person. Interest in group dynamics serves as a counterbalance to electronic computers. Often the most efficient way to attack a problem has been found to be the "brainstorming" session, where members of a group stimulated by the rest of the group as an audience, suggest orally whatever solution to a practical problem may stray through their heads, no matter how zany the solution may at first blush appear.

Libraries themselves have undergone significant realignments. The oldfashioned Renaissance public or semi-public library, with its books chained to keep the users from carrying them away, yielded some years ago to the lending library. Both these
institutions were spectacularly quiet. The new library makes allowance for noise, and utilizes noise. It includes seminar rooms and all-purpose rooms for larger meetings. Acoustic insulation, of course, has made these possible. But, by whatever means the effect has been achieved, libraries have recently become places where people can get together to talk. Our attitude toward books, our concept of what they are, is sure to be affected by such a change, especially as more libraries are being run on an open-stack plan. Librarians, including librarians of early lending libraries, until recently appear to have existed chiefly to keep books in the library, from which they would issue them with ill-concealed reluctance, placated only by thought of the savage reprisals which would result if the books were not returned by the derelict borrower almost immediately. Today's librarians all want books to go out and feel frustrated if they do not. The result is that more and more books are now read in a world alive with sound, to musical backgrounds provided by radios and hi-fi sets.

The oral-aural emphases of today run counter to certain typical phenomena of the Gutenberg era as diverse as the invention of printing and the exploration and observation of the surface of the globe. These activities reached their peak together, and both focused attention in space and thus vaunted sight. The microscope and telescope, developed as epiphenomena of printing and exploration, did the same. But a new age is upon us, and its shift from sight-emphasis to increased sound-emphasis spans this entire area from the diffusion of the word to the exploration of one's surroundings. In the realm of words dictaphones replace shorthand writing, and audio charge systems replace written library records. Exploration no longer depends on moving the human body through space. It is conducted by radar and radio-telescopes (more informative in many ways than visual-type telescopes), and by spacecraft, which are launched into space as little speaking voices. In these devices sight, of course, plays a role, but no longer so exclusive a role as before. Press reports on the first nearly successful moon rocket noted that at its apogee it could not be seen even with the most powerful lens telescope on earth, but that it could be heard.

In their whole trend, modern developments in communications, while they have not slighted the visual, have given more play to the oral-aural, which a purely typographical culture had reduced to a record minimum in human life. The sequence of development running from silent print through audio-visual telegraph to the completely aural radio is an obvious instance of increasing aural dominance. Even television belongs partially in this visual-to-aural series, being only equivocally a regression to visualism. For the visual element in television is severely limited. The amount of detail feasible on a television screen is far less than that visible on a movie screen and not remotely comparable to that tolerable and easily discernible in photographs. Details on television have to be filled in aurally, by explicit vocal explanation or by suggestion through music and sound effects. Silent television is hardly an engaging prospect.

IV
Heightening the oral-aural element in a culture does much more than merely de-emphasize vision. It subtly heightens the personalist element in a culture. For the plenary development of sound, the human voice, is a manifestation of the person. Even more than it is a manifestation of an understanding of objects, speech is a calling of one person to another, of an interior to an interior. Sight presents always surfaces, presents even depth as a lamination of surfaces, whereas sound presents always interiors; for sound is impossible without some resonance. The post-Baconian preoccupation with sight and "observation" produced the world of the Enlightenment, a world of objects and things without convincing personal presences, giving us the strangely silent universe which Newtonian physics and Deism both supposed. Printing was the harbinger of this Newtonian world, for printing is spectacularly allied with surface or "object" treatment of reality. Picasso's collages use bits of printed posters or newspapers to establish a sense of flat surface because print is sensed as indissolubly allied with surface. Scraps of printing in the collages serve precisely the function
of returning the eye from the perspective depths in other parts of the assemblage to the plane surface of the painting—it is unconvincing to imagine print on anything other than something relatively flat and smooth.

Strangely enough, although it is in part a visualist development, television has moved away from this effect of print. It has been a personalizing, not an objectifying, medium. The discussion panel, with its interchange of personalities, is properly a television phenomenon. Such personal interchange was difficult to manage on radio, for there individual persons could only with difficulty be kept distinct. Hence the use of voice was not brought to its fullest fruition. By the same token television is a more feasible means of education than radio. This is not because it can use visual aids devices (figures written on a blackboard on television cannot be seen by any viewer unless the camera is turned on them—they lack the permanent availability of figures on a classroom blackboard). It is because television better implements personal rapport between instructor and student.

But television is not the only manifestation of the growing interest in the human person which accompanies the resurgence of voice in our culture. Another manifestation is the self-conscious personalism of our times. The twentieth century, from one point of view the most mechanized of all the ages of mankind, is from another point of view the most personalized. No other age has generated a whole philosophy of personalism such as one finds in the works of Martin Buber, Gabriel Marcel, and others. At a much less reflective, more superficial, and nevertheless significant level, no civilization before our technological civilization has given such attention to problems of personnel and personality in matters even of industrial performance. The "I" and the "thou" have never been the objects of more explicit treatment than now. In the future, alongside the digital and analogue computers and other mathematicizing developments such as Western culture has specialized in more and more over the past few hundred years, the human person will receive more and more attention, not in every quarter but in significant milieus and ways.

One may object that earlier civilizations were, and other contemporary civilizations are, more personal in certain aspects of their structure than ours. Modern Arab culture, styled by Marcel Jousse "verbomotor" (verbomoteur), is still almost exclusively personal in orientation (as a preliterate culture must be), acting in terms of personal loyalties and without much "objective" insight into issues. Such cultures can be both anarchical and, as Albert Camus well knows, absorbingly interesting from a human and literary point of view. This is because of their personalist orientation. But from another point of view, and an utterly basic one, such cultures leave much to be desired in this same personality orientation. Their respect for the elementary personal right to life can be quite minimal.

V

The influence which the present cultural shift toward the oral-aural is having on language and literature study and teaching is probably most important where it is least crass and striking. To think of adapting courses to present trends by exploiting as gadgets the spectacularly evident new media—radio, television, tape recordings, inter-com—is to a certain extent to miss the point. These new media are not just new gadgets to be employed for what we are already doing with other less efficient gadgets. They are part of a shift which is inexorably affecting our very notion of what communication itself is. The question is not how to adapt television or tape recording to present courses in educational institutions or present courses to television and tape, for the present shift is sapping the very notion of a "course" itself. A "course" (Latin, cursus) means a running through. The concept of a "course" in a subject, derivative from the process of teaching by "running through" a text, is a relic of manuscript and typographical culture. Moving in a more oral-aural setting, Socrates never gave a "course" in anything, and indeed had no notion of what such a thing as a "course" might be.

This is not to say that "courses" in language and literature or in anything else are on their way out. Evolution does not proceed by jettisoning earlier developments
completely in working toward new ones. It tends rather to preserve earlier developments, even though these may have to be given new guises. Courses in language and literature are evidently going to be with us for a long time, perhaps for good. Nevertheless, their psychological significance is undergoing subtle and complex, but inexorable, change.

One way to express the nature of this change is to say that the old focus of literary studies on rhetoric is being replaced by a focus on dialogue. In ancient times, and through the Middle Ages, the cause of literature was the cause of rhetoric—which is to say the cause of the art of oratory. Poetry and all "ornate" expression was commonly referred to an eloquence which was associated basically with the oration or public speech before a group of persons. In contrast, the dialectic which split off from rhetoric and modulated into logic, first in Aristotle but more definitely through the Middle Ages, has pulled away from literature and helped generate modern science. The Renaissance sought to return from dialectic to literature by re-emphasis of eloquence and rhetoric, but the Renaissance effort foundered in the combined currents of an always ebullient scholasticism and of the modern scientism so closely related to scholasticism. Rhetoric and the areas of communication which it represented failed to develop any mature theoretical structure viable in the post-Newtonian world where neat theories seemed to account for everything else.

For some time now the Newtonian universe has been broken down, and the result has been a recrudescence of interest in language and literature. But the interest no longer centers on rhetoric, the art of persuasion, which in our day is much more the province of the advertising man and marketing specialist than of the litterateur. The more effective ally of literature has turned out to be the sense of dialogue which marks important philosophical developments of our age (and which is notably missing or ersatz in advertising). Literature is no longer standing so much alone as it did when "mere" rhetoric was arrayed against dialectic. It is painstakingly picked over by psychologists, physicians, sociologists, anthropologists, theologians, and others. Certain typically modern philosophies of the "existentialist" sort have been described as literary philosophies, conscious of and using literary form, as explored by Camus, Marcel, Sartre, and others. We have become explicitly aware in our time of the intimate linkage between the process of communication and human thought itself. Many of the illusions of the Enlightenment concerning private thought and psychological privacy generally have been dissipated since the discovery of evolution, of depth psychology, and of the processes involved in the history of human thinking. We are intimately aware, as Gaston Fessard and others have put it, that science itself is only the arrested dialogue. Voice is not an accretion, but a necessary adjunct or even a necessary dimension of human thinking. (It should be added that the "dialogue" meant here is neither medieval dialectic nor Hegelian dialectic, although it is related somewhat to both. Dialogue refers here to actual vocal exchange between person and person.)

It is through awareness of the paramount role of voice in human activity that students of English or of any other language today must seek to understand the reactivation of the oral-aural element in human culture. Voice is coming into its own as never before. But the ways in which it is doing so, and the elements in our culture which favor voice as well as those which militate against it, are complex in the extreme. We can arm ourselves and our students only by vigilant awareness of what is going on about us. In particular, teachers and students of language and literature must cultivate sensitivity to the more profound significance of the media of popular culture—which is not the same thing as either uncritical acceptance of popular culture or entrenched hostility to all its manifestations. Any kind of genuine sensitivity to literature of any age or culture has become thoroughly impossible unless a person has grown seriously, not phrenetically—reflective about contemporary communications media. Men today—and, above all, high school, college, and university students—live englobed in a universe of sound emanating from radio and hi-fi sets which surpasses anything any earlier human culture has known, both in the total decibel
output at any given moment and in incessancy. Reflection on the condition of the new media and the changes they are effecting in human life will probably produce no pat formulae either to describe the totality of the present situation or to prescribe highly simplified lines of action. But it should enable us to live.