EXCELLENCE AS A GUIDE TO EDUCATIONAL CONVERSATION

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Educational policy today is often influenced, if not actually guided, by political slogans that one finds hard to reject. "All children can learn," "Everybody counts!" and "We're No. 1!" or its variants are heard regularly. I will attack the slogan, "All children can learn," and I'll also try to promote excellence as a concept far richer than equality or competitiveness for educational thought. But my main purpose is to explore the possibility of expanding educational vocabularies and resisting the power of literal vocabularies that threaten to neutralize arguments for significant educational change.[1]

I. Setting the Agenda

When people use the slogan, "All children can learn," what exactly do they mean? Many probably mean that children of all minority and oppressed groups can learn as well as those of the privileged and dominant classes. Used this way, the slogan is a reminder to treat all students with respect and to promote their growth equally.

Equality is the motivating concept here. Indeed the slogan often arises in direct response to suggestions that cultural and individual diversity require diverse educational offerings and standards. When such an argument was made at a meeting of the National Council on Education Standards and Testing, Mary Bicouvaris, a National Teacher of the Year award winner, objected passionately, "All students can learn!" She insisted that all need a common body of knowledge.[2] However, one might argue for a core of common knowledge complemented by an array of alternatives for diverse populations or for individual children. Her resistance to diverse curricula suggests that Bicouvaris, like Mortimer Adler and his associates, wants a common curriculum without the substantial differences found in the usual categories — college prep, commercial, vocational, etc. If this is so, it would not be a misreading of the slogan to translate it as, "All children can learn algebra and geometry."

In fairness, we have to remember that this still means, "The same proportion of students in all racial, ethnic, economic, and gender groups can learn algebra and geometry." No one suggests taking this as an empirical question (except, interestingly, the gender aspect). What is called for is not investigation but political action. The slogan is an assumption that demands fulfillment in actual school results. The only way to accomplish the prescribed result is to enroll all students in algebra and geometry (to "give them a chance"). Thus the slogan entails something like, "Children of all (relevantly defined) groups can learn algebra and geometry, and therefore all children must be given an opportunity to do so."

Having so far treated the slogan with the respect due its speakers, I am at the brink of the first vocabulary trap (at least, it is the first I've recognized). I now seem committed to an analysis of what constitutes an opportunity to learn. But, instead of following that line, I

want to express my first objection to the slogan as a challenge to its underlying motive. Because *excellence* is so often posited in opposition to *equality*, I'd like to start with an exploration of excellence, and see whether I can develop something that will satisfy those who would start with equality.

II. Excellence

Before starting an analysis of what we might mean by excellence and how consideration of excellence might profitably guide educational conversation, I want to make clear that I will not work from a supposition that *excellence*, or any other word, has a fixed meaning. I agree with Rorty and others of postmodern inclination that we should seek new vocabularies and new meanings for old vocabularies.[3] Clearly I cannot mean just anything by *excellence*. But, although it has a limited range of meaning, it can vary greatly within that range. Hence I will talk about what we *might* mean or *should* mean by excellence, and my analysis will be affected by other values I hold and perspectives I choose to take.

Consider first John Gardner's influential *Excellence*.[4] In the revised edition, Gardner retains his emphasis on excellence at every level of society, but he softens his earlier remarks on the appropriate goals of precollegiate education. Although he no longer emphasizes his earlier contention that the schools can only promote academic excellence, he does not really retreat from that position. He wants a far greater range of postsecondary education than we have now, and he wants resources to be available for students who choose to continue their educations in noncollege settings, but he has not suggested equivalent changes in secondary education. Taking the perspective of a parent whose children differ greatly in their talents and interests, I agree with Gardner that an excellent system of higher education must provide for all, or nearly all, those students who can profit from continued training and who choose to pursue it. From this perspective, a *system* of education would fall short of excellence if it fell short of equity as Tom Green has defined it — if, that is, a substantial number of students were unjustly denied access to studies they wanted and from which they could profit.[5]

An admirable feature of Gardner's view of excellence is its frank acknowledgement of excellence in every acceptable human endeavor. He is quite right, I think, to value an excellent plumber over an incompetent philosopher.[6] It also seems right to connect any discussion of excellence in schools to views of excellence in the larger society. But the way Gardner connects excellence in schools to excellence in the larger society is troubling, and so is his competitive arrangement of excellences.

Children who are successful in precollegiate education — who achieve academic excellence — are prepared *by that very achievement* for further academic excellence and positions of leadership. But children who may someday be excellent tradespeople or artisans are "prepared" for those endeavors by failure in school. Here is what Gardner says:

> Many young people who terminate their education short of college have had unrewarding experiences in the classroom and have a negative attitude toward anything labeled "learning" or "education." Even if they are not bitter about their school experiences, they are likely to feel that, having tried that path and failed, their salvation lies elsewhere. What they must be helped to recognize is that there are many kinds of further learning outside formal high-school and college programs. The fact that they have not succeeded in high school simply means that they must continue their learning in other kinds of situations.[7]

This, to me, is very worrisome. Must our mechanically and artistically talented children suffer twelve or more years of failure or near-failure before they are urged to find "some form" of learning compatible with talents that have so far gone unrecognized? I'm troubled by Gardner's hierarchy of talents. Despite his generous recognition of a full range of talents in society at large, he often refers to *levels*, not kinds, of ability at the precollegiate stage, and this suggests that only one kind of talent is to be uncovered and nurtured by schools. In the first edition of *Excellence* he took this position quite openly. Now, I detect considerable ambivalence. For example, he writes:

> The traditional democratic invitation to individuals to achieve the best that is in them requires that we provide each youngster with the particular kind of education suited to his or her special abilities. That is the only sense in which equality of opportunity can mean anything. The good society is not one that ignores individual differences but one that deals with them wisely and humanely.[8]

But, apparently, students are to be given the particular kinds of education suitable to their special abilities after they have all been given an opportunity — through, say, high school — to excel at the most valued set of talents, the academic. This, then, is one problem we will want to examine in some depth: Should we assess a system of education as excellent if many children who clearly have the potential for excellence in some line are not provided with learning experiences in which that excellence is cultivated? Can a given child be said to have had an excellent education if, despite her reasonable effort, she has failed at it? When we get to that discussion, I am going to argue for diversity in curriculum and for earlier specialization. Almost certainly, such a recommendation would not arise if we started with *equality* as our guiding concept. But I have started with a search for excellence, and I'm unhappy with a system that "prepares" many of its children for future excellence through failure. I would withhold the label "excellent" from any system that operates this way no matter how well its college bound students do.

Next, Gardner states clearly that all young people need "certain basics necessary to their common citizenship," and he recognizes that providing — even identifying these basics — is made harder than ever today "by issues of race, language, and economic deprivation."[9] But suppose we could find a satisfactory way to surmount these difficulties; suppose, that is, we could construct a system of education that prepared all children adequately for democratic citizenship. Should that system receive an excellent rating on common learnings?

I don't think so. Citizenship is not all we have in common as adults. As a woman, I'd like children to be prepared to be competent parents, homemakers, mates, neighbors, and friends. I'd like them to be responsible pet owners (if they own pets), to be considerate and appreciative users of the natural and human-made environments, to be intelligent believers or unbelievers in the spiritual realm. Are these not common human endeavors? Are they not as important as "citizenship"? The concept of citizenship may be open to expansion just as that of excellence is, but I'm avoiding it because of its exclusive association with the public realm, and I want a vocabulary that will include the private. So here is a second area for exploration. Just as an excellent education must provide for the diversity of human talents, so must it provide for those concerns and responsibilities common to most of us. Further, the content of common offerings must be under continuous scrutiny. To be excellent, such a system must also be relatively free of injustices in the form of omission of perspectives that

are important to substantial numbers of people.

Now if we had a system of education that met the two conditions so far identified — adequate provision for both the full range of specialized human talent and matters common to most of us — would that system necessarily be excellent? Suppose someone raises this kind of concern: Students in this system (or school, or class) are engaged in significant common explorations and most seem to be getting rigorous training in their areas of special interest. But many of them seem to be miserable. Shouldn't we want them to be happy in what they're doing? Now I could argue that, if the first two conditions really have been met, students — a few pathological cases excepted — will be happy. But, then, someone will surely point to Beethoven or Mozart to show that one condition — a rigorous specialized education — can be met without attention to the quality of students' present lives. Inevitably, in the traditional pattern, I would have to show that happiness is built into the other condition.

I would rather respond by enthusiastically endorsing the suggestion that the quality of present educational experience is an important aspect of excellence. And what shall we mean by "the quality of present experience"? Again, a whole world of educational conversation opens up. Surely, one of our tasks as philosophers is just this — to open, sustain, and enhance educational conversations.

So far, I have suggested that an excellent school or school system should attend to the quality of life experienced by its students and teachers, that it should provide a means for them to explore matters of interest common to most human beings, and that it should develop the legitimate interests and talents of all its students. These are huge topics, and I certainly cannot treat even one comprehensively here, but I want to illustrate what the conversation might be like if we started this way.

III. The Quality of Present Experience

The slogan, "All children can learn," not only signals a high priority on equality (which I initially rejected in favor of excellence) but, perhaps inadvertently suggests one on learning. Busy explaining why we might give priority to excellence over equality, we may overlook this second difficulty. Is the aim of schooling learning and only learning? Is the proof of our success as educators found, then, in proof of learning? Again the temptation is to respond, "What do you mean by learning?" And then we are off on a discussion of levels and kinds of learning, methods of evaluation, alternative pedagogies, and — wondrous new idea — authentic assessment.

Guided by our concern for excellence, we have identified the quality of present experience as central to our view of education. We can come right out and say, *Wait a minute. Maybe all children can learn; that is, maybe the slogan refers to something sensible and true. But learning is not the only purpose of schooling*. A. S. Neill had the courage to say, "Parents are slow in realizing how unimportant the learning side of school is. Children, like adults, learn what they want to learn."[10] His educational thinking was guided primarily by a concern for mental health, and so he attacked an emphasis that he thought worked mischief on his main goal.

When we say that learning is not the only purpose of schooling, we do not have to invent

activities demonstrably devoid of learning and show that they are somehow valuable. All we have to do is point to activities that we think are worthwhile and that we would continue to promote even if we could not state exactly what children are learning from them. In my first years of teaching, I helped my students put on a Christmas play three years in a row, supervised their operation of a school newspaper, read my favorite stories to them, advised them as they organized socials, and watched in awe as they planned and executed beautiful room-wide murals on butcher paper. Did the kids learn from these activities? I'm sure they did. But they also enjoyed what they were doing, made their environment more beautiful, demonstrated their various talents, shared their knowledge, made things, expressed themselves, entered relationships of friendship and love, and in general grew as competent, caring, loving, and lovable people. Notice how much we can say about the lives and growth of children without using the word learning.

Paying attention to the quality of present experience can lead to a concern for equality. Jonathan Kozol, in *Savage Inequalities*, occasionally mentions differences in learning but concentrates primarily on the horrible conditions many children endure in the name of schooling.[11] One does not have to be deeply concerned about learning to respond passionately to the misery Kozol witnessed: school buildings with leaking roofs, backed-up toilets, freezing or boiling temperatures, peeling paint, boarded windows, filthy floors, poor lighting, dangerous parking lots, murderous neighborhoods…. When one juxtaposes a description of wealthy schools, the differences are dramatic, but an emphasis on equality alone will not get us very far. As Green has pointed out, we could achieve equality by giving everyone miserable facilities. The inequalities made Kozol angry because they are proof that the miserable conditions are an injustice. But his anger was initially aroused by the misery itself — by the poor quality of life in so many of the schools he observed. From a moral perspective, we should not begin by saying, "Children can't learn in such conditions," but rather, "Children should not have to live in such conditions."

The over-emphasis on learning is not just a "natural" outgrowth of our occupational interests as educators. It is a cultural heritage that affects not only the schools but the whole society. We live in a culture that has defined human beings as distinctly rational animals. Miguel de Unamuno commented:

> Man is said to be a reasoning animal. I do not know why he has not been defined as an affective or feeling animal. Perhaps that which differentiates him from other animals is feeling rather than reason. More often I have seen a cat reason than laugh or weep. Perhaps it weeps or laughs inwardly — but then perhaps, also inwardly, the crab resolves equations of the second degree.[12]

How children feel — whether they are happy, engaged, realistically confident, eager for experience — matters. I know that when we talk this way some people are sure to ask how we can measure these things. How will we know if we have succeeded? What proof can we offer? Often the initial response is favorable. Listeners may agree; they may nod approvingly and say that children should, of course, *learn* fine attitudes, self-esteem, altruistic values, and self-understanding. They want to continue the conversation by expanding — perhaps even revolutionizing — the concept of learning. For those of us who want to break out of the old vocabularies, this is a dangerous move, because if we follow the lead on learning, all the measurement questions follow almost naturally.

How do we resist? We might say something like this: If we are succeeding in our efforts to

establish an excellent quality of present experience, people — teachers, students, administrators, parents — should enjoy being in school; there should be fewer incidents of violence and nastiness; there should be more acts of kindness, more expressions of concern for others; more open conversation and fewer acts of control on the part of adults. In general, school will be a more congenial place. But, skeptics insist, how can you prove that something like this is actually happening? Well, we might answer, we can produce figures on attendance, but these might be misleading because in the best of educational settings the kids who have previously stayed away should be showing up more often and the kids who have been ploddingly present should be staying away now and then. This will likely exasperate our critics who might respond that we are evading the question. How *do* we know when we're succeeding at such an enterprise? Pinned to the wall, we might answer: By living with the kids. We have to immerse ourselves in their experience, talk to them, listen to them, advise them, be instructed by them, share their tasks, invite them to share ours, establish ends and means cooperatively, argue endlessly over controversial issues but remain committed to each other's well being.... Oh, God, exclaims our critic, we can't do that! It's too much. You're a raving idealist. Besides, who's to judge? Maybe you'd come out of the experience delighted, and I'd be disgusted. Give me objective measures! The heart sinks. Perhaps my critic and I need different schools for our children, but let's not decide that before trying the shared experience. Maybe we'll both be delighted.

Attention to the quality of life in schools ought not to be paid solely in the name of learning. This is how we lost many of the wonderful practices of open education. Open educators allowed themselves to be sucked into a conversation dominated by learning. Reforms that should have been made for the sake of children's lives were lost because we could not prove they produced learning. But the quality of present life should not be a pre-compensation for a lost future either. Some years ago, Christopher Jencks and his colleagues found that schooling does little to effect equality on the societal level. They concluded that we might as well pay attention, then, to the happiness of students.[13] An excellent system of education will attend to both the quality of present experience and its role in preparing students for a bright future.

What All Children Should Learn

Let's go back to the modification of "All children can learn" which I developed in the first section. This reads, "All children can learn algebra and geometry." Reasonable people who make this claim will, of course, allow qualifications describing the normality and tenacity of the children they have in mind. To avoid attacking a strawperson, we might rewrite the claim, "All normal children who really want to can learn algebra and geometry." Mortimer Adler must have had something like this in mind when he insisted that "there are no unteachable children" and that all children should have exactly the same curriculum through at least twelfth grade.[14]

The temptation, especially for an old math teacher, is to challenge the assertion — to say, in effect, that not all children can learn algebra and geometry in a way that those of us interested in excellence could justifiably call meaningful. But I'll defer this part of my argument for the last section where I'll defend a form of early specialization. By then it should be clear that I do not think that children who are poor at math, who may never — no matter how hard they try — understand algebra and geometry, are in any important sense

handicapped, inferior, or in need of heroic intervention.

If we are interested in the full range of human excellence, the best response to "All children can learn algebra and geometry," is, Why should they? My challenge can be answered politically. I have answered this way myself in the past: They should take algebra and geometry so they can go to college. Notice that I did not say "Learn algebra" but, rather, "take algebra," because I am aware that when I talk this way I am giving a political argument, not an educational one. Why should a student who wants to major in literature, art, drama, law enforcement, history, or social work "learn" algebra and geometry?

Two kinds of answer are familiar. One invokes another slogan, "Everybody Counts," and, indeed, that is the title of an important publication on mathematics education. The authors of this publication insist that practically every occupation today requires mathematics.[15] This would, if true, be a compelling reason to get all children to learn mathematics, but it is not true. Just for the fun of it, I have listed two whole pages of occupations that require no use of mathematics beyond the simplest arithmetic. You could no doubt add to my list. In our society, it is true that virtually everybody needs a fundamental level of mathematical literacy. But algebra and geometry? Thinking about excellence, worrying about excellence in connection with caring, I have come to suspect that teaching everyone algebra and geometry is both wasteful and inconsiderate. The effort required from teachers wastes energy that could be spent on those interested and talented in mathematics. Worse, it wastes a multiplicity of nonmathematical talents that could be nurtured if we were not so insistent on mathematics for everyone. It also frightens people and makes them doubt their own competence. My undergraduate music teacher — a dreadful curmudgeon who distrusted and terrorized all of us who were mathematically inclined — told the story of one enlightened math professor. In her own undergraduate days, she was unable to pass the mathematics requirement of her college. Her exasperated math professor — who happened to be a music lover — made a deal with her. If she gave a superb performance at an upcoming piano recital, he would pass her. Needless to say, all her energy in subsequent weeks went into piano practice. After the performance, her math teacher shook her hand and said, "Congratulations. You have just passed College Algebra." He was a sensible man.

All arbitrary requirements for admission, or promotion, or graduation should be questioned. Consider the case of Henri Poincare, the great French mathematician. If he had not been recognized as a mathematical genius, he would have been refused admission to the Ecole Polytechnique because his score on the drawing test was *zero*, and a zero score on any subtest was eliminatory. While a student at the Polytechnique, "Poincare was distinguished," writes E. T. Bell, "for his brilliance in mathematics, his superb incompetence in all physical exercises, including gymnastics and military drill, and his utter inability to make drawings that resembled anything in heaven or earth."[16] It is also worth noting that, as a mathematician at the height of his powers, he submitted to the new Binet intelligence tests and "made such a disgraceful showing that, had he been judged as a child instead of the famous mathematician he was, he would have been rated — by the tests — as an imbecile."[17]

The point of all this is that we, as educators interested in excellence, should continually ask the question, Why should all children learn X ? We should not let literal (that is dull, familiar) language overpower us.

If it is false that everyone needs mathematics for occupational success, what about the other familiar reason — that all students need a core of common topics to prepare them for citizenship. Both Gardner and Adler stress citizenship in their arguments for a common core in education. To say that all students must somehow be prepared for the privileges and responsibilities of democratic citizenship seems right, but what role does mathematics play in this?

We would do better to ask more probing questions. What, besides citizenship, will all or most of our students engage in as adults? Most will be parents. Should we not teach them something about parenthood? Most have the capacity to love other human beings. Should we not teach them about love? All will make some sort of home. Why do we not teach them something about homemaking?

There is nothing inherently anti-intellectual about these topics. The topic of homemaking, for example, can include economics, art, nutrition, geography, history, technology, and literature. It can be multicultural. Perhaps, most wonderful of all, it can be philosophical. What does it mean to "make a home"? Must a home's occupants be members of a nuclear family? Why is a "home for the aged" not considered a home by many of its occupants? Why is a nation sometimes referred to as a homeland, and how does love for a homeland sometimes induce disagreements and war? Why is exile such a terrible punishment? By emphasizing the intellectual here I do not mean to denigrate the practical, but note that I may have fallen into a language trap I could have avoided. We should teach homemaking in such a way that students become competent homemakers and also so that they can see both the personal and global tragedies of homelessness whether that homelessness is caused by poverty, psychological neglect, or war — whether it is the literal absence of shelter or the dreadful alienation of psychological separation.

Feminist educators are leading the way to new thinking on what should constitute a common curriculum.[18] The topics mentioned in feminist literature are as nearly universal as those listed in traditional curricula — more so, many of us would argue. But it is not simply a matter of waking up and realizing that matters which have been traditionally left to women are universally important, complex, fascinating, and demanding. It is also important to accept the notion that a common curriculum is not a fixed entity nor is it ever truly universal. It is something we should converse about regularly. Its elements should not be derived from an essential description of human nature or from an uncritical reading out of tradition. Nor should it be the product of exaggerations promoted by special interest groups — even those we consider benevolent such as the writers of *Everybody Counts*. Rather, the components of a common curriculum should be sought in the narratives of contemporary life, and its form should be under continuous construction.

IV. Excellence and Specialization

If we were to acknowledge that all children need not learn algebra and geometry — never mind whether they *can* — mathematics teachers would work with students who *want* to study mathematics. Notice that I have referred to students who want to study mathematics — not to students who are talented at it. Students' reasons for studying mathematics can range from intrinsic interest to the clearly instrumental to the lightly curious. I am not going to argue for a form of specialization in which students need to pass increasingly difficult tests to qualify. The only students we will exclude are those manifestly recalcitrant or

rebellious.

I am arguing simply that an excellent system of education would allow students to pursue their legitimate interests fully. There would be testing to uncover talents of which children might be unaware, but the results would always be used to open opportunities — never to close them. And, of course, there would be common experiences of which we have already spoken.

But, critics ask, would you really allow young students — say, ten-year olds — to pursue a course of study that is mainly mathematical, or musical, or literary? Won't such students be too narrowly educated? Won't they miss important things? Suppose they change their minds?

The greatest fear of early specialization is that children will miss out on life's opportunities. Not all children are budding Mozarts, Beethovens, or Gausses whose early specialization was a mark of genius. For most, our greatest hope is that they will go to college and get reasonably well-paying jobs. As Gardner points out, it is the fear of *this* loss — loss of access to college — that prompts the school to keep the doors open. It is this fear that induces us to push, pull, and squeeze as many youngsters as possible into algebra and geometry. But if colleges did not require subjects irrelevant to a student's chosen course of study, that fear would be somewhat alleviated. One could study literature and drama all through high school and college and remain blissfully ignorant of quadratic equations. Lots of creative artists have done exactly this — even some who sat through four years of college preparatory mathematics classes and passed tests regularly, if barely.

But what of the children who show no inclination toward any of the subjects that colleges might recognize? How early are you going to consign students to plumbing or auto mechanics? This is the kind of question that makes the heart ache. Some of those children will be plumbers and auto mechanics, and as Gardner rightly points out, if they are excellent at their jobs, they should be highly valued. Why not value them highly now? Well, we don't know who they are (translation: We have to wait and see who fails the standard subjects). If we make a mistake, a child might be trapped in an occupation he hates and miss out on one he would have loved.

The fear we've been discussing arises out of a perspective on specialization that is distorted. People who look at specialization this way see it as preparation for a particular occupation or narrow class of occupations. We do not have to define specialization that way. Suppose, in addition to the themes of care that would be addressed in the common curriculum, programs of study were organized around Howard Gardner's seven intelligences[19] (or some scheme like that one). Children with mechanical interests would follow programs in which these interests would be allowed full play. Such a program need not be narrow in the vocational sense. Its graduates might go on to study as mechanics, artisans, engineers, airline pilots, or scientists. Nor need such a program be narrow intellectually. Its students could invent, construct, repair, and maintain machinery; investigate underlying principles if interest moves in this direction; visit museums of science and industry — and even contribute service to such institutions; explore mechanical art and the mechanics of music; read and write science fiction; engage in environmental politics; get involved in city planning. The list is endless. At various points in such a program, some children would show interest in scientific principles of technology, and they would engage in the academic

studies we associate with college. Others would show interest in making, repairing, using. Doors would close — at least temporarily — as these decisions are made. But other doors — doors to exciting, highly valued domains — would be wide open. One would choose a path because he had succeeded at something, not because he had failed at everything the institution values.

In closing this paper, I want to say a bit more about how specialization, construed in this alternative way, might actually produce more "breadth" than the system we have now. At present, we force students to study snippets of specialties in order to give them a "broad" education and prevent premature specialization. Many of their teachers insist on teaching each subject for its own sake — in all its "integrity." Slogans abound in the arena of curriculum. Students are expected "to learn how to think" like a mathematician, a scientist, a historian, and writer. The result is mediocrity and boredom. A student who wants to be, say, a mathematician does not want to think like a historian or a writer, but she may be deeply interested in the history of mathematics and how that history is connected to social, military, or political history. She may be enchanted by descriptions of Poincare's popular writings, and she may even want to try her own hand at such writing. This is not to say that she should never read poetry that isn't related to mathematics or mathematicians, or that her acquaintance with music must be limited to that loved by mathematicians. But these connections open doors more effectively and naturally than the forced feeding of theories of history and the identification of metaphors.

If we insist that an excellent education is characterized by something called "breadth," we would do better to build that breadth into the areas of specialization than to scatter students' energies over a spectrum of narrowly defined specialties. Suppose, for example, mathematics students spent some time studying the work of Martin Gardner. They might read his columns from *Scientific American* (and those of his successor, Douglas Hofstadter). In these they would encounter mathematical puzzles, a sophisticated scientific vocabulary, and a sparkling wit. They might also read his *The Annotated Alice* and discover that *Alice in Wonderland* is not just a children's tale. They might be led by this into a deeper study of logic, or art, or nonsense, or children's literature, or history, or poetry — or, who knows, croquet!

But that's not the end of Martin Gardner's contributions to mathematical-generalists. Gardner, like so many mathematicians, had theological interests. Math class may seem an odd place to discuss the existence of God, the meaning of life, or the possibility of immortality. But these subjects did not seem odd to Gardner, Newton, Pascal, Descartes, Euler, or Leibniz (or to modern mathematicians and computer scientists like Rucker, Hofstadter, or Knuth). Consider what a good mathematics teacher could do with the following paragraph in which Gardner condemns immortalities that fail to preserve individual consciousness:

> It does not fortify my soul in the least to know that after I die all unmarried men will still be bachelors, that 37 will still be a prime number, that the stars will continue to shine, and that forever I will have been just what I am now. Away with these fake immortalities! They mean nothing to the heart. Better to say with Bertrand Russell: "I believe that when I die I shall rot, and nothing of my ego will survive."[20]

Tell me that we could not get lessons in writing, history, biography, philosophy, science, and mathematics out of this one paragraph! If we are interested in excellence at the level of

subject matter, this is the way we should be thinking. Emulating Gardner, away with the fake excellences encouraged by slogans such as "All children can learn," "Everybody counts," or that horror of brevity and ubiquity, "We're No. 1!" Let's really think about what we *want* excellence to mean. Now, how do advocates of equality feel about the conversation I've started?

 For a response to this essay, see Barbara Arnstine.

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[1] See Donald Davidson, *Inquiries into Truth and Interpretation* (Oxford: Oxford University Press, 1984); Richard Rorty, *Contingency, Irony, and Solidarity* (Cambridge: Cambridge University Press, 1989).

[2] See the account in Ron Brandt, "A Caring Community," *Educational Leadership* 49, 4 (December 1991/January 1992): 3.

[3] Rorty, *Contingency.*

[4] John W. Gardner, *Excellence* (New York: W. W. Norton & Company, 1984). The subtitle, which does not appear on the 1984 dust jacket, is *Can We Be Equal and Excellent Too*?

[5] See Thomas F. Green, "Excellence, Equity, and Equality," in *Handbook of Teaching and Educational Policy*, eds. Lee Shulman and Gary Sykes (New York: Longman, 1983); also Green, "'Excellence, Equity, and Equality' Clarified," in *Philosophy of Education 1990*, ed. David P. Ericson, 220-224 (Normal, Illinois: Philosophy of Education Society, 1991).

[6] Ibid., 102.

[7] Ibid., 103.

[8] Ibid., 92.

[9] Ibid., 89.

[10] A.S. Neill, *Summerhill* (New York: Hart, 1960), 25.

[11] Jonathan Kozol, *Savage Inequalities: Children in America's Schools* (New York: Crown Publishers, 1991).

[12] Miguel de Unamuno, *Tragic Sense of Life*, trans. J. E. Crawford Flitch (New York: Dover, 1954), 3.

[13] Christopher Jencks, *Inequality: A Reassessment of the Effect of Family and Schooling in America* (New York: Harper & Row, 1972). I thank Joseph Kahne for pointing out Jenck's recommendation on happiness.

[14] Mortimer J. Adler, *The Paideia Proposal* (New York: Macmillan, 1982), 8.

[15] Mathematical Sciences Education Board, *Everybody Counts: A Report to the Nation on the Future of Mathematics Education* (Washington, DC: National Academy Press, 1989).

[16] E. T. Bell, *Men of Mathematics* (New York: Simon & Schuster, 1937), 536.

[17] Ibid., 532.

[18] See, for example, Jane Roland Martin, *Reclaiming a Conversation* (New Haven: Yale University Press, 1985); Nel Noddings, *Caring: A Feminine Approach to Ethics and Moral Education* (Berkeley: University of California Press, 1984); Noddings, *Women and Evil* (Berkeley: University of California Press, 1989); Patricia J. Thompson,

"Beyond Gender: Equity Issues in Home Economics Education," *Theory into Practice* 25: 276-283.

[19] See Howard Gardner, *Art, Mind and Brain* (New York: Basic Books, 1982); also *Frames of Mind* (New York: Basic Books, 1983). Both ideas—organizing the curriculum around themes of care and programs around multiple intelligences—are discussed in my *The Challenge to Care in Schools* (New York: Teachers College Press, 1992).

[20] Martin Gardner, *The Whys of a Philosophical Scrivener* (New York: Quill, 1983), 282.
