Go and see the white wind
that is blowing from somewhere through the night.
The wind twists here in my tracks.
So you will discover its source.

Dawn's first white emerges
and underneath I join it.
It makes my tail striped
like an eagle feather.

You ran up to me here
and have brought me to this place.
You ran up to me here
and have brought me to this place.
The sun is bright and hurts my eyes.
Deer ears turn here and there.

Little Lengthener Mountain—
I am standing on it so
my antlers lengthen.
I am leaving.
The sun's rays rest
on the points of my rack.

But the moving sun
frightens me and sets in the west.
What can I do?
I shall walk to a far land.

Start again with 1
actors are mostly unpaid and the plays uncommercial. The sciences, even little sciences like economics, are where thinking gets down to business, at the Bolshoi ballets and Broadway's of intellectual life.

Professor Theodore Schultz worries about the governmental and foundational theaters for scholarship. The poverty of experimental theater at least gives it a much—a remarked freedom to experiment. No money corrupts the literary scholar. There was a comic in the 1950s who had a routine parodying the Famous Writers' correspondence school: “Have you ever wondered about the meaning of life? Wanted to try your hand at the two dogmas of empiricism? Thought you might solve the paradox of the liar? If so, you might have the makings of a philosopher: write this evening to the Famous Philosophers' School in Westport, Connecticut, for a free criticism of your philosophy. Get in on the philosophical ground floor now. Earn more than most poets.” The mathematical scholar, known to English as the scientist, has better prospects. Schultz worries that the very success of Big Theater corrupts its playwrights and actors, supporting narrow specialization within economics worthy of vaudeville, dancing dogs, or ventriloquists with dummies, removing finally the humanities from economics.

One can join him in worrying. The narrowing scientism that gets money and jobs and prestige for economists, thank you very much, is getting out of hand. Harvard has devised a Ph.D. in Applied Science, with a “minor” in economics making the candidate hireable as an economist, one purpose of which is to allow students to evade the requirement in the real economics program of studying economic history. The advisors—of princes and CEOs are thus relieved of humanizing contact with the past. The same theater of scholarship relocates them with foreign cultures in the present. As Schultz notes, economics programs and other programs outside the humanities have long since abandoned investment in foreign languages. Harvard again gloriously led the way: at 22 I was pleased to benefit from the notion that mathematics should count as a language; but at 44, as much as I value mathematics, I'm not so sure. Young economists nowadays do not know languages and do not know about language. They have trouble writing and trouble thinking, because they are denied the chief humanistic truth, the knowledge that language, even the language of mathematics, is problematic, reflexive, paradoxical, loaded. Only our foreign students have the distancing experience of acting in another play.

These are Professor Schultz's worries about the theater of scholarship. My own are more internal, worries not so much about the corruption by outside money as the corruption by inside talk. Economics has many successes, but it has recently experienced some failures, too. The failures of economics resemble those of other social sciences, many of which seem bent on emulating the condition of economics twenty years ago. The failures are not merely in social engineering. These have been exaggerated, as the successes were. We never could “fine tune” the economy; but economists still do good works with many of their calculations, their calculation for instance that each job saved by the quota restricting auto imports placed a burden on Americans of $160,000 a year. The real problem, beyond today's headlines, is that social scientists are losing confidence in the scientific simile that gives shy people the strength to go on—“Economics is just like [some 19th-century notion of] physics.” But they have not acquired another simile to live by.

I do not want to exaggerate how lacking in confidence economists are nowadays. Most of them are happily unaware of the conversation of mankind, and correspondingly confident that all is well. They play to their own audience in some tiny subfield, as any business must to some degree. What is dangerous is the degree. Economics shares with most academic theaters a disregard for what is happening elsewhere. The problem is not two cultures but N cultures, where N is large. Economists get their history, their mathematics, their sociology internally, from the latest remarks in their own theaters of language.

The danger in this is the destruction of the intellectual community. The only methodology worth following, as Richard Rorty has argued in a characteristically eloquent piece on “Science as Solidarity” (1987), is the non—methodology that the conversation of mankind should go on. It should go on because it creates a community in which ideas can flourish without a central authority limiting them, in a fashion that Socrates exhibited in his speech and that Mill and Dewey exhibited in their writings.

For all the faculty senates and university committees, the academic portion of the conversation has broken down into specializations. Of course the non—academic portion, as in the journals of opinion, has never been anything but broken down, along political lines. In academic life, however, the failure of community arises less from real than from academic politics, though sharing the same lack of mutual respect born of ignorance.

Most academics do not test themselves in other theaters of language. Economists will defend their ignorance of what is going on in the English Department or the History Department or the Mathematics Department with the remark that specialization is necessary for efficiency. “Don't you approve of the division of labor?” they will ask, with a smirk, pleased with their cleverly reflexive use of economics. As one might anticipate from their naiveté about language, though, they have butchered the metaphor of “scholarship = the economy,” forgetting that specialization is
not to be approved if there is no trade. Plumbers do nothing if they plumb only other plumbers’ plumbing. They have to trade with carpenters and teachers for their specialization to make sense. Trade involves importation as well as exportation. The plumbers cannot export plumbing without importing furniture or education.

What is to be done? The ideal would be humanistic re-education for economists. Academics talk a good deal about general education for the students. Yet it can be doubted whether 19-year-olds get all that much from a scrap of Plato followed by an hour of elementary geology. The students would get more, doubtless, if a group of them went to the same classes in science, literature, history, and so forth together, so that they would have some education in common to rub against. Brooklyn College has been doing this for a number of years; the Unified Program at the University of Iowa assembles cohorts of 80 to 120 students to take their general education courses as a group. It works, giving the students a common intellectual interest to match their common interests in rock music and basketball. The miscellany of courses offered in most colleges under the heading of General Education does not have much impact on most students.

It is the faculty who would benefit from taking the courses. The traditional American advice, delivered by people who have not read a book beyond the checkout counter in twenty years, is “first of all, get your education.” Education is fine in its time and place but is mostly for kids. Remarkably, most academics agree that it’s mostly for kids, and most of the professors do not learn much outside their special field after college.

Educator, educate thyself. The economist Friedrich Hayek has said, echoing in this the founder of modern economics, Alfred Marshall, that no one can be an economist who is only an economist. One might expect professional educators to be uncomfortable when they do not know the knowledge most worth having. Yet when a dean at a college in Connecticut began at 40 to study Greek his colleagues would ask him in amazement, “What on earth are you doing that for?” The askers were presumably educated people. He tried at first to excuse his bizarre behavior on professional grounds (which was not quite right because he was not a specialist in literature), or to offer a self-deprecating “I do it just for fun” (which was also not quite right, at least in the usual American definition of “fun,” because it was extremely difficult). Finally he hit on the correct answer: “I was ashamed to be 40 years old and still not able to read Homer.” This stopped further interrogation, and gave his interrogators something to think about.

When I die and go to heaven and become a dean, I shall give teaching or research credit to my faculty for taking one another’s classes. For credit. With exams. Someone asked Daniel Coit Gilman, the first president of Johns Hopkins, why the intellectual atmosphere was so good there. He replied: “We go to each other’s classes.”

Although the main proposal here is to persuade economic scientists to learn history and literature and Greek, the other proposal is good, too: that humanists learn computers and biology and set theory. The University of Chicago has started a program along these lines, physics for the mathematically shell-shocked among its faculty. A humanist colleague at Iowa whom I greatly admire was startled to hear mathematics described as one of the flowers of Western civilization. “What? You compare it to music or painting?” He evidently viewed mathematics as something merely useful, a tool that might help in building highways, but nothing so glorious as art or philosophy. He was astonished to hear that most of modern mathematics has nothing to do with anything but itself.

The worry is that the mutual hostility among the mathematical and verbal theaters of scholarship, broken down into N sub-theaters, results in bad plays performed to audiences half awake. In his new biography of the young Keynes, Robert Skidelsky shows this veritable Ibsen among economists to have been educated in mathematics and statistics and the world’s work, of course, but also in languages ancient and modern, and in philosophy at its frontiers. Similarly, Professor Schultz studied philosophy as an undergraduate, and has never lost a philosophical and historical tone in speaking about hog prices and rice paddies. The classical education of Professor Lord Bauer, to instance another student of economic development, shows through what he writes. Charles Kindleberger ranges across centuries and languages that his younger colleagues in economics at M.I.T. ignore. The level of general education among the best of the older generation of American economists—Kenneth Arrow, Paul Samuelson, Milton Friedman, Robert Solow, George Stigler—is higher than that of the present leaders of the profession, yet most of the graybeards spent most of their professional lives pursuing a Science that would puzzle the average violin-playing and poetry-writing physicist. The generation now retiring bears a heavy responsibility for cutting language requirements, overvaluing formal methods, and attempting to eliminate the study of the economic past and of the past of economics from the training of economists. Their students can hardly be blamed, for they know not what they have lost.

Well, so what? How does the lack of respect for the humanities hurt economics? In general the answer is that it makes economists intolerant
of other parts of the conversation of mankind, unable to listen. That can’t be good. In particular the modern economist does not notice himself using the language. He is unaware of the theater in which he acts.

A recent and important example is the use of military and sporting metaphors in talking about America’s balance of payments. A case in point is The Zero-Sum Solution, an intelligent and thorough book by one of Kindleberger’s younger colleagues at M.I.T. The theme is sustained by metaphors such as this: “To play a competitive game is not to be a winner—every competitive game has its losers—it is only to be given a chance to win. . . . Free market battles can be lost as well as won, and the United States is losing them in world markets” (59). The book is filled with such talk of America “competing” with the rest of the world, and “beating” it with a “world-class economy.” Thuro claims that more people don’t appreciate his favorite metaphor, calling it a “reality”: “For a society that loves team sports . . . it is surprising that Americans won’t recognize the same reality in the far more important international economic game” (107).

What is odd about Thuro’s use of the game metaphor is that it contradicts the way economics has viewed the exchange of goods since Adam Smith. The game of exchange in Smith is not zero-sum, not an I-win-you-lose proposition. If it is a game at all it is a game in which everyone wins, like aerobic dancing. To be sure, from the point of view of a single company the Japanese competition must be “fought.” But the zero-sum metaphor recognizes only the selling side of exchange. Underneath it all—a favorite metaphor among economists—Jim Bourbon of Des Moines trades with Tatsuro Saki of Tokyo. They do not fight; they trade. A Toyota bought is the reward from 2000 tons of soybeans sold. Thuro is aware of his metaphor, but unwilling to force it to compete openly with the more useful metaphors of economics. He speaks of the game as a reality, when all it or the economist’s more usual metaphor can be a more or less useful way of talking.

So a partial and uncritical awareness of how language works can do mischief in economics. Consider two examples of how self-conscious use of the language can do good. The first example is the metaphor of “human capital,” meaning human skills, which economists have used since Professor Schultz invented it some 40 years ago, self-consciously. He describes how he came upon the notion while working at Auburn for a time in 1946, interviewing an old and impoverished but well-satisfied farm couple: they had used up their farm to educate four children, transforming fertile land and well-stocked pens into knowledge of Latin. The physical capital which economists had long understood was evidently the same thing as this human capital that the children now “owned.”

To call education “human capital” might seem offensive and dangerous. But so long as the economist knows that the metaphor is a tool and not a Truth, so long as he has learned somehow the chief humanistic truth, no harm is done. A metaphor makes thinking possible. It is not merely an ornament. Speaking of education as equivalent to investment in machinery, say, allows an economist to ask sharply whether enough has been purchased relative to machinery, or to stress the high returns (relative to alternative investments) of teaching people how to read.

The metaphor is not “true.” It is right, which is to say, useful for some purpose. The methodology of Science that economists think they use gives no way to evaluate the rightness of metaphors. The assertion of likeness, so important in biology and physics, involves standards of likeness that can only be human and cultural. How similar is the smooth pea to the wrinkled, the planetary orbit to an ellipse, the first grade to a tractor? These are questions about our use of language, not questions about the universe out there. The physicist Niels Bohr said once that physics is not “about” the universe; it is about what we as human beings can say about the universe.

Economists and other scientists are sometimes less self-conscious about their metaphors. They fall into the reifying fallacy that because they can speak an economic model, it simply is. Sometimes, you might say, Economists are poets/But don’t know it. Take the metaphor related to Professor Schultz’s “human capital,” introduced by another friend and former colleague of mine at Chicago, Gary Becker. In trying to explain family size he came upon a metaphor of children as, well, durable goods. A child, you see, is very like a refrigerator; it is expensive to procure, delivers a stream of returns over a long period of time, has an imperfect second-hand market, and so forth.

Becker’s metaphor has resulted in much useful talk about families and their sizes. But there is a kind of voluntary idiocy that goes along with such talk that would be relieved if economists were not so busy denying that like poets they need metaphors every day. They get worried that a child does not, after all, have a door handle and ice trays; and that a refrigerator does not appear to have a mind of its own. With no way of dealing with humanistic method buried deep in their science, they become rigid and silly, retreating to talk about testing the hypothesis against its predictions, testing metaphors against badly done statistics. One paper in this humorlessly non-humanistic conversation, for example, produced with
some difficulty the startling news that, yes, children and sexual pleasure are jointly produced.

The notion of the "theater of scholarship," then, has led finally to considering the very words of economists. It has led, in a word, to "rhetoric."

If translated into English the words of economists would sound plausible enough to poets, journalists, businesspeople, and other serious though non-economical folk. Like serious talk anywhere—talk among boat designers or baseball fans, say—the words are hard to follow when first heard. The culture of the conversation makes the words arcane. Yet people in an unfamiliar theater of language are not Martians. Underneath it all (that favorite metaphor of economists again) the way we speak is not so various. Economics uses mathematical models and statistical tests and market theorems, which all look alien to a literary eye. But looked at closely they are recognized as familiar. They come to be seen as figures of speech, the metaphors, analogies, and appeals to authority by which any human conversation proceeds.

Figures of speech are not mere frills. They think for us. A person who thinks of a market as an "invisible hand" and the organization of work as a "production function" is giving the language a lot of responsibility. It would seem desirable to take a hard look at his language. If the theater of scholarship in economics were found to depend heavily on its verbal forms, the conclusion would not be that economics is "not a science" or is "just a matter of opinion" or is some sort of confidence game. Good scientists also use language, even its cunning and consideration, which is to say its social and persuasive force. Science as much as poetry requires paying attention to the other minds present when one speaks.

The paying of attention to one's audience is called "rhetoric." One uses rhetoric, of course, to warn of a fire or to rouse the electorate to xenophobia. This sort of yelling is the vulgar meaning of the word, like the president's "heated rhetoric" in a news conference or the "mere rhetoric" to which our enemies so often stoop. Since the Greek flame was lit, however, the word has been used also in a broader and more amiable sense, to mean the study of all the ways of accomplishing things with language: inciting a lynch mob, to be sure, but also persuading readers of a novel that its characters breathe, or bringing scholars to accept the better argument and reject the worse.

The question is whether the scholar speaks rhetorically. He usually fancies himself as an announcer of "results" or a stater of "conclusions," free from rhetorical purpose. But does he seek to persuade? It would seem so. Language, I have said, is not a solitary accomplishment. The scholar does not speak into the void, or to himself. He faces an audience in the theater. He desires to be heeded.

To be heeded is the desire. The devices of language are the means. Rhetoric is the proportioning of means to desires in speech. It is an economics of language, the study of how scarce means are allocated to the insatiable desires of people to be heard. A few economists are beginning to think this way, to see that using language, as we must, makes us humanistic scientists, whether consciously or not. Other scientists and scholars are turning this way, too. It is a rhetorical turn in the West, a turning back to a tradition interrupted in the 17th century. In mathematics and English, physics and history, law and anthropology one can find scholars who have outgrown the once necessary myth that language is transparent and that argument can be grounded outside of it.

In economics, then, what would achieve the reunification of the sciences and the humanities is a "rhetoric of inquiry," that is to say, a study of the ways that economists accomplish things with language. One can hope that the economist's theater of language can rejoin the others. One can hope that the economists will improve their own acting by attending to that of others. I am sure it can be done. Its high promise is suggested by the rhetorical argument a fortiori: if even the study of hog farmers and railroads and refrigerators is rhetorical as well as mathematical, if even the science of human maximization is part of the humanities as much as it is part of the sciences, well, then—all the stronger is the hope for the rest.

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