vide enough descriptive information to permit scientists to define research programs and to select their samples economically and efficiently. Reports should be available approximately 4 to 6 months after the termination of each segment of the drilling cruise. The project welcomes all inquiries and suggestions for additions and improvements in the program (*13*).

The Deep-Sea Drilling Project is the first large scale expression of the dreams described in this article. It is close to reality, and a new chapter on deep-sea drilling can soon be written.

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13. Inquiries may be directed to Project Manager, Deep-Sea Drilling Project Building T-16, Scripps Institution of Oceanography, Univ. of California, La Jolla 92037. In preparing this article I have been helped by my colleagues in various JOIDES committees, in particular by C. L. Drake and W. R. Riedel. Contribution from Scripps Institution of Oceanography.

Relevance in Testing

College entrance testing programs should be changed to meet new student needs and new educational patterns.

William W. Turnbull

Few agencies have survived since the turn of the century in America unless they have had a notable capacity for change. This proposition is true of agencies working in the field of education, as in other fields. Sir Eric Ashby has noted (*1*) that, in order to survive, educational institutions must be both sufficiently stable and sufficiently responsive—not an easy job! The College Entrance Examination Board, which has been a notably stable institution since 1900, has at the same time been no stranger to change. The appointment in 1967 of a Commission on Tests to undertake a fundamental reexamination of the College Board's testing programs demonstrates that the 1960's, and indeed the second half of the century, are likely to see the Board continuing as an institution responsive to changes in the social and institutional context in which it operates. In this article I speculate on some of the forces that may exert powerful effects in postsecondary education and on the College Board's programs in coming years.

The Board has not been merely the mirror of change. It has also served as a powerful agent of change in its own right. The Educational Testing Service Annual Report for 1961–62 (*2*) makes the following points.

> . . . during the lifetime of the SAT [Scholastic Aptitude Test], more opportunities for higher education have been opened up for more students than ever before in this country. In the 1930's, the availability of the SAT provided the additional method needed for identifying able students sufficiently well to justify the award of very large national and regional scholarships. Since then, the SAT and other tests similar to it have contributed to the effective selection of scholarship students in many colleges throughout the country.
>
> Another interesting development is the change that has occurred in the undergraduate bodies of colleges that have used the SAT over the last two or three decades. In the Ivy League colleges, for instance, the undergraduate body of the 1920's was a homogeneous one with respect to socioeconomic background and a heterogeneous one with respect to intellectual ability. Today the picture is almost reversed—undergraduates in these colleges come from widely varying socio-economic backgrounds and possess a generally high intellectual ability.
>
> A third development worth noting is the fact that at colleges where the SAT has been used as part of the admissions process for the last twenty or thirty years, the academic failure of enrolled students has been reduced to a minimal level.
>
> Surely more than coincidence is involved in the fact that these developments occurred during the lifetime of the SAT. Obviously, many other elements have also contributed to expanding opportunities for higher education, to better identification and encouragement of able students, to better guidance, and to reduction of the academic failure rate at many colleges. The SAT, however, has played its part. And the net effect has been the lifting of many of the earlier restrictions to higher education in this country.

These points are worth developing a little further. It has frequently been said that 10 or 20 years ago the most selective eastern private colleges and universities drew 80 percent of their freshmen from 150 or 200 secondary schools. Now, to fill 80 percent of their first-year places, they draw from upward of 500 schools. This movement has, of course, been fueled by the strong desire of institutions of higher education to broaden the composition of their student bodies. It has been made possible, however, by the nationwide availability of examinations designed to allow a good student anywhere to show to advantage, and to be considered favorably whether or not his school is known to the college.

For a time, perhaps, the influx of students from distant schools into prestigious Eastern colleges, made possible in part by use of the testing system, posed some problems for the independent secondary schools that could no longer be confident that their own students would find ready admission to the colleges that would surely have accepted them in an earlier day. In the

The author is executive vice president of the Educational Testing Service, Princeton, New Jersey. This article is based on an address presented in New York City on 17 October 1967 at a meeting of the Commission on Tests of the College Entrance Examination Board.

past few years, however, graduates of the independent schools have accustomed themselves to applying for admission to universities farther afield. Now it is these students whose credentials may have to be attested by the test scores. In the competitive grading system of a good private secondary school, their rank in class may be undistinguished; they frequently must count on high test scores to convince a faraway registrar of their real academic distinction.

It can fairly be said, then, that the Board's testing program has played and continues to play a significant role in broadening and democratizing the basis for the admission of students to a wide array of institutions of higher education in this country. This is by no means a trivial accomplishment. It has been achieved during a critical period in educational history, when we in this country have been engaging in the most dramatic extension of college education to young people of college age that the world has yet seen. It is instructive, however, to look behind the steady upward trend in the proportion of students continuing on to college and to ask about the qualitative differences in the student body introduced by this remarkable change.

Historical Continuity

As was implied above, during the early part of the century the operative selection factor for much, if not most, college-going was socioeconomic. But as we all know, college was seen by many people as the path to upward social mobility for their children—the avenue to a job with more prestige and better pay for a boy, or to a "better marriage" for a girl. As college came within the economic reach of the children of these families, and as means were developed for recognizing their ability to profit from collegiate study, able young people began moving into college regardless of their family backgrounds.

Still, it is fair to say that the scholastic abilities of the incoming students did not change radically before World War II. In the 1940's it was frequently pointed out that, for every high school graduate who proceeded into higher education, there was another of equal aptitude who did not. Increasingly, over the years, the numbers swelled, but scholasticaly the new clientele was not unlike the old.

What, then, of the educational programs into which the students were progressing? At all levels, and increasingly in the postsecondary years of education, we have seen changes in the nature of what has been taught. We have labored heroically to modernize the curriculum, especially in the last decade. And we have added courses in vocational and technical subjects, whether through the creation of special institutions or through the incorporation of these studies in the programs of comprehensive high schools or institutions of higher education. But the fact remains that, since 1900, for most students the core of the instructional program has remained the traditional academic disciplines. In 1964 it could still be said (*3*) that the nine literary works most widely studied in public secondary schools in the United States were *Macbeth, Julius Caesar, Our Town, Great Expectations, Hamlet, The Red Badge of Courage, The Tale of Two Cities, The Scarlet Letter*, and, inevitably, *Silas Marner*. And in a paper presented at the 1967 annual meeting of the American Council on Education (*4*), Philip Werdell said "for most students, undergraduate education continues to be an extension of the goals, the requirements, and the methods developed a century ago in response to the industrial revolution."

Whether or not one wants to adopt this viewpoint entirely, it is probably reasonable to assert that during the first half of the present century we have seen an increasingly large but academically quite comparable student body passing through a substantially unchanging array of educational offerings in both school and college.

I raise this matter of historical similarity or continuity, not to deplore it, but to point out the unremarkable fact that stable educational structures beget stable examination programs. More important, if a single educational program, albeit of varied levels of academic challenge from institution to institution, is expected to serve the great majority of students proceeding from school to college, a single program of examinations can reasonably be expected to serve the function of sorting students into the several rough ability groupings that match the levels of institutional demand. In the terms of the title of this article, a stable examination program, evolved carefully over many years, may well be most highly relevant to a stable educational system.

In such a comparatively stable milieu it should perhaps come as no surprise to us that a rather stable examination program has proved serviceable in the transition from school to college. The Scholastic Aptitude Test was introduced some 40 years ago. It is about 30 years since achievement examinations were introduced in something approximating their present form.

The objection will immediately be raised that the examinations are different. They have indeed been changed and expanded. We hope they have been improved. We are aware of at least some of their shortcomings, and we are working hard to vary and improve them further. Granting those facts, however, I would return to the assertion that in form, function, and essential content the tests now in use are recognizably of the same genus as those of a generation or more ago.

When the function of an examination program is to spread individuals along a single dimension, a unitary set of tests fulfills the function of revealing individual differences. The jingle fallacy that standardized testing leads to standardized students has been suprisingly long-lived. It is equivalent to suggesting that the standardized conditions of a race such as the mile will somehow lead to uniform performance on the part of the contestants. Every passing year reminds me more poignantly that this is not likely to be the case. The more rigorous the conditions of the trial, the more dependably are individual differences—including all the frailties of the human condition—revealed. Standardized tests have, in fact, been the single most powerful stimulus to the recognition of individual differences in this century.

Let us, however, pursue the sports analogy a bit further. A single contest, like the mile event, may serve reasonably well as an index of the respective running abilities of a large group of athletes. If we were setting up a 5-minute test of this athletic talent, a well-standardized mile race would perhaps work fairly well. But suppose we were trying to select a team, not just for track, but for a meet that would include pole vaulting, shot-putting, and perhaps even swimming. Immediately we would want a set of tests that would reveal accomplishments of much greater variety.

In this example, if we were selecting contestants for the decathlon, we might assign all aspirants a broad variety of athletic tasks to perform and choose those who were most proficient overall.

But suppose we were faced with some hopeful swimmers, some discus throwers, and so on. The indicated strategy would be to test each person's ability to perform well in just those events he wanted to enter, or thought he might want to enter. In short, we would tailor the tests to the abilities and plans of the individual.

I have made the argument that in the past we have had a high degree of continuity in both the college applicants and the college program; that—to oversimplify—we have had runners turning out for track. But is this stability likely to continue? In fact, there are many signs to indicate that the continuity is vanishing rapidly, and that we are facing a future characterized by a high degree of diversity in both the clientele and the programs available to them. The conclusion I want to suggest is that the examination program should undergo changes of equal scope and in the same direction—that *it* should be as diverse as the students and the educational programs if it is to be relevant to the new situation.

The Diversity That Lies Ahead

In order to develop some idea of the extent of the diversity that lies ahead, let us look first at the composition of the student body entering, or aspiring to enter, higher education. Here I should like to cite a few figures taken from just two of the several studies on this topic. Wolfle (*5*), in his data describing the situation in 1953, estimated that 35 percent of all high school graduates were proceeding to college. The Project TALENT survey (*6*) showed that, in 1960, 43 percent of all high school students were going on to college.

The increase over this period will surprise no one. What I find much more illuminating, however, is a breakdown of these overall percentages by ability groupings. The figures as I have derived them from the Wolfle and Project TALENT studies are given in Table 1. The data of the two studies were gathered in somewhat different ways, and I do not wish to imply that the comparisons can be made with any great precision. But the gross differences are large and revealing. In the third and fourth quarters of the high school ability range, the 1953 and 1960 data were essentially the same. At the top of the range, they were strikingly different. In 1953 only 48 percent of the students in the highest quarter of the ability range continued on to college, while in 1960 the figure was 80 percent. In SAT terms, these are students who scored in the area of, say, 450 or better, on the scale that runs from a low of 200 to a high of 800 points.

Table 1. Percentages of high school graduates going on to college, by ability group. The data are derived from Wolfle's study (*5*) and from the Project TALENT survey (*6*).

Ability group	Wolfle 1953	TALENT 1960
Lowest (fourth) quarter	20	19
Third quarter	32	32
Second quarter	38	54
Top (first) quarter	48	80

As for students who, academically, are among the top 10 percent of high school graduates, in 1953 about 54 percent of them were going on to college, and in 1960 about 89 percent. These are students who would be expected to score above perhaps 550 on the SAT.

This is a sharp and encouraging difference at the high end of the academic scale. I have no doubt that if I had the figures for 1967 they would show a further change in the upward direction. But obviously they cannot have moved up again as dramatically for these able students as they did between 1953 and 1960; already, in 1960, with 80 percent continuation of education for the top quarter of the class, we were approaching what may be a practical saturation level.

Let me say emphatically, although it may interrupt the train of logic for a moment, that we cannot afford to call 80 percent a near-saturation figure and go on. The 20 percent of the top quarter of the class who were *not* going on to college in 1960 were a vitally important group in many ways. As Ralph Berdie's (*7*) studies and others have been showing for years, the academically talented students who fail to go to college usually come from working-class families. What happens to their education is of tremendous significance to the structure of American society.

For the moment, however, I would like to return to the comparative figures to make a different point: that is, that in the years from the end of World War I to 1960 we succeeded in expanding markedly the proportion of students in the top-quarter ability group who go on to college, to the point where we had very nearly reached the limit for that group. This means that all of the further increase in the proportion of students going beyond high school must come from the second, third, and fourth ability groups. This is not a new thought, but I think the cold statistics of the SAT scale may serve to drive it home: these students are largely from the score range in the 200's and 300's. We can emphatically lay to rest the old assertion that, for every high school graduate who proceeds into higher education, there is another of equal academic ability who does not.

To look at the student body along the narrow dimensions of academic talent is, of course, grossly inadequate. For the students newly represented on college rolls, skills and aptitudes of quite different orders are probably the pertinent dimensions of comparison. It is symptomatic of our problem that we do not have the data to show systematically the ways in which the college-going population is changing with respect to dimensions other than scholastic aptitude.

Procrustes and Proteus

Having looked at the incoming student body and its increasing heterogeneity, let us turn to the institutions prepared to receive these students. Clearly, in education we are moving away from the relatively uniform academic program of earlier decades to a much more diversified assortment of offerings. At the higher-education level, the community college in particular offers a ready example of an institution that has accepted just this responsibility. It provides the academic equivalent of the hammer throw as well as that of the cross-country run.

In these circumstances, the day when a single entrance measure or an array of traditional academic measures was an adequate yardstick for all candidates has vanished forever, if indeed that day ever existed. The academic dimension is relevant to only a fraction of the tasks to be performed. We are at a point where we need to tailor the entrance measures to the particular abilities and aspirations of the individual students, rejecting the concept that all students should "prove themselves" on the same set of examinations.

If your Greek mythology is in good repair, you will recall that Procrustes was the gentleman—or villain—with the bed to which all wayfarers were fitted. I suspect it may have revealed individual differences superbly along

one dimension. Proteus, by contrast, showed infinite flexibility by assuming whatever form might be most fitting in the instant circumstances.

I am suggesting in this article that, for a well-defined and homogeneous form of education, the Procrustean model of examinations may be most relevant. As education varies its forms, however, a Protean examination program may be needed.

I do not wish to suggest that the College Board Admissions Program constitutes an intellectual bed of Procrustes. For several decades, in fact, each student has been free to choose those subjects in which he would be examined, subject to some constraints laid on by the college he has selected. In more recent years the Board has moved much farther and much faster to meet the individual's needs for a personal choice of examinations relevant to the educational options more widely available to him. Consider the advent of the Advanced Placement Examinations. One may agree that the use of these measures has grown because of the increased variance in the demands made on the student by secondary school programs, or that the causality has run the other way and that the availability of Advanced Placement Examinations has encouraged the schools to stretch their instruction. In fact, it has undoubtedly worked both ways. In any case, we see here an educationally important innovation which permits the advanced student to be examined in a fashion relevant to his own preparation.

Three Possible Stages

By now, it is probably apparent that I welcome the advent of Proteus. In this circumstance, you may ask where I think he is going to lead us, or should lead us.

I see three possible stages in the future development of the Board's tests.

1) For the immediate future, an extension of the recent trend toward the diversity of programs and of tests within programs. I call this the stage of the multiplex external program.

2) Next, a reduction of emphasis on external examinations and increased reliance on the record compiled by the student in his own school. I call this the stage of the school-based program.

3) Eventually, a system of examinations in which each student is presented with the individual questions most pertinent to his past preparation and to the responses he made to test questions earlier in the sequence. I call this the stage of the student-based program.

Let us examine each of the three proposed stages briefly.

Multiplex external program. The Board has already moved from the original "simplex" system of achievement examinations only—which was never so simple!—through the "duplex" system of scholastic aptitude and achievement, substantially into the beginning of a new "multiplex" system. The program is already made up of many tests of aptitude and achievement.

Two recent developments extend the options significantly. One is the College Level Examination Program, designed especially with the object of allowing each student to pursue his own educational course in his own way and demonstrate his competence at a time of his choosing. Another is the Comparative Guidance and Placement Program, which marks the first major move of the Board to recognize, and accommodate to, the varied talent requirements of 2-year institutions. Increasingly, then, the College Board program is preparing to meet the student on his own terms. The Board should, I believe, broaden still further the range of aptitudes, interests, and varieties of attainment for which it provides measures. These developments should be seen as extending rather than as replacing the present program.

The multiplex program seems to me to present the best hope of reaching the severely disadvantaged students—the potential college group that now and in the near future has no real prospect of demonstrating competence on traditional academic measures. At the other extreme, it offers the possibility of meeting the needs of the extremely capable students, for whom the regular admissions program may not be entirely adequate, and of whom we must not lose sight in our desire to recognize the proper claims of the educationally underprivileged.

A more highly diversified examination system should serve the placement purpose well, just as the Advanced Placement Examinations now provide a better match than the regular Achievement Tests for some students. Perhaps more important, it should permit more confident guidance of students in relation to a wide spectrum of possible institutions, curricula, and courses. It will permit colleges to provide descriptions of their student bodies covering a broader array of characteristics, and to include descriptions of both academic and nonacademic aspects of the college climate. It will be fiendishly difficult to manage!

By *managing*, I do not mean primarily the administrative activities of the Board and the Educational Testing Service, complicated as these activities may be in a multiplex system. I am thinking more about the problems posed for the counselor and especially for the students, who must find their way to the tests most relevant to them. The examining agencies have a responsibility to make this process as easy as possible, and this is a matter in which we should invest a substantial research effort. But it would be easy in dwelling on the difficulties to obscure the gains. Students are managing, with a little help, to find their way now among the Preliminary Scholastic Aptitude Test, Scholastic Aptitude Test, Achievement Tests, Advanced Placement Examinations, and the rest. With a reasonable amount of added help, they will, I suspect, find their way in a more extended spread of examination offerings. If you have a good road map and a little advice, you can find your way in some very strange territory.

Without expanding further on the multiplex external program, I would like to move on to the second proposed stage.

School-based program. To my mind, the ideal system is one in which the information needed not only for instruction and guidance but also for college admission and placement is gathered, organized, and used in the school. By the time a person reaches college-going age, he has obviously built up a very substantial record of accomplishment, differentiated according to the abilities and interests he has already displayed in school. The information gathered in the relatively brief time devoted to the external examination should, under the circumstances, be redundant.

It seems to me that we should work toward a system for collecting, on a regular basis, information about each child's performance as he passes through the school system—a record of his accomplishments in terms of grades and standardized tests, his interests, his extracurricular activities, and so on. We need to find a way of organizing this information efficiently, of expressing it in an unambiguous language that can be communicated to other people and

manipulated rationally, of storing this information and of retrieving it rapidly for use in pupil guidance within and between educational levels, including grades 12 and 13. We are rapidly developing the means of doing just that. The data-bank movement is proceeding apace, and communication both at a given educational level and between levels seems likely to improve with improving technology. The gap between grades 12 and 13 seems likely to shrink to the dimensions of the present gap between junior and senior high school. In these circumstances, the formidable mechanisms of national examinations may come to seem cumbersome indeed —vestiges of an earlier era, when college-going was the exception rather than the rule.

I suspect that such a school-based system of information storage and retrieval will tend to grow up first within large educational aggregates that look upon themselves as being in some way homogeneous. Typically, the unit may be a statewide system within which a data bank would be organized and maintained. Moreover, one might well expect that state or community colleges, which tend to draw most of their students from a known area and which emphasize guidance and placement above selection, would be the first to find such a system as good as, and probably much better than, one relying heavily on external examinations. If the signs are not misleading me, in a few years that description will fit the colleges to which the overwhelming majority of students will be going.

The problem will be more difficult for the highly selective institutions, which, in Richard Pearson's phrase, are heavily in interstate commerce. They have to be able to place their faith in the common meaning of records from different areas of the country and therefore will be the institutions most concerned with the adequacy of any system for calibrating school records that would succeed the common currency now provided by the Board scale. They may well have a need for an external testing program for some time after other institutions have been able to dispense with it. It is possible, however, that they will be able to rely on and compare scores from any one of several large educational regions, and will require external examinations only for students from other areas of the country.

I believe the conditions necessary for a workable school-based system are within reach and that we should take steps to hasten their attainment.

What are those conditions? First, that there be an adequate supply of good tests and other measures of performance available to and used by the schools. This condition is well on its way toward being met. The missing element is a way to express the results of both standardized tests and school performance in terms meaningful to postsecondary education, in a language at least as well understood, let us say, as the College Board scale.

The second condition is that school guidance be strong enough to bear the weight of a school-based system. And while guidance may still be far from perfect, it is improving rapidly. In the best systems the guidance program is already perfectly capable of operating a school-based system exceedingly well, and in a few years it may well be quite generally adequate to this complex task.

The third condition is that college admissions officers place increased reliance on the school guidance officers. This increased reliance is likely to develop as a consequence of demonstrably better guidance, especially as one looks at the within-state movement of students.

I see the school-based system as evolving out of the multiplex external examination system—or, if you will, as absorbing the multiplex system. When we have developed a wide variety of good examinations oriented toward the most diverse set of postsecondary school opportunities and designed explicitly for guidance and placement, I think the schools will want to use them early for their own purposes, just as they have wanted to use the Preliminary Scholastic Aptitude Test. When a common scaling procedure allows the colleges to interpret the results, I think they will be ready to accept the scores on such tests without the requirement of a separate, validating set of scores from an externally administered program.

One benefit I see flowing from such a system is that the emphasis on a long-term record in which test results are embedded will reduce the pressure that now builds up around the single, dramatic moment of the external test. In guidance and also in college admissions, the testorama will give way to the silent search.

Student-based program. I will take time here only to foreshadow the third stage—that of providing tests which have maximum relevance to the individual student. The provision of whole examinations geared to the preparation level of the individual student is a long step forward, since it makes the test contingent on the student's background. The next step should be to provide examinations in which the individual questions are contingent on the student's responses to previous questions. If you will permit the computer to raise its ugly tapes, I would like to put forward the prospect of an examination in which, for each examinee, the sequence of questions is determined by his response to items earlier in the sequence. The questions will be selected to provide the individual student with the best opportunity to display his own profile of talent and accomplishment, without wasting time on tasks either well below or well beyond his level of developed ability along any one line.

Looking farther down this same path, one can foresee a time when such tailor-made tests will be part and parcel of the school's instructional sequence; when the results will be accumulated and displayed regularly as a basis for instruction and guidance; and when the pertinent elements of the record will be banked as a basis for such major choice points as the student's selection of a college.

The three stages I have somewhat artificially created represent, to me, steps toward relevance in testing: relevance to the educational program and to the individual student—his past accomplishments and his future plans—in an age when diversity and change rather than uniformity and stability will increasingly dominate the educational scene. If the College Board should choose to follow paths such as these, it has ahead of it the enormous job of transforming drastically the nature of its activities, not to mention those of the Educational Testing Service. Such a transformation is never easy to contemplate. Even the best and most selfless institutions inevitably tend to crystallize around their procedures rather than around their purposes. But the real business of educational institutions is to find the best solutions to educational problems rather than to perpetuate the solutions of the moment. The College Entrance Examination Board will, I am sure, supply the imagination and the flexibility required to shape its programs to fit the new needs of education and of our society.

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NEWS AND COMMENT

Federal Health Programs: A Major Reorganization Is Under Way

A significant reorganization of federal health services has been approved by President Johnson as part of the third major effort in this decade to bring the sprawling, rapidly growing federal health establishment under better administrative control. Previous attempts at reorganization are said to have misfired somewhat, but federal health planners believe this latest effort will result in better coordination of federal programs and in more rational relationships with universities, medical schools, state and local agencies, and other nonfederal health organizations. As a result of the changes, the Public Health Service (PHS), an agency with a tradition dating back to 1798, has virtually passed out of existence.

The need for reorganization arises from the dramatic change in size and scope of federal health activities that has occurred in the 1960's. Federal expenditures on health have increased almost fivefold since fiscal year 1961, largely because of the Medicare and Medicaid programs, but also because of new programs in health manpower, environmental health, consumer protection, and the delivery of health services. Moreover, the emphasis of the federal program has changed. In fiscal 1961, more than two-thirds of federal health expenditures went to provide care for military personnel, veterans, their families, and others, while less than one-third was expended for health services for the general population. In 1969 the reverse is true—well over two-thirds will be expended to benefit the total population. These changes in size and focus "impose a greatly increased and changed demand on already overtaxed health resources," according to a report to the President by Wilbur J. Cohen, Secretary of Health, Education, and Welfare (HEW).

Two previous efforts to gear up the federal health establishment to meet its increasing challenges apparently failed to meet the need. In the early 1960's, a task force within the Public Health Service (PHS) recommended numerous changes, including establishment of a major bureau to cope with environmental health problems, but legislation to effect the changes got caught in congressional tangles and was never enacted. Then, when John W. Gardner, noted for his ideas about organizational "renewal," became secretary of HEW in the Johnson administration, a successful attempt was made to reorganize the PHS along lines suggested by a committee headed by John J. Corson, a management consultant at Princeton University (*Science*, 17 June 1966). Less than 2 years after that reorganization had been proposed to Congress, however, HEW officials and Corson were planning still more changes. Top HEW officials say the first reorganization was headed in the right direction but simply didn't go far enough. However, one leading health planner says the first reorganization "didn't make any sense anyway—they just sort of stirred things around and renamed some bureaus."

The chief features of the latest reorganization effort, involving changes announced within the last few months, include a plan for greater government-wide coordination of federal health activities and an internal reorganization of HEW's own health programs.

The general outline of the internal reorganization is said to have been written into the President's health message this year, but was cut out before the message was delivered on 4 March. Instead of announcing reorganization plans, the President simply directed the secretary of HEW to "submit a modern plan of organization to achieve the most efficient and economical operation of the health programs of the federal government." In the wake of that directive, Secretary Cohen has been periodically announcing organizational changes.

The plan for greater government-wide coordination of health programs was approved by President Johnson in mid-June. The President announced that he would designate Secretary Cohen, by executive order, his first chief adviser on health policy and programs and would make him responsible for coordinating the often conflicting health policies of federal agencies.

Cohen's report recommending such a step had noted that, although HEW administers some 70 percent of all federal expenditures for health, it does not exercise policy guidance over the broad federal health effort. The report warned that "important and far-reaching decisions are being made pertaining to federal health programs without adequate attention to their impact on the total federal effort and its goals." There is no broad consideration, for example, of whether the drafting of physicians to care for civilian dependents of the military in this country is a wise use of "the critically scarce physician pool." Nor is there broad consideration of the wisdom of providing expensive kidney dialysis through veterans' hospitals without making it available to the general population; or of the relative importance of competing research programs in different agencies that depend on the same supply of scientific talent.

In attempting to bring more unified direction to the entire federal health enterprise, Cohen will establish and head a new Federal Interdepartmental Health Policy Council composed of ranking representatives of the various agencies that play substantial roles in the health field. Such interagency