THE ENDS OF EDUCATION

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Practical, Theoretical, and Technical Excellences

In the moral and intellectual domains, the ends of education have remained much the same since Aristotle's formulation: to fulfill human potential for excellence in civic virtue, intellectual understanding, and technical or productive skills. Although some educators might add goals in the affective domain, Aristotle thought happiness consists in realizing human excellence by perfecting virtue and intellect, so he would not add goals dealing with emotional or spiritual development. In modern times we have also extended the right to be educated, which Aristotle limited to members of the polis, to all people. For Aristotle, human excellence falls into these three areas: to live in society, to know things, and to do or to make things. The first is concerned with justice and self-development; the second with theoretical knowledge of both abstract and empirical subjects; and the third with being skillful in the productive arts. The methods of education, therefore, are means to these ends. They would consist first in inculcating moral values, second in teaching theoretical subjects, and third in developing technical skills.

The first domain of human excellence — civic virtue — corresponds to the ancient concept of πρᾶξις (*praxis*) is derived from a verb πράσσω (*prasso*) meaning "to pass over or through territory," and therefore"to fare well or ill." From this it comes to mean "to achieve, effect or accomplish."[1] The associated noun in Greek is πρᾶγμα (*pragma*). Often used of public business in classical Greece, the word is the root of "practical," "practice," "pragmatic," and related words in English. The ends to be accomplished by humans in the first realm are pragmatic, having to do with how to live with oneself, which is the topic of ethics, and how to organize societies, which is the topic of social and political philosophy.

The second domain of human excellence — having theoretical knowledge — comes from the Greek word θεωρια (*theoria*), derived

from the verb θεωρέω (*theoreo*) meaning "to be sent as an envoy to an oracle of the god (*theos*)." From this, the verb comes to mean "to be a spectator at the games; to look at or behold."[2] The associated noun, θεωρια (*theoria*), is the root of "theory" and "theoretical" in English. Theoretical knowledge is sought for its own sake, for, as Aristotle remarks, "All men by nature desire to know."[3] Aristotle considers a life spent seeking theoretical knowledge, the contemplative life, to be the highest expression of human excellence, since he thinks human beings are primarily rational creatures.

The third domain of human excellence — having skills in the productive arts — corresponds to the classical Greek concept of θέχνη (*techne*). Originally a noun meaning "an art or a skill," *techne* has both a positive and a negative sense, as an art may be employed either skillfully or cunningly.[4] It is the root of the English words "technology," "technical," and "technique." The third domain of education combines the fine and useful arts. Since the Greeks did not distinguish them as we do, I have called *techne* "the productive arts" in this paper. Some of these involve making things, others, doing things.

An understanding of Aristotle's four causes is also useful in analyzing educational policy. The final cause is that purpose for which a thing is done; the formal cause is the blueprint or outline of the thing; the efficient cause is the agent or source of motion by which a thing is done; the material cause is the stuff out of which a thing is made. Since education is a purposeful activity, the final cause of education is that human beings fulfill their potential for excellence in the practical domain, the theoretical domain, and the technological domain of human action.

Aristotle's goal in educating an Athenian citizen is to produce an Athenian who possesses virtue to apply to the practical matters of living. This person has a disposition to do the good because he has been habituated to doing the good. It is the business of those who teach to accustom children to like what they ought to like, so they can act according to the right rule, willingly, from preference. Ac-

cording to Aristotle, the continent man may act moderately by reason, but the truly virtuous man acts as he ought by preference. Liking to act according to the rule of moderation actualizes children's potential for excellence in the practical domain.

Secondly, it is the business of the educators to arrange the conditions so that children can develop their potential for theoretical excellence. There are relatively few geniuses, but many people are capable of the theoretical thinking necessary to practice various professions that require some theory. Many professions have both a practical and a theoretical component. In some the practical component is predominant; in others, the theoretical component predominates. Philosophy, higher mathematics and physics are largely theoretical. Music performance, surgery, and cooking require technical skill, but include a component of theoretical knowledge as well.

Finally, education develops the skills of making things and doing things. There are many kinds of *techne*, as diverse as computer programming, carpentry, diagnosing illness, sewing, or getting plants to grow. Technical skill may contain a component of theoretical knowledge, but there is an element of hands-on practicality in productive activities. These skills entail cultivation, but of capacities different from theoretical understanding.[5] The fine arts also fall under the technical, requiring practice.

Aristotle understood the three competencies which an individual could develop, but held the productive arts in lower regard than the pursuit of theoretical knowledge. Everyone needs civic virtue, even artisans, but not everyone will be competent to rule under most existing conditions. Aristotle applied his analysis of the ends of education to a restricted group, the male citizens of Athens. Nevertheless, he is correct in his general conception of the ends of education, that is, to develop people's potential for various kinds of human excellence. Later writers on education universalize Aristotle's conception of education to include all people as citizens of the world, equally fit subjects for development.

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Like theoretical knowledge, the productive arts are also sought for their own sake. A fine performance or a well-wrought urn are satisfying to the maker as well as to the user. Even less elegant works of art or skill that exhibit the progress of the maker are satisfying, regardless of the uses to which they may be put or the audiences they may please. A child may well take satisfaction in playing her recital piece well, even if she isn't ready for a Carnegie Hall debut.

These are the three excellences to be developed in fulfilling the potential of human beings: first, moral training to develop the potential to be good members of society: second, theoretical study to develop the rational capacity; and, third, technical practice to enhance the productive capacity of human beings. Education of the moral capacity starts immediately at birth as habituation and culminates when the individual's potential to fulfill his or her role in society responsibly is developed as well as might be. Education of the rational capacity encompasses all the subject matter of the liberal arts and sciences, crowned by philosophy, the practice of formal abstract thinking, as the coordinator of the disciplines. Practical skill applies the theoretical conclusions of the arts and sciences to enhancing and improving human life, while technical skill produces the goods and services useful in this endeavor. In Aristotle's teleological view, practice of these excellences constitutes happiness, which is activity of the soul in accordance with the intellectual and moral virtues that humans are capable of perfecting.[6]

Kant transforms Aristotle's final cause into a transcendental ideal. Fulfilling human potential is open-ended, although it is not merely a romantic whimsy. An ideal is something at which we aim as a goal, even if we cannot fully finish its accomplishment. Such an ideal would result from practicing Kant's categorical imperative, which demands that we always treat other people as ends in themselves and never as a means to our end, that we always act under a maxim that we would be willing to universalize, and that we act as members of a global community. Kant's universal ethic accords to all people the right to fulfill their potential to the highest degree pos-

sible, which entails recognizing their autonomy. In its most inclusive and general form, the ideal is to allow all human beings to fulfill their potential for excellence in practical, theoretical, and productive knowledge under their autonomous control. Kant's addition of autonomy as an educational goal introduces a new element to appropriate educational practice based on Aristotle's formula.

Human potential varies. Since the end of education is to fulfill the potential of each individual, whatever that may be, success is to be measured by the degree to which a person's accomplishments come close to that fulfillment, not by an external criterion which measures their accomplishments against those of another person, or some arbitrary standard. The standard is an ideal which sets a goal challenging whatever has been accomplished. Instead of classifying children by abilities (or disabilities), we should use categorical identification systems only to place children in programs designed to help them fulfill their potential.

Moral excellence, Kant adds, includes the exercise of autonomy as a necessary component of a full human life. Therefore to reach their full potential, people must become autonomous adults. The ideal must aim towards students becoming responsible for their own definition of themselves by the time they are adults. Such a view of the ends of education is consistent with an ideal that democracy is the best form of government. Thus we must add to the Aristotelian ends of education Kant's condition that autonomy be practiced. The final cause of moral education is to allow human beings to become autonomous as well as fulfilled.[7]

As Dewey points out, children also need to learn to value their own social effectiveness. What they do as individuals matters, but it also matters to their social group, since people are social. Dewey claims that all education is, at basis, education in ethics, since all activity is undertaken in relation to others.[8] This lesson can be promoted in education at all levels. Students need to respect each other and teachers need to respect students as members of a learning com-

munity who know what is effective in their own learning process. Although the teacher possesses the technical knowledge of what and how to teach, nevertheless, good teachers seek feedback from their students, who alone can reveal whether they have understood the lesson. Many abuses in both education and society in general would be reformed by a proper perception that people ought to be autonomous, accompanied by educative practices that foster autonomy.

Although Aristotle thinks that human beings are most fully human when reason rules over the passions, since Freud, we often attribute to the passions a power to rule over reason. Yet Aristotle asserts that the reason ought to govern the passions. We admit that sometimes instinctual or passionate behavior takes over, but we also agree that in many situations Aristotle is right. He thinks rational individuals ought to govern their behavior by right rule, which results in continent people, people who can rationally choose to do the right thing. However, Aristotle thinks it is more reliable if people choose to be moral by preference, which he believes is established by habituation early in life. His moral education inculcates moral virtue through training children in good habits, offering them the opportunity to practice in living by the rule of moderation. Although we now recognize that passions run deep, we would do well to clarify what role reason does play in moral education. Kant, on the other hand, thinks that morality is rational. Autonomy, which is understood intellectually, is the basis of morality and ethical behavior results from following a rule, the categorical imperative. He does not suppose that training plays a large role, and the perfectly moral person is the one whose intention, or will, is to do the right thing, regardless of what he or she desires to do.

Even though theoretical knowledge alone does not instill moderation, there are both practical and theoretical components of morality. Younger children cannot reason sufficiently yet, which is why Aristotle thinks moral education begins by establishing a disposition to act by habituation or training. Since such dispositions form in very young children, it is crucial that education begin early. Reformers

who would like to reduce random violence in the schools while increasing principled, autonomous behavior among the youth must begin their reforms at the level of day care and early childhood education, in fact, even in the home, where all teaching begins. Later, educators must increase opportunities for students to act autonomously as they become capable of using reason to foresee the consequences of their actions. As students advance in their cognitive capacity, they become better at deliberating about the consequences of their actions and can be allowed more power to control them.

Aristotle's distinction between the productive and theoretical uses of reason neglects the complexity of modern technology, which requires correspondingly complex theoretical knowledge. Intellectual virtue is not only exemplified in the contemplative life which Aristotle envisioned as the highest, but also in complex productive activity. Consequently, since theory and technology are interlinked, Aristotle's view is superseded by the idea that technical skills are also worthy. Dewey's pragmatism, which links theory and practice, provides the corrective for Aristotle's scorn of manual arts.

We also need people skilled in technology, in both the fine and the useful arts. Art is better when it produces insight into the human condition. We criticize artists whose technical capacity is flawless but who have nothing to say, that is, whose art is not expressive of human meaning. Many other technical excellences include theory and practice as well. Even where there is a large component of manual dexterity, trades still produce valuable goods and services. These need not be relegated to a lower status. Humans, distinguished by their tool-making ability, ought to have the highest regard for people who are able to make and to manipulate tools as well as for those who know what underlies the use or manufacture of tools. Tools must be put to good uses, which involves moral virtue. Technical excellence therefore ought to be considered among the excellences that humans can cultivate to fulfill their potential. Human excellence can be theoretical, moral, or technical, and inevitably combines all three excellences to some degree.

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In addition, people need to understand technology because it has a tremendous impact on human life. Humans produce technologies, and humans control them. The responsibility to make technology serve good purposes is incumbent on all people everywhere; technological knowledge is a part of having that ability. We cannot simply do away with technology, but we can have it serve good purposes, including preserving the ecological balance in the natural world so that our grandchildren can know what a frog is.

Finally, Dewey's contribution to the ends of education requires that all people be treated equally as members of a global society regardless of their gender, class, race, or nationality. In other words, respect is accorded to those who fulfill their potential in intellectual, moral, and productive capacities, not to those who belong to a certain group by chance. The end of education is global. This is the only way to overcome the provincialism implicit in the practices of groups who think it is morally acceptable to help their friends and hurt their enemies. Clearly, in a world where one people slaughter another because they are different culturally, where many cultures are repressive towards people because they are women, where racial prejudice creates differentials in such basic factors as infant mortality and average salary, we have not eliminated bias based on group membership. This goal, however, is already implicit in the formulation of the end that all human beings be educated to fulfill their potential. The end of education implies that people will be members of a global *polis*[9] whose relations will be reciprocal and who act autonomously as members of a kingdom of ends.[10]

The Four Causes in Educational Reforms

It seems to me that there are two kinds of mistakes that educational reformers can make concerning the ends of education. One is to fail to formulate the proper ends for education. The other is to neglect final cause in favor of material, efficient, or formal causes. Reforms in materials, methods, or curriculum should not be implemented for their own sake, but only because they are conductive to

some end. When educational reformers lack a clear view of what they are trying to accomplish, whether the ends suggested by Aristotle and expanded by Kant and Dewey that I have outlined above, or some other set of ends, they may fail because they lack the vision that could inspire as well as inform practice. Reform that focuses on subsidiary causes without considering purpose can easily go astray. Public education in the United States is concerned to implement lasting reform that brings improvement in its train. Despite this concern, reform movements, from Conant's of the nineteen fifties to Madeline Hunter's of the nineteen eighties, have been short-lived. Flourishing at teacher in-service workshops for a few years, they vanish, to be replaced by a new fad. A general understanding of how these fail to incorporate the ends of education may help to understand and remedy the cyclic nature of educational reform in the public schools.

An example which is pervasive in American education is Behaviorism. Because behaviorism is a technology, a way of eliciting desired behaviors, it is unconcerned with final cause, why we should educate people. Behaviorism subordinates other causes to efficient cause; it is a methodology, a technology of behavior. As a technology, behaviorism provides a means of eliciting whatever behaviors someone might specify. All learning follows the stimulus-response model. Positive reinforcement increases desired behaviors; negative reinforcement decreases or extinguishes undesired behaviors. Teachers arrange contingencies and schedule reinforcements, but the purpose for which they implement these strategies lies outside the system. Since any reinforcer which increases the likelihood of the action's being repeated is as effective as any other reinforcer that has the same results, it doesn't make sense to distinguish kinds of positive reinforcers. If students like the consequences of the action, they repeat it. Although behaviorism shares the Epicurean acknowledgement that pleasure motivates people, a Skinnerian has no philosophical grounds for choosing katastematic over kinetic pleasure.[11]

In the Skinnerian model, all learning is the same: pigeons learn by positive reinforcement, as do children and adults. Benjamin

Bloom's book *Human Characteristics and School Learning* provides a good example of the implications of this for educational practice. Since he assumes that everyone learns in the same way, Bloom concludes that educational differential comes about from different rates of learning. His concept of mastery learning would allow each student to proceed at his or her own pace through packets of materials that teach the same contents, in the same way. If students did not master the material the first time, they would be redirected by the packet to a second presentation. Eventually everyone would learn the same material, only it would take longer for some than others.[12] This approach reduces the complexity of teaching to one model, and proposes one solution, based on a methodology of teaching. The method itself ignores the social aspects of learning. It solves the problem of prejudice based on educational differential, but at the cost of failing to acknowledge real differences and oversimplifying the complexities of what is essentially a social task: teaching and learning.

Another difficulty with Skinner's model, since behavior modification is essentially manipulative, is that it cannot provide an adequate account of autonomy. Intermittent reinforcement works best on more cognitively advanced subjects. However, it is impossible to reinforce oneself sporadically. A subject cannot manipulate him or herself, just as a person cannot play a competitive game of chess with him or herself, or fool him or herself. This makes the model inappropriate for any learning that is self-directed.

Another problem with the influence of behaviorism on education is the concomitant strategy of writing measurable goals and objectives. Formulating goals and objectives that are measurable results in limiting the kinds of goals that teachers can write. For instance, since appreciation is hard to measure, a goal stating that students will appreciate literature is unacceptable. Being measurable comes to mean being easily tested and recorded; the behavior to be elicited must be observable, which is often taken in a naive, literal sense. Being observable turns out to mean being quantifiable, in practice. Since what constitutes accomplishment of the objective must be

specified beforehand in the individualized educational plan commonly used in special education, the standard of measurement is preselected, but may turn out to be inappropriate. This encourages teachers to substitute some easily recorded, measurable, specific goal for one which may be more significant but harder to document. The kind of global goals that could be visionary are not amenable to this treatment. Socrates pursues a transcendent goal – knowledge of the Form of the Forms. Such knowledge may be unreachable, but how will he know if it is, unless he tries to reach it? Behaviorism ignores final cause, which can distort practice.

In American education, another pervasive way of talking about reform is very like the Sophists of antiquity. Periodically, government reports warn us that our public schools lag behind those of our rivals: the Soviets during the post-Sputnik era of reform, the Japanese or the Germans now. We are encouraged to want the goals of the Sophists: power, fame, and riches, or worldly success in general. Success in the marketplace is taken to mark educational success. The rhetoric proclaims that we must be competitive so that we can occupy first place among the nations. Schools must improve so that we can keep our competitive edge, which means we must dominate world markets. If riches are our goal, and we judge merit by wealth, then we won't care how we get it. The idea is to wield power, not to govern wisely; to look good, not to be good; to make money, not to create value. This view of education makes the simple mistake of wrongly identifying the final cause of education as power, wealth, or fame. But power is only desirable if it is used for good purposes, wealth is only good when it is properly distributed, and fame should come to the wise rather than the notorious. Students should want to become politicians to be statesmen and stateswomen, doctors to heal the sick, or lawyers to bring justice to the downtrodden. Instead, the reason they give is that they want to be powerful, rich, or famous. These cannot be universal goals of education, since someone must be richer or more powerful than someone else to be successful in these competitive terms. We all chuckle when we hear Garrison Keeler's joke about the children of Lake Woebegone, who are "all above average,"

but, as Jonathan Kozol points out, having one group of children be above average requires that another group somewhere else be below average.[13]

Contrary to the rhetoric of the government reports, schools in poor neighborhoods continue to get worse while rich schools improve, according to Kozol.[14] Marxist theorists Gintes and Bowles analyzed the actual correlation between years of schooling and socioeconomic status, finding that all the rhetoric about equal opportunity seems to be mostly that: rhetoric. Years of schooling and school success are found to have significantly less value in predicting adult socioeconomic status than the socioeconomic status of one's birth.[15] Given this reality, some critics have become cynical about intentions to reform. For instance, Ira Shor, in Critical Teaching and Everyday Life, argues that the junior college system was designed to provide "custodial care" for the unemployed workers that Marx called the industrial reserve army. He even accuses the builders of the junior college system of creating parasitic institutions to stimulate the economy artificially by spending money on supplies.[16] Others, critics of repressive regimes such as Paolo Freire, offer similar accounts of the oppression imposed by education.[17] Economic success for a few is inconsistent with the universal scope of the ends of education. Fulfillment of the potential of all members of a global society is inconsistent with rhetoric about any particular nation or group being first.

The free school movement, current in the sixties and seventies, proposed radically changing the structure of schools to allow development of the creative powers of the child. Theorists of this movement believed Piagetian child psychology to recommend educational practices that allow the child to blossom by a process of natural maturation. Their belief in the desirability of natural maturation as opposed to any system that encouraged the child to follow the direction of another led them to establish schools with very little structure. Their guiding axiom is to leave children alone and they will develop in a better way because it will be natural. David Elkind criticizes the

pushing of our youth by a culture that forces children into adult modes and adult activities much too soon in his book,*The Hurried Child*.[18] The happiness of the child is paramount to A.S.Neill, whose school, described in *Summerhill,*[19] served as a paradigm for freeschoolers. Although freeschoolers may take the theory of inherent patterns of development too far, their model is the essentially humane model of Rousseau's *Emile*.[20] Their mistake is twofold: first, mistaking a natural process of growth for the end of a purposeful endeavor, and secondly, reforming the structure of the school, rather than the goals or purpose.

The deschoolers of the early seventies carry this further, proposing that "school is dead." Ivan Illich and Everett Riemer's solution to the problems of repressive schools is to abolish school as we know it and start again with a system of informal educational networks.[21] Although the movement offered trenchant criticism of the system, its genesis is reactive. The essence of its vision is derived from what is wrong with the standard educational model. Although there are valuable aspects of the deschoolers' reactions, they depend on the existence of the wrong thing to which they are responding, rather than a positive vision of what we ought to aim for instead. We need to tear down useless old structures, but also must build up viable new ones to replace them.

Humanistic education is a kind of reform movement. Writers like James Herndon,[22] John Holt,[23] Ken McCrorie[24] and Jonathan Kozol[25] engage in an essentially romantic rebellion against the Sophistic view. These writers describe poor facilities, inhumane conditions, and heroic efforts of some students and teachers to overcome them. This approach is idiosyncratic. Its accounts are narratives of the author's (or someone's) personal experiences in a particularly bad school. Reform depends on an heroic individual willing to do battle against terrible odds. This doesn't reform the system, just that person's classroom, temporarily. Such writers may well be sympathetic with the ends of education identified here, but they focus on efficient cause, thinking charismatic leaders will reform education. Although, again, we certainly need leadership, we also need a sense of purpose. Reform is harder to institute widely and permanently when

it depends on someone's personality as efficient cause. Dedicated teachers have a tremendous impact, but they cannot reform education single-handedly.

Another kind of mistaken focus takes content to be the end of education, sometimes a very specific content. E.D. Hirsch's massive list, in his best-selling book on cultural literacy, is subtitled: What Every American Needs to Know.[26] This wrongly identifies content as the final cause of education. Published in response to public demand, his companion volume, The Dictionary of Cultural Literacy,[27] compounded the error by undertaking to identify the items on the list in definitions two or three sentences long. More recently, a new series lists what your child should know grade by grade.

Hirsch's epistemology informs his idea of listing.[28] He proposes that we need to learn parts of everything so that we can recognize that part when we meet it in a larger context later. Hence, it is valuable to teach little children the names of the characters in Shakespeare's plays so they will recognize them when they read Hamlet when they are in high school. His view is formulated from a theory of perception; it is a variety of the perception-is-knowledge type of epistemology which Plato criticizes in the *Theatetus*. An epistemology based on appearances cannot account for how we know that what we perceive is what it appears to be. Hirsch's epistemology fails to address how we know the discrete parts of anything in the first place.

The mistaken focus on content seems to be a phenomenon of the conservatism of the nineteen eighties and nineties. Allan Bloom, in The Closing of the American Mind: How Higher Education has Failed Democracy and Impoverished the Souls of Today's Students,[29] asserts that diluting the standard classical curriculum with "relevant" authors, including black, female, and third world writers, has resulted in a generally lower level of education among undergraduates at the elite universities.[30] Bloom concentrates on particular ideas that he wants to teach, not the skill of analyzing a text. However, history

teaches us that ideas change. Although some authors may have had much influence, it is absurd to suppose that a certain body of knowledge constitutes an education. Presumably one could finish mastering it and be done. On the other hand, if students learn to figure out what the philosophical assumptions of influential authors are, then they will be in a position to assess what they think of anyone's presuppositions. They will also have a clearer idea of how philosophical positions have affected society. Development of such skills does not require reading a particular set of authors.

Many discussions about reading the so-called "canonical" authors have resulted from the idea that education constitutes mastering a certain content. Some people contend that there is not enough time to sacrifice the classic texts that everyone ought to read for some lesser works just because they are "politically correct." Each age sees what it wants to see; our revisions of the canon are a necessary part of this reinterpretation. History is *our* view of the past. It cannot be the past itself. As Kant tells us, we always see things as we see them, never as they are in themselves.

Another mistake takes mastery of content for what is interesting or useful about that content. Being able to regurgitate some assignment differs from truly understanding the material. Not only is it silly to merely repeat everything some person said as the only possible source of truth, it is also harmful because it perpetuates any errors there might be. This happened to Aristotle in the middle ages. We can also go wrong the other way, and abandon what is good in an author because there are some things we disagree with, which happened to Aristotle in the late nineteenth and early twentieth centuries. However, it would be better to retain what is useful or applicable and discard what is not. Human knowledge accumulates gradually by sorting out ideas. The continuity of human thought is much too valuable to theorize anew each generation. But it is also important to be able to recognize what needs changing and be able to change it. Change for the sake of innovation is as absurd as conservatism for

the sake of tradition.

Postmodernism takes cultural diversity to override the commonalities of culture, making a universal ethic like Kant's categorical imperative seem arrogant at best, impossible at worst. But the point of Kant's ethical principle is that it is applicable globally. His third formulation of the categorical imperative requires that we always act as if we were members of a kingdom of ends. This would certainly include respecting other people's cultural traditions. *Perpetual Peace* shows how thoroughly Kant believed this; if everyone followed the categorical imperative, there would be no need for war, since the only justified wars are wars of self-defense, and no one would attack if all nations acted morally.

Cultural diversity can coexist with Kant's universal morality, however, in the conventions of any society which differ but are not contrary to the universal ethic. Ethnic practices exemplify conventions consistent with a universal ethic. Cuisine, music, costumes, language, folk art, and various kinds of manners and practices are matters of convention, worthy of respect as long as they are not demeaning to anyone, members of the group or otherwise. Aquinas has a nice way to discuss this issue; he says that human law must accord with the divine law, but can regulate human actions in ways not contrary to divine law. Multicultural takes national cultural practices to be more important than what is common to human societies. Although this may seem to be the way to correct a rampant nationalism that disregards the importance of cultural differences, and even seeks to obliterate other cultures because of their supposed inferiority, there is plenty of scope for a celebration of difference. The conventions people choose to practice are a matter of their preferences. Richard Rhoads formulates a similar idea in the conclusion of his book,*The Making of the Atomic Bomb*. Rhoads recommends a strong United Nations but suggests relegating the idea of nationality to something like national theme parks.[31] Nationalism is deeply ingrained in human beings, or else we wouldn't have as many troubles over this issue as we perennially have. But nationalism, rightly interpreted, is

also consistent with a universal principle of morality by which people can agree upon what is right. I maintain the ends of education are universal, consistent with a universal morality, and allowing scope for cultural diversity. Mistaking promotion of nationalistic purposes for the ends of education makes a global view impossible.

Another mistake occurs when the formal organization of education takes precedence over the accomplishment of the ends of education. Thinking that reform lies in changing the schedule of a school without examining what is accomplished by the changes is fruitless. Unless schedule changes serve the ends of education, they are merely formal. We don't rearrange how students spend their time for the sake of a schedule change alone. Students need the chance to practice autonomy, but most schools are organized with few opportunities. A schedule that allowed students more chances to practice autonomy would promote the ends of education. Curriculum is important in so far as it allows students to acquire the theoretical and technical knowledge they need to practice excellence. But they need the chance to develop into autonomous human beings, too.

Another formal aspect of education,grading, presents additional problems. Grades are often mistaken for final cause; yet, at best, all they can do is measure accomplishment of school tasks that relate to final cause in various ways. Grades also serve as motivation, an aspect of efficient cause. Distinction between grades as a measure of achievement and as motivation may help. Grades that measure achievement by a criterion-referenced standard, provided the standard is properly set, provide a measure of the level of mastery of a subject by different people. Grades which measure achievement by a norm-referenced standard merely rank students according to how they did on a particular measure in reference to a particular group of people at a particular time. Grades of this sort are affected by the composition of the particular group, the appropriateness of the task, whether the teacher succeeded in teaching the subject matter, the difficulty of the test, and the time it took the student to accomplish the tasks set by the test. On the other hand, curriculum-based assessment measures

student progress against a professional projection of a satisfactory rate of advance for that student. A portfolio contains a cumulative record of a student's best work. Grading is an aspect of formal cause which should foster the ends of education we hope to achieve, but it is not an end in itself.

Other recent reform movements have concentrated on teaching methods. Madeline Hunter's teacher effectiveness training is an example which was popular in the public schools in the nineteen eighties. Hunter rightly advises that teachers need to seek formative feedback, as well as give it to students. She has devised useful stratagems like signaling, which insure that teachers will immediately address the failure of students to get a point, instead of waiting until they fail a test. She faces the issue of teaching all the students in a class, instead of counting it a success if some understand what is being taught. However, Hunter does not address more than her claims cover — teacher effectiveness. She does not analyze student effectiveness, so to speak, nor the appropriateness of the content, nor the goals. But clearly final cause is more important; people have to know where they are going before they can decide how to get there.

Hunter does not suggest that her method is the only theory relevant to education, but over-zealous administrators who like the simple clarity of her model use lists of "Hunter's behaviors" to be exhibited by teachers as an evaluation instrument. This changes the model from a useful one that addresses a part of the efficient cause of education to a merely formal model which may or may not address the issue of effectiveness. a similar mistake consists of using lists of "Bloom's verbs"[32] to judge what level of knowledge a teacher is addressing when she writes objectives containing verbs. This reduces what might be a useful analytical tool to a mindless exercise in formality. The effective schools movement is subject to a similar error. Administrators may focus on the appearance of success, aiming to reproduce the statistics of schools judged to be effective on some external criterion like test scores, drop out rates, or placement results, which do not, by themselves, indicate real success. When gov-

ernment officials report that our schools are failing, based on comparing scores on standardized examinations with other countries, they make a similar mistake.

Even well-intentioned reforms like inclusion can lead us away from what we want to accomplish if they become the end rather than the means of achieving the end. Inclusion, properly implemented, would undoubtedly contribute to fulfilling the potential of many special education students. But when inclusion is implemented merely by placing those students in a regular classroom without the support services needed to make it work, it may actually subvert the end and retard the progress of those it is intended to help. We need to formulate ways of implementing inclusion that are actually based on assessing whether or not the method chosen contributes to the goal. This will require thoughtful restructuring of the present system.[33]

A new fad of the nineteen-nineties is "outcomes-based education." This requires that a teacher do what good teachers have always done: figure out what the students should learn, teach it to them, and evaluate whether they learned it. The problem is that listing the outcomes often goes astray. Sometimes, outcomes are listed as course content. There is nothing wrong with listing content, but that is material cause, not final cause. If we are going to talk about curriculum, we ought to be clear that curriculum is content and content is not purpose. Other planned "outcomes" make other mistakes. In planning the district outcomes, schools address global goals. One example states: "We will successfully teach all students."[34] The emptiness of this utterance should be apparent. The intentions are good, but formulating such a claim is absurd. It does nothing towards accomplishing such a goal, and indeed, may disguise a deceptively thin program.

A transcendental ideal is not a statement about future facts. Such a statement can only be a guess, at best. We can't claim empirical knowledge about the future. Hume points out to us, we can only assume that the future will be like the past. A transcendental ideal is an

ideal towards which to strive. Unfortunately the whole outcomes-based idea mistakenly encourages teachers to think in terms of future facts instead of striving toward ends. "Outcomes-based education" is especially damaging when the real threat is this: if students don't accomplish the outcome, they must repeat the process until they do (which, by the way, ignores the question of whether the process is appropriate). The result of this implicit threat is to set the expectations low, so as to be assured of "success," especially where no additional time is allotted to already overworked teachers to carry out additional work. The temptation is to design easy examinations if the teacher has to reteach the material and re-administer the examination until everyone passes. "Outcomes-based education" is right in its intention to offer every student the chance to accomplish certain goals, but this is only successful if the outcomes are rightly determined and the conditions needed to carry them out provided. Again, if guidance from final cause is missing, concentration on instrumentalities may go astray.

In the first part of this paper, I have suggested what sorts of things we could say about the final cause of education, building on Aristotle's formulation, adding autonomy from the work of Kant, and extending these ends to a global society as Dewey insists. We may want to reformulate these ends, adding goals relating to emotional maturity or spiritual development. Whether we are satisfied with what I have developed or not, we ought to formulate the ends for which we engage in the purposeful venture of educating our youth. I think the final cause of education ought to be stated as a transcendental ideal. The formulation I have suggested is that education should actualize the potential of all people in the practical, theoretical, and technological spheres, including recognition of the autonomy of citizens in a global society.

In the second part of this paper, I have examined various reform movements which pass through our public schools every few years. I have tried to suggest that their cyclic nature may result from addressing only some part of the causes of education, the formal cause,

the efficient cause, or the material cause, or parts thereof, while failing to address final cause adequately. Clearly final cause determines the others. We must know why we are doing something before we can ascertain in what order, by what method, and with what materials we should pursue our purpose. My hope is that this analysis, brief though it be, will provide a framework by which to analyze educational change with a view to developing lasting and cumulative reforms in American public education.

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ENDNOTES

1. Henry George Liddell and Robert Scott, eds., A Greek-English Lexicon, A New Edition revised and augmented by Henry Stuart Jones, 9th edition (Oxford: the Clarendon Press,1940) 1460.
2. Liddell and Scott, 796-797.
3. Aristotle uses the generic term, ανθροπος (*anthropos*), meaning mankind rather than the gender specific term, αυῆρ (*aner*), meaning man. Aristotle, Metaphysics, Book I, Chapter 1, in McKeon, 243 [980a, 20-25].
4. Liddell and Scott, 1784-1785.
5. Howard Gardner's theory specifies these different capacities as occurring in seven (or more) domains: verbal/linguistic, mathematical/logical, visual/spatial, inter personal , intra personal, body/kinesthetic, and musical/rhythmic. Howard Gardner, Frames of Mind: (A Theory of Multiple Intelligences New York: Basic Books, 1983).
6. Aristotle, The Nichomachean Ethics, Book I, Chapter 9, Jonathan Barnes, ed., The Complete Works of Aristotle (Princeton, Bollingen Series LXXI, 1984 [1099b8-1100a9] 1737-1738.
7. See my paper, "Fostering Autonomy," forthcoming in Educational Theory, for implications of Kant's categorical imperative for education.
8. John Dewey, "The Ethical Principles Underlying Education" in Reginald D. Archambault, ed., John Dewey on Education: Selected Writings (The University of Chicago Press:Chicago, 1964) 108-109.
9. This concept is reflected in the title of Toulmin's book on modernity and post-modernism: Stephen Toulmin, Cosmopolis: The Hidden Agenda of Modernity (Chicago: The University of Chicago Press, 1990).

10. This wording corresponds to the third formulation of Kant's Categorical Imperative: "Act so that you treat humanity, whether in your own person or in that of another, always as an end and never as a means only." Kant, Foundations, 47.
11. According to Epicurus, katastematic pleasure results from enjoyment of a stable state of being such as health. Kinetic pleasures are fleeting, often bringing pain in their aftermath, such as the "pleasure" of drinking alcohol and the consequent hangover.
12. Benjamin Bloom, Human Characteristics and School Learning (New York: McGraw Hill, 1976.)
13. Jonathan Kozol, Savage Inequalities: Children in America's Schools (New York: Crown Publishers, 1991).
14. The whole of Savage Inequalities documents Kozol's claims, which are summarized in his introduction,1-6, and documented in statistical tables, 236-237.
15. Samuel Bowles and Herbert Gintes, Schooling in Capitalist America: Educational Reform and the Contradictions of Economic Life (New York: Basic Books, Inc., 1976) 11-17.
16. Ira Shor, Critical Teaching and Everyday Life (Chicago and London: The University of Chicago Press, 1980 and 1987) 8 and 5.
17. Paulo Freire, Pedagogy of the Oppressed (New York: The Seabury Press,1968. Freire makes this point, in particular, in Chapter One, 19-56.
18. David Elkind, The Hurried Child : Growing Up Too Fast, Too Soon (Redding, Massachusetts: Addison-Wesley Publishing Company, Inc., 1988).
19. A.S.Neill,Summerhill: A Radical Approach to Child Rearing (New York: Hart Publishing Company, 1960).
20. This comment, of course, refers to the sections of Emile about rearing boys, not to the education of Sophie. Jean Jacques Rousseau, Emile, Barbara Foxley, trans. (London: J.M. Dent & Sons Ltd., and New York: E.P. Dutton & Co., Inc.,1957).
21. Everett Reimer, School Is Dead: Alternatives in Education (New York: Doubleday and Company, 1972), and Ivan Illich, Deschooling Society (New York, Evanston, San Francisco, and London: Harper and Row, 1970, 1971).
22. James Herndon, How To Survive in your Native Land (New York: Bantam Books, 1972).
23. John Holt, Escape From Childhood (New York, Ballantine Books, 1974).

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24. Ken Macrorie, Uptaught (New York: Hayden Book Company,1970).
25. Jonathan Kozol, On Being a Teacher (New York: Continuum, 1981).
26. E.D. Hirsch, Jr., Cultural Literacy: What Every American Needs To Know (Boston: Houghton Mifflin Company, 1987)
27. E.D. Hirsch, Jr., Joseph Kett, and James Trefill, The Dictionary of Cultural Literacy (Boston: Houghton Mifflin, 1988).
28. Hirsch, Cultural Literacy, 48-56.
29. Allan Bloom, The Closing of the American Mind: How Higher Education Has failed Democracy and Impoverished the Souls of Today's Students (New York: Simon and Schuster,1987).
30. This is the thesis of the whole book, but can be found stated generally in the opening sections.Bloom, 47-61.
31. I heard Rhoads expound on this idea is a public lecture in 1986 or 1987. It is also implicit in the last chapter of his book. Richard Rhoads, The Making of the Atomic Bomb (New York: Simon and Schuster:1986) 778-788.
32. These are lists of verbs to be used in writing short term objectives on Individualized Educational Plans, or outcomes in outcomes-based plans, that are supposed to indicate the level of thinking skills addressed by Bloom's taxonomy of educational objectives.
33. Jim Black, Systems Change Project, Syracuse University, "An Outline of a Process for Restructuring Service Delivery Models for Inclusion in New York State" (draft presented at The Council for Exceptional Children Conference: "School Reform: Rethinking Education as We Know It" (Geneseo, New York, April 1, 1995).
34. Lawrence, Kansas, USD 497 Mission Statement inscribed on all public relations materials and stationary issued in 1992-1993.

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