

Let the great world spin forever
Down the ringing grooves of change.
—Alfred, Lord Tennyson

On Intellect, Intelligence and Chewing Gum—A Contemporary Appraisal

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That ours is a rapidly changing world is scarcely a matter of serious debate. Social and political unrest among the Russian republics has called for a drastic restructuring of the regional and geographical boundaries of the Soviet Union and its satellite nations. Stunningly victorious in the battle to free Kuwait from its domination and control by Iraq, we are now confronted with the problem of how to assist the Kurds in establishing a homeland. The impasse between the Palestinians and the Israelis likewise calls for urgent resolution. Biafrans are starving in West Africa, while thousands of natives are being brutalized and massacred in Johannesburg in the Republic of South Africa. In light of the near-catastrophic flux in the world today, what obligation does education have in ameliorating such turmoil, i.e., in bringing about stability in an apparently chaotic world? Is a more intensive study of history all that is needed, or should such study be viewed as a prelude to change? Is knowledge itself power, or do the uses to which knowledge is put determine its power and its significance?

The very nature of education is imbued with change when it is conceived as a forward-looking enterprise designed to chart the course of our future aspirations rather than as simply a recounting of our past—important as that may be. Certainly there is truth in the adage that those who refuse to study history are compelled to repeat it. But it is likewise true that such study—divorced from a kindled imagination and considered visions of a better future—does little more than perpetuate the status quo. An overweening concern with the past is perhaps best represented by certain followers of the classical or Great Books movement, while the contemporary or future-oriented outlook is more likely indicated by the adherents of Pragmatism. A

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closer examination of this schism would seem to be in order.

The classical point of view is perhaps best represented by such writers, among others, as Mortimer J. Adler; William F. Buckley, Jr.; Harry S. Broudy and the late Robert M. Hutchins. Pragmatism is most clearly delineated in the writings of John Dewey (who preferred the term Instrumentalism), Boyd H. Bode, John L. Childs, George S. Counts, William H. Kilpatrick (founder of Progressive Education), Ernest E. Bayles and several others. In *The Learning Society*, Mr. Hutchins had argued that education must begin preparing for a time when "... we shall find ourselves largely without work as we have understood work in the past." He believed that "... for the educational system the transition from schools, colleges and universities away from jobs and toward intellectual power." That many of the kinds of jobs that have heretofore been an integral part of our working society are no longer in demand is scarcely debatable. Whether mechanization means an increasing elimination of all kinds of work, however, is at least open to serious question.

If, in the classical view, the matter of learning hinges upon the learning of newer and more productive kinds of work, wherein inventiveness, creativity and imagination would play increasingly greater roles and a greater proliferation of job opportunities would result, considerable merit might be attached to such a position. There is reason to believe that such learning would release the worker from enslavement to his job and free him to become an innovator of myriad ways of better accomplishing his task. It would enable him to remove himself from the stigma of assembly lines and conveyor belts and become a genuine participant in the improvement of his product. He would be able to view himself, as it were, not a layer of brick upon brick, but as the builder of a cathedral. But this is probably not what the classicist has in mind at all. It is doubtful, in fact, whether he views learning as geared to any tangible end, least of all to anything so lowly as work. What he appears to be urging upon us is not that learning be redirected toward implementing the newer kinds of jobs that technology may require, but that learning be conceived as a substitute for work, with no apparent relationship between the two—and this is quite a different matter.

Learning thus becomes an airy abstraction to be indulged in for its own sake, unencumbered with any practical purpose. What may be overlooked in the advocacy of a transition from working to learning is a basic fallacy in the argument, viz., that learning and working are not mutually reinforcing but that they are disparate terms. It would seem that the learner is not a doer and that the doer is not a learner, which suggests a subtle reinstatement of the old dichotomy between knowledge and action, between contemplation and involvement and perhaps even between morality and conduct. That intellection is somehow different from and superior to the work of the hands is an insidious notion that has plagued us for centuries. It has characterized every aristocratic or caste society from the Greeks to the present, but it remains withal a notion that is alien to democracy. Every contributor to society has been in some sense or another a worker. The architect works to achieve a master plan; the draftsman works at his drawing board to implement its design; and the skilled laborer works to bring the plan into being. Skilled surgeons, violinists, writers, artists and sculptors all work in various ways with their hands. It will scarcely do to say that the skills with which they ply their work were not learned or that they do not continue to learn better ways of performing as they practice their crafts.

II

To hold, on the other hand, that learning is not for the purpose of doing, working, or performing in regard to some skill or creative act would be to deprive learning of its purposive function or end-in-view. Learning is not a matter of vague celebration. To learn is always to *learn how to do something*. Whether a learning society is a worthy society is ultimately to be measured, not by the mere fact that it is learning, but by what it is learning, by the purposes for which it learns and by the criteria it uses in assessing such purposes.

This brings us to the age-old question of aims, which in turn hinges upon whether they shall be viewed as universal and transcendental, as classicists maintain, or as contingent upon present and probably future states of human affairs, as suggested by John Dewey. It seems paradoxical, at least, that classicists should so long have claimed a kind of transcendence in regard to educational aims and now urge that they reflect the current and forthcoming technological revolution in the social order. Lest it be presumed that the classicist had suddenly become a relativist and that his educational values were culturally oriented, I venture to suggest that what he is really saying is that the kind of intellectual training of which he has long been an ardent advocate as at long last giving promise of coming into its own, not as a luxury but as a necessity. I suspect that he is further saying that despite—not because of—the job dislocations and eliminations that a highly technological society may bring about, education should primarily be concerned with a cultivation of those universal ends that are oblivious to the changing physical environment and that are impervious to time, place and human conditions.

It is only realistic to recognize that science and technology are becoming increasingly integral parts of our daily lives, and it would be a woefully short-sighted view of education that failed to reconstruct itself accordingly. But is the classicist's brand of reconstruction what we need? It is not difficult to detect in the classical proposal the familiar thesis, borrowed largely from Plato and Aristotle, that true education pertains to a cultivation of the intellect, that labor is necessarily menial and degrading, and that this is because, philosophically speaking, the mind and the body exist in disparate realms, with priority assigned to the mind.

III

One cannot but question whether it is not this very bifurcation of mind and body, of the cultural and the practical, of the academic-minded and the hand-minded, of the humanistic and the scientific that has resulted in what C.P. Snow has called our "two cultures" and which has but served to widen the breach between the artist and the artisan, between the poet and the scientist, between the philosopher and the activist and between the intellectual and the average man. The shearing away of values from the experiences we engage in, on the one hand, and the isolation of what we do from its connection with our moral aspirations, on the other, have led to a kind of schizophrenia in regard to a proper relationship between thinking and doing, as well as between ordinary thinking and doing and intellectual thinking and doing.

At a conference at Princeton University the British M. P. Brian Waldon once referred to "... the increasing divergence between what intellectuals do and think and what ordinary people are doing and thinking." His observation was also that there had been a complete collapse of liberal values at their source and that the framework in which the ordinary man now thinks has virtually no relationship to liberalism, or indeed, to any values at all. The classicist quite

properly reminds us that in an increasingly computerized and technological society many of the vocations that were earlier in demand are going by the boards, and that future generations are going to be faced with fewer and fewer of the traditional kinds of job openings. He urges that the curricula of our educational institutions, in order not to prepare students for outmoded or non-existent vocations, ought to take into account these changing conditions.

But the rather handy conclusion that soon most people will be learning and few will be working is too simplistic an assessment of the issue. In the first place, although a great many of the vocations for which we have prepared and may still be preparing young people may no longer be in demand, this is not to say that we shall ever become a completely mechanized society. Nor is it to say that the bulk of the professions—law, medicine, education, the ministry, economics, politics, etc.—are likely to become obsolete. Moreover, the creative work that is required in music, drama, painting, sculpture, poetry, etc. is not likely to be displaced by technology. Productive work will no doubt always be in demand wherever creative art and scientific inventiveness are concerned, and the work of the imaginative mind will become increasingly prized as such slide-rule skills as calculation and simple logic are taken over by machines.

In the second place, there is a strong and highly prized relationship between the dignity of labor and social values. From the simple carpentry of Jesus to the architectural designs of Lewis Mumford, from the geometry of Euclid to the mathematical physics of Einstein, from the epic poetry of Homer to the cryptic imagery of T. S. Eliot, from the majesty of Beethoven to the cacophony of Shostakovich, man has valued and respected the worker—be he inventor, discoverer, physician, poet, mathematician, musician, actor or manual laborer. Although he may occasionally have envied them, man has habitually failed to respect those who do nothing, or who are merely aristocratic, or who are too lazy to work, or who do not have to work, or who do no more than cultivate their own intellects and contribute nothing to the well being of others.

IV

Lewis Terman, in his *Genetic Studies of Genius*, once assumed the equivalence of genius and a high intelligence quotient. In his later years he acknowledged that these are not the same, that persons who merely "sit" with high I Q's are not perforce geniuses, and that the term genius had best be reserved for those who have demonstrated *productive* intelligence. It may be significant to note that the term intellect, which those in the Aristotelian tradition make paramount, is largely avoided by Dewey and other experimentalists, who prefer the term intelligence. Both terms derive from the Latin root *intellegere*, meaning "to know." Intellect, however, stems from the perfect passive participle *intellectus*, meaning "having been known"; whereas intelligence is derived from the present active participle *intelligens*, meaning "knowing." Despite the apparent similarities of these two terms, the difference between them is more than merely etymological. It suggests the conception of intelligence as ongoing, in the present, hence active. Intellect, on the other hand, is understood as something completed or perfect, hence passive. This also supplies us with a clue as to why intellect is commonly conceived as an entity, a reified or hypostatized capital stock of knowledge; whereas intelligence is viewed as a function, an active participation or transaction in regard to the environmental field in which the activity we term knowledge-getting occurs. It may likewise provide us with an understanding as to why intellect is so often thought of as a kind of soul-substance, removed from

experience; whereas intelligence is seen as joined in interaction with experience.

Some analytic philosophers—among them Gilbert Ryle and R.S. Peters—have argued to the effect that intelligence is not an inner entity which manifests itself outwardly, nor simply, as Dewey has argued, that it is continuous with its expression, but that it is to be identified precisely with its product. This amounts to saying that Beethoven's genius, for example, resides *in* his compositions, or Picasso's *in* his works of art, or Hemingway's *in* his written works, for here lies the only basis for calling such men geniuses. Although virtually every society has esteemed its productive members, the free society has seen fit neither to subsidize nor to patronize them, but to dignify their efforts by granting them independence and increasingly higher degrees of autonomy. Accordingly, one cannot but wonder whether the proposed shift in emphasis from working to learning would actually constitute no more than a realistic attempt to adjust to technological change, or whether, if seriously and thoroughly undertaken, it would threaten the very foundations of our social values and our social order.

In the third place, aside from the social recognition and rewards that accrue to work, what is to become of the human need for self-respect that is engendered by a sense of accomplishment from a job well done? The boredom of the idle—be they rich or poor, learned or unlearned—is a poor substitute for the zest that derives from undertaking, working at and successfully completing difficult and worthwhile tasks. We're urged to reorient education away from jobs and toward intellectual power. But what is the significance of intellectual power except as it is utilized in working out more humane ways of living in association with others? Moreover, if our educational system is to retain a semblance of its democratic structure and outlook, can it afford to overlook the fact that not every learner is capable of profiting from an exclusively intellectual kind of education?

V

There are many kinds of intelligences—mechanical, manipulative, clerical, as well as creative and abstract—which represent the diverse capacities, needs and interests of the free, multi-group society. To single out but one kind of capacity—to attempt to limit all learning to a strictly intellectual variety—would be to ignore the rich and varied scope of talents and aptitudes that American youth represent. It would be an ironic twist to discover that the technology we have spawned—a technology that purportedly enables us to realize virtually every end we set up—is capable of usurping those very ends and of bending our historic goals to its will.

Like a Frankenstein's monster, the technology which in many cases man may be justly proud of having wrought, may now be threatening to take away from man his pride of accomplishment. What is apparently forgotten in this strange phenomenon is that the original purpose of technology—the easing of undue hardships and the betterment of human living—is in danger of being ignored, and the servant threatens to become the master. The specter of a technological usurpation of man's ability to decide his own best interests and destiny is not without its parallel at the governmental level. Washington Senator Stan Chamberlain, for example, once referred to Federal bureaucracy as a "governaut, which is something with the personality of a grinch and the momentum of the Seventh Fleet, only bigger—a self-generating monster which devours its creator, bursts out of the laboratory and sinks the United States."

In times past, religious revolts, industrial revolutions

and technological shifts have been seen as portents of a better life. To be sure, there was often unmitigated suffering involved in the task of realigning one's faith, in temporary job relocations and in adopting ways of production that were claimed to represent greater degrees of efficiency. But in all such historical phases there was a tacit assumption that, once the painful period of transition was endured, equilibrium would again be restored, and a new era of religious, economic and social stability would be ushered in. Efficiency was the magic word, and whatever disruptions were necessitated in its name were presumed to be ultimately beneficial. In the name of efficiency our natural resources have in many instances been drained. In his devastation of forests and destruction of wildlife, predatory man has often thoughtlessly disturbed the balance of nature. To facilitate the efficient flow of traffic, the beauty of a landscape yields to the construction of a superhighway. If it be efficient and profitable to industry, the resultant contamination of our air, lakes, rivers and streams, although perhaps unfortunate, will apparently just have to be endured.

Even the gracious-sounding names of telephone exchanges such as EVERgreen, LAWndale, PARKway, CRESTview, WALnut and FOREst have given way to mere numbers—all in the name of efficiency. In order to live efficiently, modern man has increasingly reduced himself to a nameless and faceless blob. Today it is quite possible—indeed almost routine—for him to have a house number on a numbered street in a community that is located primarily by its ZIP code number; to have attended a numbered school; to have—in addition to a telephone number—a social security number, an insurance policy number, a license plate number and a drivers license number; and to be buried in a graveyard plot that is identified by a number. Our cities, industries, jobs, educational systems and, indeed, our entire lives have been geared to efficiency, with the result that efficiency has virtually become a way of life itself.

What we have neglected to consider is that to live efficiently is not necessarily to live effectively. Whereas efficiency has to do only with means, effectiveness has to do with taking into account the probably consequences—both immediate and long range—in the service of which means are employed. Merely to live efficiently is to live at the superficial level of a sometimes questionable economy of time, funds and energy. To live effectively is to live at the higher level of perceived relationships, as well as to keep under continual surveillance the desirability—both individual and social—of whatever we undertake to accomplish. While corporate enterprise, Madison Avenue advertising and computerized living may represent the Golden Age of the efficiency expert, they do nothing to prod us to tap the deep wellsprings of meaning that life can afford.

VI

The average man has come to believe that the meaning of life is a matter of discovery, or that it is a commodity, like aspirin, ready-made and available upon request; he seldom thinks of it as something personally wrestled with and individually wrought. Even religion has often become a big-business commodity-dispenser of ready-made ideas instead of the means for an honest, perhaps disturbing and unorthodox, inquiry into the depths of human relevance.

In science and technology we are daring innovators, whereas in morals we tend to be subject to the dominion of the herd. We have been spectacularly experimental in plumbing the ocean depths, in invading outer space, in conquering disease and in devising all sorts of efficient means of communication and transportation. But in the labor of learning how to live in harmony with our fellow man—in our

families, in our communities and among nations—we have exhibited a sorry lack of aptitude. We have all but exhausted ourselves in the heroics of physical conquest, while our moral frontiers remain uncharted. Perhaps the ever closer proximity of our megalopolitan populations of the future bespeaks a need not so much for intellectual power as for the fostering and development of sharable interests, human sensitivities and mutual understandings.

The transitional nature of our times goes deeper than the rather obvious changes in the physical scene. It is bound sooner or later to raise the problem of choice between competing standards of value. To put it differently, evidence of material progress is basically an indication of an increasingly experimental outlook. Although not widely understood, the import of this view is that progress consists in gaining mastery of situations for the purpose of human betterment. In opposition to this view is the contention that progress results not by acquiring control over physical forces but by conforming to some set of fixed principles, which has variously been defined as cosmic, revealed, transcendental, classical or otherwise absolute and inviolable. From the latter standpoint, those who would invade the cosmic order, if not rank heretics, are at least persons whom we should "keep an eye on," and those who would presume to match their wits against nature had better "watch their step." Or the position is sometimes taken that scientific truths are not really truths at all, since real truth is metaphysical and transcends any propositions that science may formulate. Our present dilemma has to do with the fundamental question of deciding between piecemeal adjustment on the one hand and wholesale reconstruction on the other.

The *Weltanschauung* in which we have been operating stems largely from the Aristotelian notion of a closed universe, mechanistic in nature, which was thought to be an outward manifestation of some sort of predetermined plan or cosmic design, the metaphysics for which was provided by Platonic philosophy and later adopted by Christian theology. It is this dualistic or two-world outlook that has been largely responsible for the present dichotomies in psychology, philosophy, economics, religion, morals and government and which has become so familiar, if unfortunate, a part of our Western culture. It is this twofold conception of reality which has resulted in a not-too-healthy separation of mind from body, heaven from earth, the spiritual from the worldly, the ideal from the real, the metaphysical from the physical and the individual from society. In education it has performed the irreparable error of separating things to be learned—the curriculum, subject matter—from the learner.

Although it would be inaccurate to say that philosophy has stood still since the days of Aristotle, the fact remains that the dualisms of which we have been speaking likewise tended to separate the philosophic from the scientific, with the somewhat predictable result that neither was considered to have much more than an incidental bearing upon the other. The philosopher, absorbed with the metaphysical, has seldom felt compelled to concern himself with scientific discoveries; while the scientist has for the most part been content to stay within his appointed bounds of purely physical research and has been shy about playing philosopher. As a consequence, wherever science has collided head on with philosophic truth, it remained for philosophy to put science in its place. The upshot was that newer scientific findings were usually adjusted or "hitched on" to the established philosophic order of the day, which it was thought necessary to preserve at all costs.

VII

The discoveries of such men as Copernicus, Galileo, Newton and Einstein might have constituted grounds for re-vamping our world outlook. Had the spirit of their habit of mind caught on, we might have been spared the shackles of ancient superstitions, outmoded dogmas and the whole tradition of fixed standards. Instead, the degree of their acceptance was usually limited by the degree to which their ideas did not seriously disturb the old, dualistic scheme of things. The very names attached to "new" philosophic movements—neo-Platonism, neo-realism, neo-classicism, neo-scholasticism—reveal the persistent tendency to give ground grudgingly by making minor concessions within the established order rather than to engage in serious reconstruction of the order itself. Our present culture harbors a hodgepodge of assorted outlooks, incompatible with one another, which give aid and comfort to two basically irreconcilable philosophies. It is neither fish nor fowl. The idea of a closed system obedient to certain immutable laws, where truth is an eternal verity, cannot be reconciled with the conception of an open universe, hospitable to change, in which truth is forever emerging and modifiable with each new addition to knowledge.

It is the philosophic framework from which the rather superficial admonition to stop working and begin learning is made that needs to be seriously examined. Moreover, the job of moving toward an increasingly equitable distribution of the world's resources among the less fortunate people of the earth and the continuing task of learning how to live with diverse cultures suggest a far more significant conception of learning than just learning for learning's sake. It has long disturbed me that many persons have been assigned educational status whose knowledge outstrips their ability to utilize it in moral and humane ways. I have long felt that the hallmark of an educated person is a reflective and compassionate attitude toward human being and human problems. The truly educated man, as distinguished from the man who merely knows, is the man who has learned how to enlist his knowledge in the service of moral ends. We're not especially short on "intellectuals" today—indeed, it may even be said that we are burdened with them—but there is a difference between being merely intellectual and being cultured or civilized. Formal education, from the kindergarten to the graduate school, has emphasized what might be termed the "learning that" aspects of education. We have finally produced a generation that is perhaps over-equipped with knowledge as no previous generation has ever been. As Professor Guy Davenport, of the University of Kentucky, has remarked, "Knowledge, once ordered, has now become an atomic rain of random particles under which the mind dances like a toy balloon in a hailstorm." But our surfeit of knowledge has apparently fallen short of ameliorating the psychology of the human predicament and, despite our burden of information, we continue to fail in our attempts to realize our moral aims.

VIII

Whereas the intellectual may have *learned that* to an astonishing degree, the educated man is distinguished by the fact that he has *learned how* to discipline his behavior in the achievement of reflected-upon ends, i.e., to align his methods with his goals. For what is the purpose of education if not ultimately to render life richer, more livable, more decent and more humane? A study of subjects such as mathematics, astronomy, biology, history, music, literature, drama and painting is truly educative not because it adds to our funded knowledge but to the degree that it contributes to the enrichment, enhances the dignity and ennobles the

purposes of life. By the same token, to be proficient or well-versed in technology, or to be expert in the field of international diplomacy, is not necessarily to be educated. But to have learned how to utilize technology in the service of effective living, or to have mastered the art of aligning diplomacy with the attainment of moral goals is representative of true education. Every science and every art reaches its greatest degree of significance in its social bearings—or, like Dewey's conception of intelligence, the meaning of every human undertaking is ultimately social.

The literal-minded simplicity of the average sociologist or public moralist serves little purpose. Instead of listening endlessly to picayune answers to small questions, perhaps it is time to demand tentative answers to important ones. It is encouraging to note that there are a few voices beginning to be heard in regard to defining the issue. Erich Fromm, for example, holds that "Our problem today is technology vs. humanism in both its religious and non-religious forms." Fromm has proposed the creation of a National Council of the Voice of the American Conscience, which he believes should consist of about fifty eminent, dedicated Americans concerned to make technology subservient to the attainment of human ideals. What we are in danger of losing, Fromm believes, is a recognition of the social primacy of man. Although his proposal might be interpreted by some as fostering a kind of elitism in respect to the questions of who should serve as watchdogs of our common aims, and although grass roots awakening to the inherent pitfalls of a mindless technology might be considered more desirable, Fromm at least reminds us of the need for sober thinking about the problem.

IX

Intellectualism in the classical sense suggests an at-

tempt to escape from reality—it serves as a sort of metaphysical antidote to the crassness of technology. Instead of joining brain power with man power, the classicist appears to see no connection between the two. He is all for technological progress, for this provides us with more and more leisure time in which to cultivate our intellects. But whether cultivation of the intellect has any bearing upon a planned economy, urgent urban needs, a conservation of natural resources, or problems of international accord is nowhere made clear. An intellectualism cut off from the circumstances, plights and predicaments of modern living, while nurtured by leisure, could at the same time preside over a technological desecration of our landscapes, a dehumanization of our social relationships and a gradual usurpation of our power to choose the conditions of our own lives. The prevailing notion that all technology is good technology needs to be drastically altered. In the words of Harvard biologist George Wald: "Our society is trained to accept all new technology as progress, or to look upon it as an aspect of Fate. Should we do everything we can? The usual answer is 'of course.' But the right answer is 'of course not'."

A most serious danger to our social well-being is the threat of an irreparable cleavage between our technological prowess and our so-called intellectual development. If the potential and long-range benefits of technology are to reach beyond the dilemmas it has created; if, once leashed and thoughtfully directed, technology is to become a true harbinger of human progress, then the scientific, the intellectual and the moral forces of human thought had best be united in a joint declaration of our education aims. In our rapidly changing world it might be well to remember, however, that progress is more than just movement—as chewing gum proves.