

GRAIN AND RAY WIDTH IN LIVING AND FOSSIL NYSSA

	2	3
wood coarse-grained, fibers large and saurish	# 102- 356	# 309- 414-515
	# 48- 343-1630	# 111- 363- 373
wood fine-grained, fibers narrow and rounded	# 44-101-106-114- 121-357-1350-1818- 1935-1959	# 103- 1956
	# 49-101-106-114- 121-357-1350-1818- 1935-1959	# 103- 1956

1818, 1956, 1959: Pendleton, Oregon (Miocene?)
1350-1359-1630-1935-1938: Payette Region, Idaho (Miocene?)
All others: Central Washington (Russell Flora) Miocene

1. Size and shape of wood fibers.
2. In cross section.

species, *N. knowltoni*) may represent the foliage of the same botanic species which furnished the *Nyssa* fruits described (as *N. hesperia*.)"

Somewhat more recently Dr. Roland Brown has discussed the nominal species of *Nyssa* in the Pacific Northwest (36) saying, page 184:

"The two leaves figured here show that occasional pointed lobes or teeth on leaves of this species indicate a probable relationship with *Nyssa aquatica* Marshall, of the southeastern United States. There being no other detectable leaf species, it is assumed that the characteristic seeds called *N. hesperia* belong to *Nyssa knowltoni*."

Despite this apparent tendency to reduce the nyssas of the Pacific Northwest mid-Tertiary (Miocene) to one nominal type, the woods show the variation exhibited by the three common species of present day eastern America — *N. aquatica* Linn., *N. sylvatica* Marsh., and *N. ogeche* Marsh. We have, therefore, the choice of one extremely variable Miocene species or as many or more species as represented in eastern

America today. Each of the above mentioned modern species has its typical counterpart in the fossil woods appropriately marked (italicized).

In the chart the living and fossil types are compared as to ray seriation, and fiber diameter and shape. Both living and fossil woods show considerable variation in ray heterogeneity which has not been evaluated successfully for this report.

As projected upon the chart, the living specimens represent examples from the Hough series belonging to the Department of Paleobotany of the University of California, or examples of a series taken from various portions of the range of the living genus in America. I am indebted to Dr. Ralph W. Chaney for use of the former and to Dr. I. W. Bailey of Harvard for the latter.

The chart seems to indicate that the fossil woods provide the counterparts of all three modern American species of *Nyssa* with a more general grouping in the area (lower left) where *N. aquatica* and *N. sylvatica* overlap. There is at least one good example (515) of the *ogeche* type and it is here cited as the

type for the genus as a whole, as well. The types for the other modern species are indicated as numbers 98 and 103. A slight departure from these three types (upper left and center right) may represent error in placement or inclusion of additional extinct species, or greater variation on the part of the ancient wood types.

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AN EXPERIMENT IN EDUCATION:

THE NAVY V-5 AND V-12 PROGRAMS

WHITMAN COLLEGE

In the larger symposium to which the colleges and universities of the Northwest are contributing the question that is being asked of all institutions is *What were the Lessons in your Military Training Program/s for Science Education; for Education in General*. This evaluation was made for Whitman College by a panel of members of the faculty and administration of Whitman College, chosen to represent both the required and elective curricular areas of the Navy training programs, as well as their over-all administrative aspects. In this way, it is believed, a representative cross-section of faculty opinion and evaluation has been obtained.

The panel met as a group several times to discuss general policies and procedures in preparing the symposium, but the separate contributions were written largely independently of each other. It has seemed best, therefore, to present the material in this fashion, for a number of reasons, not the least of which is the value of preserving the individual contributions as complete units, so that differences as well as agreements of opinion may be all the more conspicuous. This method inevitably produces some unevenness and diversity of presentation, but it is the belief of the panel that it also provides, more accurately than any other method of presentation, a truly representative cross-section of Whitman faculty opinion.

THE NAVY V-5 PROGRAM

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The nature of the V-5 Program must be well defined before any attempt is

made to assess its value as a possible source of contribution to the amelioration of the present liberal arts program, with a view to adjusting this latter so that it may better qualify to meet the specific needs of post-war education.

This is the third article in this series. Anyone wishing copies of this article or the other articles in this series should write to Dr. J. W. Hungate, Eastern Washington College of Education, Cheney, Washington.

The objective of the V-5 training was to prepare men to react automatically to a large number of specific conditions to be encountered in a single field: aviation. With the possible exception of Meteorology the program relied mainly upon memory training to prepare the student to cope with situations demanding a practical knowledge of the functioning of aircraft (emphasis in the V-5 Program was laid on actual flying of aircraft—not the theoretical aspects of flight). Two factors, then, make a clear-cut separation between the fundamental nature of the V-5 curriculum and the goal of the liberal arts program: (1) V-5 prepares for narrow specialization, (2) V-5 relies mainly upon memory training.

Aside from the above considerations there are certain other features which tend to differentiate V-5 from ordinary college procedures to such an extent as to make them incompatible. The V-5 trainee had each hour of his day planned and overseen by teachers or officers. He could exercise his initiative and individuality only within a very narrow scope. Such a narrowing of the student's freedom is basically unacceptable to the American philosophy of education, and resembles more the European system.

If the fundamentals of V-5 training can scarcely be considered as potentially capable of offering major ideas for application in the broader college field, still, there are certain minor points in which it excels, particularly in the question of procedure. The V-5 training accomplished certain things of detailed nature whose applicability to teaching in general should not be overlooked:

- (1) Extensive and effective use of visual aids:
 - a. Projectors and films used for most subjects. These films were carefully prepared and clarified many difficult points for the cadets, particularly in the field of meteorology.
 - b. Daily weather maps.
 - c. Cartoon poster material (changed daily) displayed in classrooms to emphasize various points.

- d. Books consisting of a series of cartoons illustrating various phases of a subject.

- e. Extensive use of cartoons throughout various serious texts (prepared by the Navy).

- (2) Use of mechanical equipment directly in connection with all phases of theoretical discussion: airplane parts, navigator's equipment, calculating apparatus, etc.

- (3) Plentiful standardized equipment placed in the hands of each student (no student hampered for want of sufficient and adequate texts or apparatus).

- (4) Strict system of obligatory attendance in all classes. This is somewhat inconsistent with civilian tradition but it has its advantages.

- (5) Supervision of teachers and teaching methods by the Civil Aeronautics Authority (a question scarcely arising in the case of experienced and academically qualified college teachers, but a point to be considered).

- (6) Frequent testing and grading were called for weekly. This seems impossible for college work, but it suggests that a more frequent testing of students tends to increase both their interest and their efforts.

- (7) Objectivity in testing was obtained through a system whereby the teacher had nothing to do with the final examination. He neither prepared it or graded it.

- (8) Cadets falling below a passing grade were restricted, i.e., forced to spend week-ends in their quarters studying. (It is unlikely that any parallel method of force could be applied outside a military system.)

In brief, it appears that certain details of the V-5 Program could be profitably studied and perhaps in some cases advantageously adopted for use in the liberal arts program, but that its basic principles are too foreign to the objectives of college-level training to be viewed as of any value in the broader field of higher education.

The most outstanding benefits of the Navy V-12 Program for postwar liberal education are, it appears to me, three in number.

First, the V-12 Program, itself an adaptation of the liberal arts curriculum to the needs of war, specifically the training of Navy officer candidates, has afforded proof to the College of the vitality of the liberal arts, and corroborated belief in their value and significance for the postwar period. Training in responsible leadership, in intelligent thinking, in the mental disciplines of precision, analysis, synthesis and perspective, has always been the aim of Whitman College, and this kind of training has also been a basic principle of the V-12 Program. The courses of the Program have, with few exceptions, been those normally offered by the College, and the educational philosophies developed by Whitman over a period of years have needed no significant modification. The primary importance of this single fact for the future of liberal education can hardly be overemphasized.

The second important lesson of the V-12 Program is its demonstration of the value of the fully-prescribed curriculum as opposed to the freely elected program. The Navy has been interested in certain very definite, short-term objectives, it is true, but the implications of this method in application to the more far-reaching objectives of postwar liberal education are obvious. V-12 curricula are predominantly scientific, but within the framework of each curriculum the pattern is that of liberal education, and, as a result of the very definite objectives of each, an integration has been achieved such as was seldom true of pre-war college curricula. This, together with the better student motivation deriving from these same objectives, has produced, despite, or, perhaps, because of the acceleration in quantity and emphasis upon quality, more student work and better than average scholastic results, without any lowering of academic standards.

THE NAVY V-12 PROGRAM

CHARLES J. ARMSTRONG, Director, Navy V-12 Program
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Finally, the V-12 Program in Whitman College has added impetus to the development of the student counselling and guidance program, and has clearly demonstrated the importance of such a program, even more fully developed and carefully planned, for the postwar period—one which will be geared to the needs both of returning veterans and of younger students, whose preparatory education has been subjected to the stresses of war time. The contribution to the success of the V-12 Program, from the point of view of student motivation and attainment, made by an effective counselling program, which was centered in the office of the V-12 Director, but which was augmented and expanded by other interested faculty members in student conferences, and implemented by the intelligent use of diagnostic and measuring tests, has been, we believe, a large one. The increased requirements of the V-12 Program have put upon students a more stringent necessity for the proper use of time and effective methods of study than ever before, and the counselling program has therefore been chiefly directed toward these ends. It may well be that the success of the liberal college in meeting the needs of the future will hinge upon the effectiveness of its counselling program.

There are in addition many lesser advantages accruing to the College as a result of its wartime experience, which can be only briefly noted here. The use of audio-visual training aids, developed by the Navy far beyond the limits previously imposed on colleges by lack of resources, has increased student interest in subject matter, and produced more work in less time. New techniques of testing and classification have been worked out, and valuable experience gained in the addition of some new courses to the curriculum or the adaptation of existing courses to new requirements. Innovation in college procedures has acquired a new respectability as a result of the frequent necessity for speed and dispatch in making decisions and

achieving results. This will undoubtedly prove salutary in meeting the many as yet unknown demands of the postwar period.

THE NAVY V-12 PROGRAM

DOUGLAS V. McCLANE

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This Registrar faced the opening of the Navy V-12 Program with combined apprehensions and satisfactions. The immediate satisfactions were represented in the knowledge that Whitman College was undertaking a very important special job in the service of the nation, and that its particular war assignment provided opportunity for the College to serve as it was best fitted to serve, namely, to maintain its traditional pattern of liberal arts coeducation and at the same time operate strictly in accordance with the Navy's wishes.

Any apprehensions centered around the question of how the Navy V-12 Program would affect the gyroscope in a registrar's office machinery. The V-12 was not long in operation before we realized that we were dealing with a program which in many respects approached our vision of perfection.

Most certainly there were adjustments which had to be made—extra office assistance had to be secured; the total number of individual records to be kept increased, but only directly with the increase in new enrollments the program occasioned; some extra records of scholastic performance had to be kept; et cetera.

But totally the dispatch and efficiency of the V-12 Program, which is directly felt in a record keeping office, has offset entirely in end results the effect any additional work the Program has caused the Registrar's office.

There are many small satisfactions, such as the following:

(1) The fixing in advance of carefully determined classifications of study which when once set up on the registrar's books seldom change. In the cases of "regular" V-12 trainees the Navy has

In sum, it appears to me that this college's experience with the Navy training programs will in many ways improve its ability to undertake its future tasks.

prescribed curricula; in the cases of "irregular" V-12 trainees, a carefully conducted counseling program in the V-12 director's office helps to bring about study classifications in which there is seldom occasion to make changes.

(2) The establishment of a speeded-up registration procedure encompassing many efficiencies.

(3) The experience of dealing with young men who are in every respect college students, but who are impelled to be completely responsible in their relationships with the college administration.

But more important than citing factors and techniques which make work a pleasure is a scrutiny of some of the results of the V-12 Program as revealed by the registrar's records.

(1) Enrollment figures have increased. Not that there has been in the College during any one trimester a markedly increased number of students, but the turnover of V-12 trainees and the addition of a summer trimester have meant that during the academic year 1943-1944, for example, there was a 23.9% increase in total enrollment over the academic year 1942-1943.

(2) The average per-hour student load has increased. During the winter and spring trimesters of the academic year 1943-1944, 365 V-12 registrations averaged 18.6 hours per trainee. Over the same two trimesters 654 civilian registrations averaged 13.8 hours per student. The combined Navy and civilian per hour student load was 15.5 hours. In short, V-12 trainees carried an average student load of 4.8 hours per man heavier than civilian students carried.

(3) A comparison of grade point averages of V-12 and civilian students dur-

ing the winter and spring trimesters of 1943-1944 is as follows:

Composite grade point average, both trimesters: V-12, 2.489; Civilian, 2.680.

It would seem that the higher grade point average attained by civilian students is attributable most largely to the fact that the average civilian load, as explained above, was 4.8 hours less than the average load carried by Navy men. Further, the subject matter in Navy curricula, which includes a preponderance of science, without question is more difficult than that contained in the classification of the average civilian student.

(4) It is a matter of pride to the College that the academic achievements of the men in the V-12 unit have constantly improved. During the first three trimesters of the V-12 operation the grade point average of the unit improved respectively as follows: 2.368, 2.444, 2.500.

(5) Scholastic failure at the end of each trimester on the part of V-12 trainees has ranged from 15% to 20% of the unit. This is a somewhat higher percentage of failure than is normal among civilian students. Civilian students are admitted to Whitman selectively and the method of selection of V-12 trainees means that they too, in the main, are a select group of students. It seems accurate to assume that civilian and Navy students are of essentially the same competence, but that the higher percentage of failure on the part of Navy men is caused by three factors: (1) V-12 trainees carry heavier loads; (2) a few seamen are unfitted for V-12 training or are assigned to the Program against their personal wishes; (3) this was more true of the early days of the V-12 Program than of the present) (3) the method of separation for poor scholastic performance is rigid. A special V-12 Academic Board has been established, one duty of which is to review carefully the scholastic achievement of each man. This

Board has devoted long hours to its work and has carefully recommended for separation from the Program each man who seems to lack the mental ability and personal qualifications of an officer.

(6) With only two or three exceptions the courses offered by Whitman College in the V-12 Program correspond closely to those normally offered by the College. Beginning November 1, 1943, they, with the exceptions noted, have been offered to Navy men and civilian students alike. All courses completed by Navy men have been credited towards the individual's A.B. degree, and a number of V-12 trainees have been or will be graduated by the College. Only minor modifications in degree requirements have been necessary in graduating them under the Accelerated Degree Program of the College.

(7) A few faculty additions have been necessitated during the operation of the V-12 Program, but in some cases these were replacements of personnel which had been called to war service, and in other cases they are part-time instructors. The average teaching load of the faculty has increased, but not in every case. In a very few cases at first some instructors carried as much as 22 hours of teaching. These teachers gradually have been relieved, and at present full-time instructional loads range in the majority of cases between 16 and 19 hours, with science teachers in the main carrying the highest number of contact hours.

In a longer and more comprehensive report many more facts could be given and conclusions drawn by the registrar and his staff concerning the V-12 operation. Space limits cause this report to be inadequate. However, it is hoped that this brief summary will convey the impression that from the registrar's point of view, and also from the institutional point of view, our experience with the V-12 Program is highly satisfactory.

THE NAVY V-12 PROGRAM

LEO C. HUMPHREY

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At the termination of the spring, 1945 trimester, Whitman College will have accumulated two years experience with the Navy V-12 Program. In this short time, the Program has left its mark on our institution. While its impact has been felt most keenly in the science division, our whole institution has been influenced considerably by the presence of Navy officers and service men on our campus.

Within the limits of the writer's experience, the presence of the V-12 Program on our campus has been of great value. It has given us an acute consciousness of the fact that we are making a substantial contribution to the war effort. It has been inspiring to realize that our curricular offerings do have a practical and significant use in the business of war, and it is evident that we have realized considerable success in communicating to our students enthusiasm for the subject matter in our courses. In other words, it has served as an incentive to our faculty to do better teaching. The necessity for pointing toward a definite objective has also brought us the satisfaction of working toward a common goal. Departmental lines have been forgotten, and a greater cooperation between different divisions of the institution has resulted. Every member of our V-12 faculty has endeavored to assure himself that our V-12 students received the best possible academic training. We have given more individual instruction than ever before. Some new techniques, made available through the Navy, have been utilized to make our instruction more effective. We have scrutinized even more closely the study habits of our individual students, and as a result, failures in our courses have been fewer than we have experienced heretofore. It is hoped that this increased efficiency in teaching will carry over to the post-war period.

There is no question but that the discipline to which V-12 trainees must adjust themselves has been of great per-

sonal benefit to the young men in this program. They have been taught to keep appointments punctually, and to maintain regular hours. They have been forced to get sufficient sleep. Politeness and regard for others have been stressed in a manner that could be accomplished only under military regulation. These instructions have had a great influence on their behavior in the classroom. Absence and tardiness have been very rare, and attention in class has been much improved. It is hoped that trainees will retain the fruits of this discipline when they return to civilian life.

Presence of the V-12 Program on our campus has created some problems, also. Because of the nature of the Navy curricula, there has resulted an unusual emphasis on scientific training. Consequently, the faculty and facilities of our science departments have been burdened to the limit. This burden has been felt most keenly in our Departments of Mathematics, Chemistry, Physics and Physical Education. From the point of view of the liberal arts objectives, this influence has made us somewhat lopsided.

Since nearly all of our housing facilities have been utilized by V-12 students or by women, it has been necessary for our upper-class civilian men to live in private homes off the campus. These students have felt keenly the lack of a spirit of unity, and it is hoped that this situation may be improved soon.

During the past three years many articles have appeared in the newspapers, popular magazines and professional journals concerning the so-called "accelerated program" under which the various military programs have operated. Acceleration in education, especially of the technical variety, was represented as a war-time necessity. Many enthusiasts have advocated a continuation of accelerated education even after peace has been declared. It is the opinion of this writer, however, that as

soon as possible the accelerated program should be discontinued. For a short time it is possible for a student to carry a heavy academic load, but it appears evident from our experience that many of the benefits of education both cur-

THE NAVY V-12 PROGRAM

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After five terms' experience teaching in the V-12 Program I am left with profound doubts as to whether or not the V-12 and other similar armed forces training programs will influence to any great extent post-war education. Except for the general war-time speed-up, elimination of vacations, and fairly heavy credit hour load, the V-12 Program is very nearly a standard introductory technical course. The Program is highly condensed and heavily weighted with mathematical and physical courses.

As regards the mathematics and physics course, the Program is very well integrated both as to course content and sequence of courses. Detailed curricula such as those of the V-12 offer one possible suggestion for post-war college planning, particularly for returning service men. Many departments could profitably spend time in outlining detailed curricula and sequences of courses designed for specific goals. Too little thought is put into proper sequence, and even content, of courses.

Experience in the V-12 Program has convinced me that the general "speed-up," both in number of courses taken per term and the elimination of vacations in the war-time college program, should have no place in post-war planning. I have invariably observed, with few exceptions, a slackening of interest, with a consequent drop in morale, in the majority of V-12 trainees during their third and fourth terms. This I judge to be primarily due to a fatigue factor. Time is still a paramount element in education.

In a curriculum loaded with mathematics and physics courses, the general success of the V-12 trainees offers one more piece of evidence of the utter falsity of the general pre-war student attitude, "I can't do math and physics." Of course it must be remembered in this connection that success in these courses is required for further advancement to officer training of the V-12 trainees and hence a powerful motivation factor is present, which is lacking in other cases.

In connection with the technical courses, particularly physics, experience in V-12 leads me to one other conclusion. The traditional laboratory procedure in first year physics courses needs complete recasting. Where large groups of students are handled in the laboratory, nearly always the procedure degenerates to a cut-and-dried repetition of standard experiments. The student enters the lab, makes certain measurements, fills in a prepared form and leaves—all too often with no idea of what he has done or why he has done it. Nothing could be more foreign to the spirit of experimental science. Even at the first year level, physics departments should provide facilities, at least for good students, to experiment on their own initiative.

ricular and extra-curricular, are lost when he is compelled to accommodate himself to a concentrated high-pressure educational program. Likewise, faculty members cannot give their best under such a program.

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I doubt whether the extreme technical bias of the various war training programs should or will carry over to post-war practice. While planners should remember the horrible vacuum of physical training and knowledge, found in the products of our educational system at the start of the war, and attempt to prevent a repetition, any attempt to "high-pressure" students into taking too much technical training will defeat its own ends.

THE NAVY V-12 PROGRAM

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In dealing with ideas and general problems, it became evident to me at an early stage that the general intelligence of V-12 trainees was high. There were definite points, however, at which their thinking became inadequate, and these points correlated quite obviously with the extent of their vocabulary. There were many concrete instances in which an individual trainee, after he had acquired some new words and with them new ideas, changed his opinion as a result of increased understanding.

By comparison with civilian students, the average V-12 trainee is woefully deficient in his knowledge and use of grammar. There is only one other language skill in which he is still worse: spelling. This spelling deficiency offers the clearest clue, I believe, to the basic reason for the unusual weakness of the average male high school graduate in writing. Freshmen men exhibit ability in speaking in contrast to their ability to write clearly or correctly. Evidently, the writing situation has never been made convincingly real to them by their teachers or by their environment generally, whereas they have come to realize that the ability to speak effectively is of real value. As a result, their ability

in writing is still frequently at about the sixth grade level. The emphasis which the Navy put upon skill in writing offered a new and real motivation for the first time to many of the trainees.

Coupled with the deficiency in written composition was a low reading ability, both resulting from identical causes: the world of the written word has too long remained unreal and unfamiliar to male students. This deficiency in reading skill has been, I believe, the major contributing cause to the difficulties which trainees have encountered in all their college subjects.

Lastly, may I note that there was apparent a notable difference in achievement between those determined to complete successfully the V-12 Program and become officers, and those to whom V-12 was not an adequate motivation. Some of those students who entered with notably poor training in English improved phenomenally because of an almost fanatical determination, a determination seldom observable in peacetime. In spelling, however, few students made much improvement; learning the ability to spell must start much earlier than college.

THE NAVY V-12 PROGRAM

NORMAN E. RICHARDSON

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Because of the amount of time allowed to certain students for electives in the V-12 Program, one of its most important features, many of the trainees were able greatly to broaden their education. A small percentage of these students took work in the philosophy department—some because they wanted to, others to fill in the blank spaces on their schedules. Since ours is a small college the instructor was able to get to know these men rather well; and thus whatever these suggestions lack in breadth may be made up for in terms of depth.

While there was some free time for electives the main emphasis of the program was on the development of specific skills. By concentration on these areas the Program was able to speed up the acquiring of these techniques. One of the more general conclusions which is being drawn from this experience is that this speeded-up approach can be applied to the whole liberal arts program. Another interpretation and one which I believe to be much more valid, can be made. The liberal arts education attempts to give the student perspective

and to develop his ability to use his mind. This cannot be speeded up—it is a slow maturing process. The development of technical skills, on the other hand, can be learned much faster after a student has had this liberal education, and much better learned at the hands of the company for which the student goes to work. With the possibility of large government subsidies for technical training the colleges should be on their guard against selling their liberal arts education for a mess of technical training.

A second conclusion is that many of the students are interested in trying to integrate the knowledge which they are getting in various courses and departments. While mine was a selected group of students, it did include many of the highest academic averages, and for this reason I believe that this concern of theirs should be given real consideration. From the point of view of the teaching of philosophy it suggests that we should turn from the problem approach to the presentation of whole systems. From the point of view of education as a whole it suggests that there is a real need and demand for an integrated education, a thing which we have sadly lacked ever since the elective and vocational approaches came in with their consequent disintegration.

Another conclusion should follow immediately on this one—the practical concern of the students. They want something which will "pay off". Many of them are thinking in purely financial terms, but some of them are thinking in broader and longer terms. They want something which will help them as individuals to live better and fuller lives, and through them, the society of which they are a part. This does not mean a demand for the progressive or experimental approach in our education, but rather an approach which will point out the practical and contemporary applications of the broader ideas of our intellectual and cultural heritage. Most of the teaching of the social sciences has come to a safe stop far before contemporary issues. What these more mature students want is an objective presentation of the overall ideas which have

been tried throughout man's history, and an application of them to the contemporary scene. All of which means that our post-war education must get off its secondhanded basis, roll up its sleeves, and get into the contemporary scene, not as the advocate of any particular program, but rather as the means of presenting alternative programs and their historical consequences. Education must become a resource of democracy, not an escape from it.

One final conclusion, and this from the point of view of all the students with whom I came into contact, especially those found in philosophy classes merely to fill out their schedules. There is a serious lack of motivation on the part of all students. The immediate job before them, training for the winning of a war, served in most cases to carry them through the programs. But there was no long-term motivation, whether it be political, ethical, or religious. Coupled with this I found a cynicism with regard to man, individually and collectively. As the result of the combination of these two attitudes there was an increasing tendency to hand over to someone else the problems which do not immediately concern themselves. Here, it seems to me, is the fertile soil for some sort of fascism. It does not at all mean that we should embark on a program of indoctrination, which would simply supply the seed for which the soil is so well prepared. Rather, the harder job is ours, that of providing, by democratic methods, some sort of basis for democratic motivation. To me this means a re-emphasis on the social sciences, and on those general principles which have been the basis for man's social life: ethical ideals, law, and religious belief. But how are these to be taught? Surely they cannot be taught in the so-called "objective" manner which we have been using. Instead, we as teachers must come to a greater appreciation for the role of these elements in our culture, and a greater understanding of them, first. Then, by trying to develop a similar knowledge and appreciation in our students, democratically, we may be able to do the job that is ours today.

THE NAVY V-12 PROGRAM

FREDERIC F. SANTLER

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Much has been said about the so-called G. I. language program. Recent magazine issues abound with articles describing in glowing terms the advance in language teaching based upon the innovations and experiences of teaching modern languages in the armed services. By and large, however, the method of language instruction in the Navy V-12 Program at Whitman College remained in most aspects, with slight modifications, a continuation of procedure followed in pre-war days.

Whereas normally in language study the course begins with a study of grammar and progresses via courses in reading, writing, and conversation to courses in literature, it seemed practical, from the very onset of the Navy Program, to look to the course in Scientific German or Medical German as the terminal course. German in the hands of a V-12 student was not a humanistic discipline, but a tool in the furtherance of his study of the medical science. Because of this, some of the text books used for civilians had to be replaced with new ones, specifically chosen for the purpose of attaining a so-called reading knowledge. Conversation was by no means eliminated but its scope had to be revised to fit the new demands. Since cooperative tests were used in term examinations, some comparison between civilian and Navy achievements was pos-

sible. I realize, however, that such a comparison based upon standardized tests may be questioned as to its validity since the objectives were not entirely identical. The time factor must be considered. Whereas the civilian beginning language courses met five times a week for fifty-minute sessions, all Navy courses were three-hour courses. Naturally, in spite of the selectivity of the Navy V-12 complement, industry alone was not sufficient to offset the loss of two weekly class sessions. Sometimes V-12 students, after having taken the first or second trimesters of German, had to skip the third and fourth in order to acquaint themselves with the contents of the terminal course, i.e., Medical German. But this is a war program and such forced acceleration must be viewed in terms of the existing emergency. With all these disadvantages, hard work on the part of the instructor and students succeeded in achieving results which compared favorably with civilian progress.

Innovations in the method of instruction were limited to new text books, the use of phonograph records for conversation and the use of a German as a native informant, plus many unscheduled conferences with V-12 students. In all other respects the Navy Program remained a civilian program, conducted in the same manner and graded by the same standards.

THE NAVY V-12 PROGRAM

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The men of the V-12 unit at Whitman College seemed to me to be somewhat above the average in ability. Among them were a number of especially bright persons and a few who could be called slow thinkers. From the standpoint of ability they were a rather satisfactory group of people to work with.

I question very much the validity of the statement that the V-12 Program

line of approach really "took," the men concerned will have fewer adjustments to make in their thinking in the period following the war.

The V-12 Program should furnish the country at large with a number of clues as to the kind of higher education that should be offered after the war. My first suggestion along this line is that educational opportunities should be made available to all qualified persons, whether former members of the armed forces or not. As the new generations come on, there will be many worthy young people who cannot afford higher education, and our policy should make it possible for them to get the education they need and want. I believe also that while the government makes funds available for former members of the armed services, the nature of the education to be offered and the methods of instruction by which it is offered should be decided by the individual institutions concerned. These educational opportunities should not be offered on the basis of "acceleration," as conceived in the first part of the present war. The system should be based on the assumption of the right of the student to think for himself, and should provide ample time for him to mature in the field of general education and in some field of specialized study. It may be hoped that the continuance of the policy of educational freedom may be to some extent a defense against the growth of Fascist tendencies in thought in this country in the post-war period. The tendencies in that direction will be more than sufficient in any case, and it would be statesmanlike to maintain an educational policy that would encourage the growth of independence of thought.

was necessary to have it so. A number of weeks of such a regime could not enable the young man in question to be intellectually alert. From such a situation involving many more than one student, unusual achievements in the field of history could not be expected to arise. Few indeed were the men who did anything more than the minimum requirements, and it should be unnecessary to remark that many did less.

A word ought to be said about the attitude of V-12 men toward the work in history, not considering, of course, the question of their physical energy. In general, it may be said that they have been only slightly interested in history for its own sake, but that when the historical material helped to cast light on a specific problem of the present, either national or international, they showed a very definite interest. This was especially true with regard to class discussion. I am not able to say, however, that the interest shown in this connection carried over into more extensive reading. The V-12 Program does not seem to me to encourage extensive and thoughtful reading.

It should be remarked that throughout the trimesters devoted to the study of the historical origins of the present war it has been possible to present the material in an open-minded way. This thought has run like a thread through the courses—wars are not generally the result of the wrongs committed by one country or group of countries. Occasionally it was possible to sense opposition of some student toward such a point of view in the class room, but in general the students have reacted satisfactorily to it. It is my opinion that if this