# Letters

## The Academic Labor Market

I would like to take issue with the article by Vaughan and Sjoberg (14 July 1972, p. 142), in which they attack manpower projections in general and my earlier article (*1*) in particular.

Over the last 8 years I have written several pieces attempting to project trends in the academic labor market, hoping to draw attention to a growing problem facing higher education. Now that events have begun to bear out those projections (not entirely for the reasons I had anticipated), Vaughan and Sjoberg have chosen to read into this development some subtle political manipulation of the educational community. I take issue not with their disagreement over the desirable course of public policy toward graduate education, but with their misleading and unsubstantiated quasi-charges against those who attempt to analyze and interpret trends. Galileo may or may not have preferred the world to be round, but the protestations of the bishops did not alter the facts.

Perhaps because we approach the problem from the perspectives of different disciplines (economics in my case; sociology in theirs) we view these trends differently. If, 8 years after my first article, it is generally accepted that the Ph.D. shortage is in the past, this is not because of my persuasiveness or influence, but rather because events have proved those initial projections [shared, I might add, in the 1960's by Berelson (*2*) and Folger (*3*), both reputable sociologists] reasonably correct. Vaughan and Sjoberg seem to feel that there is something conspiratorial in the fact that the market is working about as one might have predicted, while the economist takes this for granted.

The main thesis of their criticism is that I have ignored "fundamental social changes that are likely to erode the very basis of . . . [my] projections. . . . nowhere does Cartter acknowledge that fundamental changes have occurred in the economic structure of the country and that these changes are affecting, and will continue to affect, the educational system."

I confess to rereading their article several times, and have yet to find out what these dramatic social changes, which are not already evident in recent trends, are to be. Surely "upgrading the skills of some kinds of secretaries" and "college-level training for prison guards and policemen," while probably desirable, are not very earthshaking. Vaughan and Sjoberg are greatly impressed with the growth of the service sector and read some mystical significance into the fact that service employment is now greater than manufacturing employment. But this gradual employment shift has been evident since the turn of the century, and it seems unlikely that the *trends* are going to alter that significantly in the near future. How any intelligent reader can conclude that I call "for Americans to return to an era when there were more blue-collar than white-collar workers" I find difficult to understand.

Clichés about the "postindustrial society," "the knowledge explosion," qualitative sociocultural patterns, and so forth, do not really advance the argument. Vaughan and Sjoberg are certain that I have not placed my analysis "into this broader social context," that I ignore the use of education "as a means for improving the quality of life," and that I do not "come to terms with the nature of the service sector." I can only assume that they have read very little of what I have written and have ignored what little they have perused. For example, they charge that I fail "to acknowledge that various institutions, including some of the largest graduate centers, have initiated policies and implemented decisions that affect not only long-range production rates, but immediate ones as well," yet in several articles I have pointed out why I believe that the cutbacks at universities such as Harvard and Yale are likely to be offset by growth in developing institutions. As an example of changes in state policies, which they apparently believe I am unfamiliar with, they cite the "dramatic action" of the New York State Commissioner of Education in declaring a 1-year moratorium on new Ph.D. programs proposed to the Board of Regents. I must confess that I was a member of the advisory committee that recommended that action to Commissioner Ewald W. Nyquist. (They are strangely inconsistent in seeming to applaud these cutbacks in some universities and states which support or result from my point of view instead of theirs.)

Vaughan and Sjoberg are critical of my use of the 18 to 21 age group as a basis for projecting undergraduate enrollments. Obviously many undergraduate students fall outside this age range, but historically the 18 to 21 cohort has been used successfully to estimate the number of likely students. In the fall of 1971, 81 percent of full-time undergraduates were 21 or younger, and another 12½ percent were 22 to 24 (78 percent and 13 percent in terms of full-time equivalent enrollment). It is conceivable that the proportion of older students will increase significantly in the future, although it has not done so over the past decade of relative affluence and educational opportunity. In fact, the proportion of total higher educational enrollment accounted for by persons 25 and older, *including graduate and professional students as well as undergraduates*, declined from 23 percent in 1960 to 20 percent in 1970 according to the Bureau of the Census. I have long advocated extending educational opportunities to persons throughout their lifetimes, but I would not presume to insert my preferences or wishful thinking into projections of trends. No one objects to Vaughan and Sjoberg dreaming about a better (certainly different) world, but it should be incumbent upon them to present a positive case documenting such trends instead of assuming that others are blind to the world around them.

My critics also claim that I assume "that the percentage of doctoral faculty in higher education will not change appreciably." My estimates in *Science* in 1971 showed "the likely employment of new college teachers with the doctorate *if we maintain the present proportion of doctorate-holding faculty* [original italics]," and went on to indicate that the percentage had risen during the 1960's and to discuss what the numbers would be if as many as 70 percent instead of 44 percent of new faculty hired possessed the Ph.D. My earlier article with Robert Farrell (*4*), and my more recent articles (*5*), specifically spell out three projections models, showing constant, rising quality

and maximum absorption alternatives. To describe the "constant quality" projection as "his image of the normal educational condition" is a clear distortion.

Vaughan and Sjoberg attack my use of the word "normal" [for example, "In a normal year, approximately 50 percent of new doctorates take positions as college and university teachers" (*1*, p. 135)] to describe a steady trend, claiming that I "imply that it is fundamentally good." Surely anticipating the continuation of a customary pattern of growth or market behavior does not have "normative" overtones. They take even greater liberties when they refer to my "assumptions concerning the *ideal* proportion of Ph.D.'s in colleges and an *ideal* student-teacher ratio of 20 to 1 [italics added]." None of the one or two dozen economists and sociologists who have attempted to project trends in the academic labor market have ever assumed that likely events were therefore "ideal." The incremental student-teacher ratio of 20 to 1 happens to be the average for the period from 1958 to 1972, and 44 percent of college faculty members happen to have the doctorate. It surely is not my conception of the ideal world; it is part of the real world that one must contend with.

Finally, in one of the few instances where I *have* stated a personal preference among public policy alternatives, Vaughan and Sjoberg claim that I fail "to recognize the political dysfunctions of . . . [my] rather elitist educational commitment." "Implicit in the policy for restricting graduate programs is the notion that limited funds would be spent most expeditiously on those institutions wherein high quality is already judged to exist. By implication . . . this policy would lead to the support of a relatively small number of low-risk students who are carefully selected by these prestigious institutions." I have argued, and firmly believe, that it is inappropriate federal policy to merely let the market resolve the problem, imposing a kind of Malthusian adjustment upon academic institutions. Instead, I have argued for a positive program of federal support of graduate education that would attempt to provide long-term financial stability for the major graduate schools. I have suggested that "75 to 100 national universities" should receive basic federal support, but I hardly see that as being elitist. These same universities today produce 75 to 80 per-

cent of all the doctorates, and most of them have enviable records in recent years of enrolling minority students. One could hardly characterize the nearly quarter of a million graduate students enrolled in these universities a "small number of low risk students." Vaughan and Sjoberg create straw-man arguments that mislead the reader.

In summary, it is difficult to know what Vaughan and Sjoberg are positively recommending. They applaud the actions of institutions and government agencies in cutting back on enrollments, yet deplore my proposal for added federal aid to support the major graduate centers. They wax enthusiastic about educators taking "a more active role in defining the future social order" and "creating a more viable and meaningful way of life," but they provide few hints as to what that new order might be. They want graduate education to change markedly in undefined ways to better serve some future undefined society. I wish they would reveal that vision to their readers; many of us might share it.

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**References**

1. A. M. Cartter, *Science* **172**, 132 (1971).
2. B. Berelson, *Graduate Education in the United States* (McGraw-Hill, New York, 1960).
3. J. K. Folger, *J. Hum. Resour.* **2**, 143 (1967).
4. A. M. Cartter and R. L. Farrell, in *The Economics and Financing of Higher Education in the United States* (U.S. Congress, Joint Economic Committee, Government Printing Office, Washington, D.C., 1969), pp. 357–374.
5. A. M. Cartter, in *Higher Education and the Labor Market*, M. S. Gordon, Ed. (McGraw-Hill, New York, in pre → *Ann. Amer. Acad. Polit. Soc. Sci.* **404**, 71 (1972).

Although many of Cartter's comments reflect the pique of one personally offended, his response nevertheless is instructive: it more fully exposes his basic orientation to public scrutiny. We shall consider the more obvious areas of intellectual friction and, at Cartter's behest, outline our vision of the future.

1) A fundamental source of disagreement between Cartter and ourselves arises from our differing conceptions of the nature of the market. Cartter's central argument regarding the academic labor market rests on the premise that market outcomes necessarily result from invariant, impersonal forces. In our view, market operations are less determinate; outcomes emerge from choices among a range of alternatives partially defined by noneconomic fac-

tors. For one thing, the market has a political component.

Only by taking the existing power structure as a given can Cartter argue that educational needs are reflected in market demands. What is required by the broader society and what some persons in positions of power are willing to pay for are not necessarily the same. To equate social needs with effective market demand is to cling to a 19th-century definition of the market. To speak of a surplus of highly educated talent in a highly affluent society, where about 12 percent of the population over 25 has completed four or more years of college, is to denigrate the value and importance of higher education (*1*).

2) Cartter's conception of market operations leads him to accept long- or moderate-range social projections uncritically even though most social scientists have expressed major reservations about them. He resists the suggestion that some projections are realized because they are a case of self-fulfilling prophecy.

By asserting that "Galileo may or may not have preferred the earth to be round, but the protestations of the bishops did not alter the facts," Cartter would have us believe he studies invariant market forces much as a natural scientist would investigate his subject matter. But Cartter's reasoning is as faulty as his example. Galileo was persecuted not for arguing that the earth was round but for actively supporting the Copernican heliocentric theory. Nor are Cartter's projections and analysis of the market comparable with Galileo's experiments or his telescopic observations. Then too, Cartter, by his own admission, acted as adviser to the New York State Commissioner of Education and thereby influenced the nature of the academic labor market. Church leaders who censured Galileo did not exert a similar influence over the laws of nature. Cartter often seems to don the robes of a "cleric" who attempts to keep the academic labor market in line with a particular political orientation.

Does Cartter seriously believe that the reputed Ph.D. surplus and the operation of narrow economic forces are alone responsible for the precipitous decline in the number of federally supported graduate students "from 51,446 during fiscal year 1969 to 22,121 estimated for fiscal 1972" (*2*)? Surely political decisions on the part of the Nixon Administration have affected these developments.

More generally Cartter fails to recognize that the social researcher is a variable in the research process, and he seems unaware of Robert K. Merton's analysis of the self-fulfilling prophecy. By acting in terms of his own projections, and encouraging others to do likewise, Cartter is then better able to claim that his projections are being fulfilled.

Cartter to the contrary, we do not applaud the cutbacks in graduate programs or in graduate students. We discussed the present cutbacks in order to illustrate Cartter's contribution to a self-fulfilling prophecy. Our position is that major readjustments in the training, and hence in the kinds, of Ph.D.'s are required, and if some constraints on the market are overcome by purposive action and future possibilities realized, then higher education would expand rather than contract.

3) Cartter's rebuttal confirms our assertion that he fails to recognize the necessity for placing his projections of academic manpower within the context of broader sociocultural trends. He suggests, for instance, that the notion of a "postindustrial society" is a cliché. Cartter thereby ridicules the concerns of many eminent social scientists, such as Daniel Bell (*3*), as dealing with trivial nonissues. Although Bell, like Cartter, is locked into the categories of the present in projecting or predicting future events, Bell's discussion of the postindustrial order has highlighted fundamental *structural* changes, especially in the labor force, that have been occurring in American society. According to Cartter the trend toward a service economy has been underway since the turn of the century and therefore is not new. The implicit hypothesis that the growth of the service economy during the past two decades is similar to that during the first few decades of the 20th century, when America was moving from a rural- to an urban-manufacturing base, is demonstrably false.

Cartter reasons that examining sociocultural trends "does not really advance the argument" over the future need for Ph.D.'s. By implication, only the more readily quantifiable aspects of society—for example, selected demographic and economic phenomena—are worthy of special attention. This reasoning leads Cartter to accept only variables defined in official statistics as affecting the academic marketplace. Yet official statistics are constructed in terms of past and present social definitions, and officials generally ignore countervailing trends which, though often qualitative in nature, can readily, when viewed in their cumulative effects, undermine such projections as Cartter's.

4) The future is not a fact; it must be created by taking into account not only the constraints Cartter stresses but the possibilities he ignores. Our vision of higher education in the future, calling for its expansion, seeks to contend with complementary and contradictory forces. First, it is necessary to provide ever-expanding technical knowledge and skills for many sectors of the populace. The use of higher education to upgrade the knowledge and skills of such occupational groups as secretaries and policemen is illustrative of what can be done in such sectors. We also called attention to the possible upgrading of the skills of many college instructors. And new occupations, based upon increased scientific knowledge, must be created to cope with, for example, environmental concerns.

Moreover, Cartter should recognize the need as well as the potential for far more highly trained personnel in, say, the health services, and to be more specific, in the field of geriatrics. But educators must participate in redefining the social and economic rewards of such activities so that people will find greater satisfaction in service to humanity.

Second, we are far more concerned with the issue of the quality of life than is Cartter. He fails to acknowledge the equality movement in American society. He seems unaware of the grave difficulties that the lower-middle class, ethnic minorities, and women will experience if educators and politicians act according to his projections. Cartter persists in slighting the potential contributions of women to higher education and the broader society.

Equality can be approached only if we restructure higher education and if some income redistribution is achieved. Even so, expansion of higher education is essential. To attain relative equality through "compensatory justice," which favors the underprivileged at the expense of those immediately above, that is, the lower-middle class, can only intensify the current backlash against higher education.

We must also recognize that higher education can become leisure, leisure in Aristotelian terms as contemplative thought. Americans expend huge sums on entertainment and leisure-time activities. But higher education has come

to be viewed by many persons, whether members of the alternative society or other adults, as a laborious set of requirements that have to be met in order to acquire a job. A redefinition of education as leisure cannot be attained through commitment to present-day bureaucratized educational structures and the concomitant "efficiency model."

An elaboration of our image of the future of education must await another essay. However, our discussion has emphasized Cartter's call for a retrenchment in higher education, whereas we, though cognizant of constraining forces, deem its expansion essential if American society is to cope with accelerated social change. We must broaden the social and economic base of the college population and aggressively create multifaceted programs in higher education for use by persons throughout their adult years.

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**References and Notes**

1. *Chron. Higher Educ.* **7**, 1 (1972).
2. *Graduate Education: Purposes, Problems, and Potential*, No. 1 (National Board on Graduate Education, Washington, D.C., 1972).
3. Bell has written extensively on this topic. See, for example, D. Bell, *Dissent* **19**, 163 (1972); *Survey* **16**, 1 (1971).

## Medical School Admissions

Samuel Z. Goldhaber's report "Medical school admissions: A raw deal for applicants" (News and Comment, 28 July 1972, p. 332) is a classic in its field and hopefully will prompt the needed reforms. However, I must caution that Goldhaber's suggested improvement in the admissions process of reducing or eliminating state preference regretfully will never be changed. The money which the federal government provides to most state medical schools is small in comparison to the state funds provided. Consequently, as long as the legislators control the purse strings, a majority of the entering class will be state residents. It would be interesting to compare statistics on the number of state residents educated in a state medical school who eventually practice medicine in that state versus the number of out-of-state students educated in the same school who set up practice in that "foreign" state. Legisla-