Cultural *Or* Scientific Literacy?

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About two hundred years ago the United States was a poorly developed (both culturally and economically), newly independent nation with a population about ten times smaller than that of either England or France. Over the years, our country seemed to have evolved as a counterweight to the dominant European culture, trying to reject the ways of the Old World, thus creating its own identity. Two centuries later, objective statistical indicators show the U.S. as the undisputed world leader in scientific innovation and consequently in economic prosperity. Upon visiting the New World, Oscar Wilde wrote about "the crude commercialism of America, its materializing spirit, and its indifference to the poetical side of things." Perhaps it is exactly the neglect of the "poetical side of things" and the decline of the education in the arts and humanities in this country that catapulted the American society to its supremacy in the areas of science education, technology, and material wealth.

The incredible progress in the field of the natural sciences and engineering shaped much of the twentieth century. At the same time, the humanities and social sciences have lagged behind in their efforts to explain the humanistic outlook and the historico-philosophical impact of the advances in the natural sciences. These advances have been led mostly by researchers in this country, while the American mass culture is often perceived as provincial and less sophisticated than the more cosmopolitan cultural fabric of European nations. Interestingly, the educational establishment, as well as the American mass media, is constantly worried about the scientific literacy level among our students, as they appear less prepared in the sciences and math than their overseas counterparts.[1] At the same time, the level of cultural literacy (knowledge and appreciation of the arts, humanities, and social sciences) receives very little attention. Furthermore, many experts either completely condemn or unquestionably glorify the American educational system without differentiation between the two quite opposing fields of human knowledge—the "two cultures" as described by C.P. Snow in the 1950s—the sciences and the humanities.

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The above-listed observations raise several issues that may be best addressed from an international, transatlantic perspective: What are the main *goals* of scientific and cultural education? What exactly makes the field of the natural sciences and engineering different from the humanities and the social sciences? What are the real, meaningful differences between the American and European *approaches* to achieving these goals? What are the educational *and* societal *outcomes* of the two quite different educational systems? Why does the American-style, laissez-faire approach to education appear to be more appropriate for the field of the natural sciences than for the humanities and social sciences? I have performed an integrated analysis of the answers to these questions using readily available statistical data. My argument will be that, the postindustrial American society and its educational establishment need to focus on efforts aimed at increasing the levels of cultural (*not* scientific) literacy for all.

Sciences Differ from the Humanities and Social Sciences

The world of the natural sciences deals with objects that do not possess self-awareness and are independently external to us. Major breakthroughs in mathematics and the natural sciences, where the number of variables is *comparatively* small, tend to be associated with younger researchers whose knowledge of the subject matter is quite limited—narrow and deep, rather than wide and comprehensive.[2] More knowledge and accumulation of schemata may actually impede innovative thinking in the natural sciences.

Social and cultural knowledge is structured in a less hierarchical manner and includes an unimaginably higher number of variables that must be managed. Therefore, due to their more complex nature, the humanities and social sciences require a great deal more time for accumulation of a larger body of information, followed by multivariate analysis of many factors and subjective perspectives. It seems that "less is more" in the study of natural matter, while "more is more" in the study of social and cultural issues. Deep and narrow specialization of a young mind generates breakthroughs in the natural sciences, while only broad and interdisciplinary knowledge attained comparatively later in life is able to generate new ideas in the humanities and social sciences.

Researchers and science educators have shown that humans are *not* naturally inclined to think scientifically.[3] The formal, logical thinking needed for math and science represents an abnormal mode of thinking, which may not be beneficial to an individual from a historical and evolutionary perspective. The use of intuition appears to be a faster and more natural way of solving everyday problems. The notion that the scientific way of looking at things doesn't come naturally to humans is further supported by three sets of data: First, psychologists have found that the learning patterns for the vast majority of the general population are non-abstract, more concrete, and sensing in

their nature.[4] Second, many educators, including a prominent figure like M. H. Shamos, who is a former president of the National Science Teachers Association, have indicated that efforts to instill habits of scientific reasoning in students who are not scientifically inclined have been largely fruitless. This is attributed to the fact that "so much of modern science defies common sense."[5]

Finally, the unusual character of the scientific reasoning process could explain the fact that even though the percentage of people with university degrees varies widely from country to country, the percentage of scientists and engineers is relatively small and fairly constant throughout different countries and educational systems. The percentage of all 24–year-olds with university degrees varies from 33 percent in North America to around 16 percent in Europe.[6] However, the ratio between science and non-science majors in the U.S. is three to four times smaller than the same ratio in Europe. Therefore, the number of university graduates with degrees in the sciences and engineering is practically the same on both sides of the Atlantic—around 5 percent of all 24–year-olds. This small number later translates into a relatively equal proportion of scientists and engineers in the workforce of all industrialized nations—from 50 to 80 per 10,000 in the labor force.[7] Perhaps this figure actually reflects the small segment of the population that is *naturally* inclined to do math and science. Everything else being equal, most of these people would have specialized in science fields *regardless* of their educational environment.

Education appears to serve two main purposes: First, to create a scientifically *and* culturally (globally) literate citizenry that can function in a modern democratic society where the public, through their elective representatives, is constantly making political decisions about domestic or foreign policy issues. The second goal of education is to train the future specialists—professional scientists and engineers, artists and humanists. The level of professional preparation among the natural scientists and engineers, as well as the extent of scientific literacy among the workers of any nation, is generally considered to be of primary importance for the level of scientific innovations, economic development, workers' productivity, and material wealth of a nation.

Cultural or *social* literacy (as opposed to *natural science* literacy) may be defined as knowledge of the development of the world through time and space as shaped by humans (i.e., history and geography) as well as an understanding and appreciation of the arts and literature. Cultural knowledge appears to be the primary civilizing force that keeps people socially together by providing them with the meaningful perception of their own individual lives as being a small but integral part of the larger story of humankind and/or their own nation. In addition, the study of the arts and literature is supposed to exert a major humanizing effect by uplifting the young soul above the world of things into the world of ideas. In contrast, the study of the physical and life sciences has an opposing, "dehumanizing" effect by rationalizing our lives and emphasizing material reality. The natural sciences provide the basic, material *means*

for our existence, while the social sciences, arts, and humanities explore the humanistic, nonmaterial *meaning* for one's presence on earth.

America and Europe, Contrasting Models of Education

The American educational model is somewhat unique in the world. It is much less regulated and more laissez-faire than most European schools. In many ways, the educational system in the U.S. operates with a free market spirit, which creates its two distinct features: first, a less structured curricular organization, which allows students the freedom to make their own educational choices in an environment of student-centered instructional practices; and second, a great diversity of types of schools, majors, and small-niche, highly specialized course offerings.

Most Americans are schooled in a very "democratic" environment of personal responsibility and curricular freedom of choice without the pressure of national exit examinations (at secondary level) or strictly defined core requirements (at college level). In contrast, students in Europe are not allowed to choose any of the subjects for study and they follow a strict and rigid curriculum both at the high school and university level, with very few electives. They are required to complete their liberal arts education at the secondary level of schooling with comprehensive mandatory exit examinations in all core subjects. According to the *Chronicle of Higher Education,* in the field of natural sciences, less than half of the entering college freshmen in this country met or exceeded the recommended two years of high school study in biological and physical sciences.[8]

The recommendations also include only one year of American history/government and *no* geography. In contrast, 90 percent of the Bulgarian population graduates from high school with trigonometry, four years of history, three years of geography, and scientific knowledge roughly equivalent to introductory courses for science *majors* at an American college.[9]

The uniquely American approach to education shows also in the fact that about 60 percent of the colleges in this country admit nearly all who apply.[10] As a result, nearly every American who completes high-school (72 percent of the population) enters some form of higher education institution (68 percent of the population).[11] In contrast, about 85 percent of all Europeans graduate from high school while only about 20 percent continue on to universities. Unlike most of their U.S. counterparts, European universities are extremely competitive, very differentiated, and for specialization only, without general education components.

The second distinct feature of the American educational system (directly related to its free-market character) is the extreme diversity in terms of the type of schools, course offerings, and majors available. This diversity naturally leads to very narrow instruction, often arbitrarily defined, with numerous subdisciplines, small-niche courses, and a tendency toward a gradual disappear-

ance of the more general, liberal-arts components.[12] This is evidenced by the significantly larger number of electives and options for different majors at U.S. colleges and universities in comparison to the similar numbers at schools across Europe. For example, an undergraduate history major at the University of Sofia is required to take four, year-long general courses in world history (worth a total of 32 credit hours). At the same time, even a recipient of a Ph.D. degree in history from an American school, after spending years of study in one area, may have graduated without having ever taken a course in *world* history. Another example of the narrowing nature of offerings at U.S. schools is the interesting phenomenon of disappearance from American curricula of the only genuine interdisciplinary subject—geography—which spans both the physical and the human worlds, for the sake of other narrower disciplines like political science or cultural anthropology.

Given the above differences between the American and European approaches to education as well as the differences between the sciences, on the one hand, and the humanities and social sciences on the other, it seems appropriate to look at the societal outcomes of these two educational approaches.

Social Outcomes of American Science Education

Given the laissez-faire climate at American schools and the fact that science and math classes require "less high-level thought" than similar classes in Germany or Japan,[13] it is only natural to expect the average American student[14] and adult citizen[15] to score below his/her overseas counterpart. This is especially true for the eastern part of the European continent, where the educational systems still adhere to particularly high national standards inherited from the decades of totalitarian socialism. A study reported in *Science* found that democracy appears to be bad for scientific literacy, as the citizens of the former East Germany came out on top in scientific literacy among all of the European Union nations.[16]

Concerning the second goal of science education—the training of future scientists and engineers—it appears that the American approach to instruction in the sciences, which allows the students to make their own educational choices and thus leaves behind the vast majority, still manages to encourage and catch the scientifically talented ones. There is hardly any statistical difference between the performances of the top science students in countries around the world, irrespective of their educational backgrounds.[17] These people become members of the American teams producing articles in world scientific and technical journals that are cited *in excess* of the U.S. output's world share.[18]

Despite the fact that Europe now leads North America in science and engineering doctoral production by 60 percent and that Europe spends more than the U.S. on research, the U.S. is still responsible for nearly half of all research performed worldwide.[19] The European way of state-supported education and science does not produce results as good as the American, free market ap-

proach.[20] The state does not need to pay for science and technology, as the speed of discovery depends largely on the extent of economic freedom.[21] Overall, American scientists have received a disproportionately high number of the Nobel prizes in the physical and life sciences.[22] Furthermore, the U.S. enjoys better economic indicators than the European Union.

One major factor contributing to the U.S. scientific and economic success may be the influx of young, overseas-educated immigrants who fill nearly half of the slots in the graduate programs in the sciences. The U.S. is known to have a more open immigration policy and the most tolerant, least xenophobic culture. In fact, noncitizens obtain 47 percent of the science Ph.D. degrees.[23] The vast majority of these students, who arrive here from such poor regions of the world as Eastern Europe, China, and India, for purely economic reasons, plan to remain in this country. At the same time, 20 to 35 percent of the science and engineering faculty in U.S. higher education are foreign born.[24] A recent study published in *Science* shows that foreign-born scientists contribute disproportionately highly to the development of U.S. science.[25] America may be considered as either a land of opportunity in which talents flourish in ways that are difficult at home or as a sly merchant who lures the best and the brightest by paying more and offering better laboratory facilities.

The scientific and economic success of the U.S. is related also, I think, to the free-market spirit of our educational system. This spirit supports a uniquely American loose, undemanding curricular organization and a student-centered form of instruction that is especially efficient and appropriate for teaching mathematics and the natural sciences.

True, the American model of education fails to produce a scientifically knowledgeable work force.[26] The use of the scientific method requires an aptitude for abstract, logical thought that is usually determined long before students enter college. Studies have shown that the genetic influence on mental capabilities increases with age through adulthood.[27] There is a small window of opportunity for mental development (under the influence of such environmental factors as education) of one's abilities to do language or math, which closes even before puberty. Therefore, only an academically more structured and demanding (East) European educational model, which requires the study of specific subjects at a very early age, could possibly achieve universal scientific and cultural literacy. Researchers within the U.S. also find that only an academically challenging environment correlates positively with math achievement.[28] If *all* young Americans were actually *required* to master college-level courses, they would do so just as all Europeans do.[29] The question is whether it is worth the effort.

The level of public understanding of the nature of scientific inquiry as well as the mean score on the Index of Scientific Construct Understanding correlate with the level of formal education, and science and math education in particular.[30] Paradoxically, according to the mean score on the same Index,

the average American, who did not take as much math and science during his school years, came out on top among the rest of the industrialized nations.[31]

A high level of scientific literacy among the general population is generally connected to expectations of high productivity in the work place. Indeed, American workers are somewhat less productive than their French or German counterparts.[32] However, the difference is small enough to be more than offset by the fact that, in the U.S., the average annual hours (nearly 2000) worked per person in employment are much higher than the same hours in Europe (around 1600), thus generating a significantly higher per capita gross domestic product.[33]

A McKinsey Global Institute study in 1993 found that differences in basic skills were not a large factor in productivity; managerial talent and labor rules mattered more. Studies of personnel directors of major industries show that they consider work ethic and motivation to be the most important qualities of a new hire. Knowledge of math and natural sciences is rated as the *least* important attribute for employment.[34] "The sad but simple fact is that one does not need to be literate in science to be successful in most enterprises," as Shamos has written.[35]

The ability to solve trigonometry problems, to understand molecular orbitals, and to explain the literary-philosophical intricacies in Faust or Don Quixote (requirements for *all* Bulgarian high school students) are hardly prerequisites for being a good plumber or software specialist. In fact, less interest and understanding of subject disciplines and issues outside of one's own narrow professional area allow for better concentration and a higher level of professional devotion and accomplishment. This most certainly applies across the board—from the modest secretary to the brain surgeon.

It seems that the American educational style where children are encouraged to follow their own inclinations allows for an excellent self-selection in the nondemanding climate of free choice and personal responsibility. Therefore, U.S. schools appear to be most efficient and productive in the way they deliver science education to the relatively few scientifically talented students. Perhaps America moves forward in terms of science, technology, and economic growth not despite of, but because of the comparatively lower levels of scientific and cultural knowledge of its work force. This absence of breadth allows for the development of good, professional depth, which is the most important characteristic of the technical fields of knowledge as opposed to the humanistic areas of study.

In other words, the American style of education seems to produce more focused individuals, who devote most of their energy to their own work leading to an abundance of material wealth.

Social Outcomes of Humanities and Social Sciences

Educators often are not aware of the fact that, in Europe (and especially in its Eastern part), the strong emphasis on science and math education is not at

the expense of but in addition to the strong, content-based instruction in the arts and humanities. For example, the study of world literature at Bulgarian high schools includes major works from Homer, Dante, Shakespeare, Cervantes, Moliere, and Tolstoy.[36] British students are required to master a range of drama, fiction, and poetry, from Shakespeare to Orwell, while only 34 percent of U.S. high school seniors achieve this. The requirements for graduation from a Bulgarian high school in *world* history and geography appear to be higher than those for obtaining an undergraduate or even graduate degree in history from an American university![37] Each young Bulgarian is *required* to study history for seven years starting in the fifth grade, and geography for five years starting in the sixth grade. Both subjects cover the world and the local area on a two-hour per week schedule. Furthermore, the method of instruction does not include a free exchange of factless opinions, but emphasizes dates, events, and places, thus preparing students for meaningful discussions in the upper grade levels.

Most colleges in the U.S. have general education requirements, which results in a smaller amount of course work in all major fields of study in comparison to overseas programs. These differences are much more pronounced in the humanities and social sciences than in the natural sciences. For example, a bachelor's degree in chemistry at a prestigious liberal-arts institution like Washington & Lee University in Virginia requires nearly twice as many credit hours (72) of course work in the major field as the same degree requirements in English (37 credit hours) or history (39 credit hours). In contrast, a bachelor's degree in chemistry from the University of Sofia requires a smaller number of credit hours (166) of course work in the major field than the same degree in English (210 credit hours) or history (193 credit hours). A history major in Sofia completes a core of 193 credit hours, 36 credit hours of electives, and 360 contact hours (9 weeks) of research, which ends with a thesis defense. History majors are required to take four separate, yearlong courses (each one worth 8 credit hours) of world history—ancient, medieval, new and modern history. There is no course devoted solely to Western civilization. The thirteen centuries of Bulgarian history are covered in courses that are worth the same total number of semester hours—32. The ratio between the hours of lectures and seminar discussions is 1:1.

Cross-national, outcome-based comparisons are difficult to conduct in fields that are more culture-bound than the sciences. A report on the first national assessment of our 17–year-old students' knowledge of history and literature found that this "nationally representative sample of eleventh-grade students earns failing marks in both subjects."[38] A more recent study on cultural literacy, reported in the *Chronicle of Higher Education* (14 June 1996) found that only 7 percent of our graduating college students answered fifteen or more of the twenty questions correctly.[39] The results from the National Assessment of Educational Progress history exam show that only four out of ten high-school

seniors demonstrated even a rudimentary knowledge of their own American history.[40] A comparative analysis of the textbooks used in seventh and eighth grade history classes[41] in Bulgaria shows a level of coverage in terms of both breadth and in-depth discussions that far exceeds the expectations from a similar one-semester course on the same subject at an American college.[42] Even some of the most prestigious universities in America do not offer (let alone require) a course in *world* history or geography. Instead, students complete their majors with small-niche courses, created by narrowly specialized faculty who are apparently neither capable of nor interested in teaching about the world.

The American approach to education has affected in a negative way the preparation of our students *not* in the sciences, but in the humanities. For example, one third of all undergraduate institutions require a natural science course for graduation,[43] while only about one tenth of them require literature or philosophy.[44] Furthermore, so-called "political correctness" with its ideological agenda has penetrated to a much greater extent undergraduate humanities education in this country than that in Europe.[45] The postmodern "paradigm shifts" in combination with our "individualized, unfocused, scattered curricula" unintentionally results in the omnipresent perception of "rootlessness and aimlessness" among our students who seem to possess "little or no sense of the human experience through the ages."[46]

Universities in the U.S. (unlike the state-run institutions in Europe) are driven by market forces that lead to the development of a more turf-conscious professional environment and extreme fragmentation of the curriculum. College catalogs are full of a wide variety of small-niche courses along unusually narrow subdisciplinary lines. The outcome of this curricular chaos is students and teachers in the humanities and social sciences who lack the breadth needed to evaluate complex social phenomena. Perhaps it has also inadvertently affected in a negative way the cultural outlook of our students, as most of them appear more provincial and less sophisticated than their European counterparts.

In their preoccupation with math and science education, education specialists and the popular press in this country scarcely ever comment on the level of instruction in the humanities and social sciences. Interestingly, by choosing their specific majors, foreign students who come to the U.S. in fact vote for what they consider to be educationally the best in the world. The ratio between natural science and social science majors (4 to 1) among foreign students in this country is twelve times larger than the same ratio among their American counterparts.[47] The best American undergraduates also gravitate toward the natural science and engineering fields. Twice as many of the National Merit scholars (the top half of one percent of all high school graduates) choose to major in the natural sciences over the social sciences. No such preference is found among the students in Europe, where the social sciences attract equally qualified candidates and are not considered any "softer" than

the natural sciences. Even though at U.S. colleges, nearly 30 percent of the incoming freshmen expect to major in the sciences or engineering, only a very small fraction of them actually graduate with a science or engineering degree. The vast majority moves on to non-science fields.[48] Grade inflation is also significantly higher in the social than in the natural sciences.[49]

The discrepancies between the choices of specialization are even more pronounced at the postgraduate level. Apparently, U.S. graduate schools in the sciences and engineering are considered the best in the world. Although overall graduate school enrollments of foreign students in the U.S. have declined, the number of foreign doctoral recipients in science and engineering fields doubled from 1986 to 1995.[50] This is not because the sciences are less culture-bound and do not require perfect mastery of the English language. The proportion of natural science and engineering doctoral degrees earned by foreign students in the U.S. is still much larger (around 50 percent) than the *same* proportion earned by foreigners in Europe or Japan.[51] Fifteen times more foreign natural scientists and engineers than social scientists come temporarily to this country for research.[52] In contrast, four times as many of the American students who study abroad explore the social sciences rather than the natural world.

Research shows that when, ten years after graduation, the extremely successful (from a material perspective) alumni of Stanford University look back upon their college experience, they do not feel that they were shortchanged in their science education.[53] Many express the desire to have rich intellectual and cultural lives but few actually do.[54] Interestingly, overseas study programs get the single highest rating of *all* undergraduate courses. Apparently, the world as a subject is missing from our campuses, and study-abroad programs help to fill the void. Overall, the American style of teaching the humanities and social sciences appears to be detrimental to the humanistic outlook of our students and to the cultural fabric that knits our society together.

General Discussion

What is the philosophical basis for the more "democratic," laissez-faire approach to education in the U.S. as opposed to the more prescribed European tradition? Schools in the American melting pot are regarded "as tools for alleviating social inequalities and the disadvantage of the working class" (Horace Mann) by providing equality of opportunity for all. The social and educational policies of the 1960s were also designed with the idea to promote equality further. Ironically, in examining the social consequences of the educational systems on both sides of the Atlantic, it appears that the democratic, liberal American approach leads to elitist results, while a more demanding, traditional curriculum brings about egalitarian outcomes.

That an egalitarian, U.S.-style educational system actually *promotes* academic inequalities and further exacerbates social stratification seems not to have

been studied to a great extent. The laissez-faire approach, which creates wonders of material wealth in the economy, leads to intellectual impoverishment when it is applied to education. The shopping-mall-style, student-centered instruction (from high school through college), in fact leaves each student's scholastic performance largely dependent on the individual's socio-economic background, since his innate abilities were not fully explored by a rather nondemanding and fragmented (by market forces) curriculum. In contrast, when *all* students are challenged and pushed in a quite prescriptive manner to perform to the highest of their abilities, the effect of any social factors involved in determining the students' performance is greatly reduced. The undemocratic, demanding instructional climate appears especially appropriate if applied at an early age when the window for mental development is wide open and the role of genetic factors is comparatively less significant.[55] The Third International Mathematics and Science Study report concludes that the unfocused U.S. standards aim at the lowest possible denominator, thus benefiting mostly the elite few.[56] Studies by Finnish researchers found that the United States had less social mobility between generations than any other country except Britain.[57]

It appears that it is exactly the free market spirit of the American education with its more elitist educational outcomes that helps the U.S., on the one hand, lead the world in scientific innovation and material wealth, and on the other, causes it to lag behind Europe in social development and cultural sophistication. If we take a differentiated look at the two opposing areas of study—the sciences and the humanities—it may be concluded that societies can't have the best of both worlds. Excellence in one must come at the expense of developments in the other. It seems that while democracy and free markets may be a good thing in politics and economics, the same approach to culture and education leads to mediocrity. The East Europeans are a rare experimental group of people, who had the exclusive chance to live in two different worlds—the totalitarian socialist system and the free market environment of democratic capitalism. Polls in East Germany show that people in that relatively advanced economy overwhelmingly indicate that the quality of education under socialism (among other things) was far superior to the one offered in the laissez-faire environment of free capitalism.[58]

The exceptional character of scientific thinking, and the fact that only a very small minority of the general population is capable of adding enjoyment to scientific mastery, suggests that universal scientific literacy should *not* be the primary goal of education. The average citizen needs simply to be aware of the workings of science, and in this, Americans do very well.[59] In fact, a demanding educational environment, while fostering universal scientific literacy, may actually fail its most scientifically talented students. In contrast, exploration of the humanities and social sciences comes naturally to humans,

brings them together, provides them with meaning, and lifts them into the realm of ideas, building on truly universal desires.

Our national identity developed with the assertion of the uniquely "American ways" and the rejection of the Old World and its ways. Young Americans fail to comprehend how "Swan Lake" or "Faust" can be part of their own American heritage. They are rarely exposed to non-American cultural and informational resources. In contrast, Europeans are bombarded with cultural messages from the countries around them, and develop a more cosmopolitan outlook.

In European schools, knowledge of world and local geography, history, arts, and literature is considered to be the most important component of national and personal identity. Cultural knowledge of one's native land becomes ingrained in the inner soul of young Europeans, and provides them a firm foundation, which serves as a reference point to explore with more understanding of, albeit *less* tolerance for, similarly structured foreign cultures. In contrast, the average American is culturally and globally less literate, which makes him less understanding and much more tolerant toward "the other." Perhaps the fact that world history, geography, and literature are not required for graduation from U.S. colleges is one of the factors contributing to the numerous overseas failures of our foreign policy makers (from Vietnam to Somalia and the Balkans) regardless of their good intentions. For example, in his memoirs, Robert McNamara admits that his (as well as his colleagues') lack of geohistorical knowledge and cultural understanding of the Vietnam conflict led them to make the "wrong" decision and send 58,000 Americans to their deaths.[60]

A rigorous education in the arts and humanities (from an *early age*) does not turn children off but rather acculturates them and lifts their souls above the materialistic, consumer, and pragmatic side of everyday life. It gives them a sense of belonging to a human civilization with certain common cultural values.

Europeans carry their national and cultural identity in their hearts while most Americans feel the need to show off their national pride in a more extroverted way (e.g. permanently posted flags at private residences). For example, the *Washington Post* reported that the French turned on the soundtrack from *Star Wars* instead of "La Marseillaise" after their World Cup win in 1998. What the American reporter failed to comprehend was the fact that the French can afford to celebrate their soccer success with an American mass culture product without losing even one gram of their Frenchness. For them this has hardly anything to do with the French culture and identity. They easily cross over to other cultures, watch foreign films, listen to a variety of music and read different books, without ever losing the sense of belonging to the French civilization. High culture (instilled through pressing and rigorous educational practices) is what makes a European feel European. Mass culture (developed by market forces) is what makes an American feel American.

In conclusion, international comparisons consistently show that the U.S. is an economic and scientific giant, whose culture remains provincial without

much emphasis on "the poetical side of things." Perhaps it is the more pragmatic and laissez-faire approach to education and life in general that makes the American society strong in one area and weak in the other. Therefore, in the beginning of the century perhaps we should try to achieve a more balanced societal outcome by emphasizing the humanistic elements in the education of our children.

Notes

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An article by Andrew Brownstein in the 18 April 2000 online edition of the Albany *Times Union* told of difficulties at SUNY Albany with the word "picnic."

For 40 University at Albany students, it harks back to an ugly chapter in American history—when picnic, they alleged, meant a racist lynching.

They were wrong, but the allegations led to calls by student leaders to stop using the word...

Zaheer Mustafa, a student who serves as affirmative action director for the Student Assembly, issued the warning despite learning that the word had a harmless French derivation.

"My job is to make sure people from underrepresented groups are heard," Mustafa said. "Whether the claims are true or not, the point is the word offended"....

Several student leaders at SUNY Albany, meanwhile, said they will have no problem using picnic in the future.

"It's the age of political correctness," said Richard Ryback, editor of the *Student Voice*, a publication for student government. "Every day we come up with a new word we can't use."