CHAPTER XIII

THE TRAINING OF NEGROES FOR WAR INDUSTRIES IN WORLD WAR II

HERMAN BRANSON

When Japanese bombs blasted holes in the Arizona in Pearl Harbor, many Negroes felt that down into the mud and silt went not only ships but a pattern of societal organization which limited the Negro in the social, political, and economic life of America. A keen social observer expressed a prevalent view:

Logically it would be appropriate for government to impose controls and regulations, as mandatory as those imposed on its economic life, to ensure to all its racial minorities not only free but equal participation in the economic and political life of the country. In fact, before the present war is ended, such action may become a political necessity.¹

Everywhere one met the belief that at last the integration of the Negro into American life was not a question of charity or abstract democratic principle but a necessity for the full mobilization of our most valuable war asset, manpower. On every side one heard that this is a people's war and that there would be full utilization of all the talents of the American people to defeat the ruthless enemy of democracy. Now with the war 15 months old, a better appraisal of the larger horizon offered in the training of Negroes for skilled positions by the war is possible.

Programs for the training of essential personnel for war industries are centered in four authorities: the U.S. Office of Education, the National Youth Administration (NYA), the schools, and private industry. The U.S. Office of Education conducts two major programs: Vocational Training for War Production Workers and the Engineering, Science, and Management War Training Program (ESMWT).

The programs accommodate trainees of varying educational preparation. The Vocational Training Program aims primarily at the training of adults with nominal educational backgrounds. The NYA trains youths who have grade school education. The ESMWT requires that courses be of college grade; the minimum educational prerequisite is graduation from secondary school. The ESMWT courses range from the first-year college level to those of graduate-school level. The in-service and pre-service training of private industry varies according to the type of training.

The Vocational Training Program prepares skilled workers in two types of courses: supplementary courses for workers already in war industries to improve their knowledge and skill and pre-employment refresher courses to prepare workers for war jobs. $104,000,000 was appropriated for this program for 1942-1943.

For the period July-December, 1942, 58,228 Negroes enrolled in pre-employment courses and 13,066 in the supplementary. The distribution of the trainees was as follows:

These trainees were distributed throughout the States and Puerto Rico; none were being trained in Vermont, North Dakota, and Hawaii. The geographic distribution of Negro trainees is tabulated in the following:

<table>
<thead>
<tr>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre.</td>
<td>Sup.</td>
</tr>
<tr>
<td>North and Northeast:</td>
<td></td>
</tr>
<tr>
<td>Midwest:</td>
<td></td>
</tr>
<tr>
<td>Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin</td>
<td>22,662</td>
</tr>
<tr>
<td>Farwest:</td>
<td></td>
</tr>
<tr>
<td>Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming</td>
<td>3,989</td>
</tr>
<tr>
<td>South:</td>
<td></td>
</tr>
<tr>
<td>Alabama, Arkansas, Florida, Georgia, Louisiana, Maryland, Kentucky, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia, District of Columbia</td>
<td>15,516</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>163</td>
</tr>
</tbody>
</table>

The specific listing by states shows discrepancies between the population percentages and trainees more vividly than does our summary. During the six-months period, the eight states, California (3,639-1535), Illinois (6,251-870), Maryland (3,655-553), Michigan (6,242-1512), New York (6,327-599), Ohio (6,298-752), and Pennsylvania (7,037-3,280) had over 70 per cent of the Negro trainees. Illinois, New York, and Ohio had over 18,000 preemployment Negro trainees, over 3,000 more than the 17 Southern states and the District of Columbia. Pennsylvania with 3,280 supplementary trainees had over 300 more than the South; Nebraska had more trainees than Mississippi; Massachusetts had three times as many as Texas. We could continue this comparison. In brief the South with roughly 80 per cent of the Negro population was training 0.2 of 1 per cent of that population in this program or 20 per cent of the total trainees, the other states with 20 per cent of the population were training about 2 per cent or 80 per cent of the total.

The data do show, however, that there has been a tremendous upsurge in Negro participation since the study of Wilkerson and Fortune's survey. Other data show too that the per cent of Negroes to total in the number of trainees entering the preemployment program has grown steadily since the quarter July-September, 1941, from 4.9 per cent to 10.6 per cent for the quarter October-December, 1942. For the same period the Negro trainees in training at the end of each quarter, increased from 5.2 to 11.7 per cent. For the supplementary program the per cent for the number entering quarter was 2.8 for July-September, 1941, which dropped sharply and rose to 2.4 for October-December, 1942.

The Negro seems to be participating in approximately his population ratio in the preemployment program but at only one-third that ratio in the supplementary program. In the South, he participates in very much less than his participation ratio, which is very much less than the national average. The specific listing by states shows discrepancies between the population percentages and trainees more vividly than does our summary. During the six-months period, the eight states, California (3,639-1535), Illinois (6,251-870), Maryland (3,655-553), Michigan (6,242-1512), New York (6,327-599), Ohio (6,298-752), and Pennsylvania (7,037-3,280) had over 70 per cent of the Negro trainees. Illinois, New York, and Ohio had over 18,000 preemployment Negro trainees, over 3,000 more than the 17 Southern states and the District of Columbia. Pennsylvania with 3,280 supplementary trainees had over 300 more than the South; Nebraska had more trainees than Mississippi; Massachusetts had three times as many as Texas. We could continue this comparison. In brief the South with roughly 80 per cent of the Negro population was training 0.2 of 1 per cent of that population in this program or 20 per cent of the total trainees, the other states with 20 per cent of the population were training about 2 per cent or 80 per cent of the total.

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local ratio, but this is offset, numerically, by his increased participation in other regions.

The enrollment statistics in no way indicate the most important aspect of this training—its quality. In the South we expect in general poor equipment and poor facilities. A visitor through the South reported:

Thousands of Mobile natives who happened to be Negroes, however, were walking the streets unemployed and barred from any training whatsoever.

This was the training situation in Alabama then. The same thing prevailed in Georgia, and Tennessee and Arkansas and South Carolina and Texas. Hardly any defense training was open to Negroes anywhere in the South, and much of what was labeled defense training was close to being outright fraudulent. I might mention one course for 150 shipfitter helpers where the sole shop equipment consisted of some shipyard pictures clipped from Life magazine and a bathtub navy, purchased out of the instructor’s pocket at the five-and-ten. This particular course accounted for two-thirds of the Negro trainees in the state of Georgia. Somewhere else they were pretending to train Negro marine electricians in a shop where positively the only item of marine equipment was an eight-inch length of electrical cable. I recall also a class in motor mechanics where the students were forbidden to go into the motors—it was actually a class in alemiting, tire-inflating and windshield wiping for filling station attendants. And I shouldn’t forget the Negro defense shop so far out in the piney woods that it was next to impossible to get to, yet I heard such praises of and such accounts of the completeness of its equipment that I arranged to visit it. There I found a splendidly-equipped sheet metal shop with unfortunately no sheet metal to fabricate but only tin cans salvaged from the garbage pile. There I found also a gleaming row of electric welding machines but somebody had neglected to put through the requisition that would connect them with power.

These observations were made in the Spring of 1942. As far as numbers in training, Georgia had improved little by December, for the number entering training from July-December was only 217. With equipment rigorously rationed or not obtainable, there has been little chance of improvement in this sphere. There seems to be little difference in the quality of training for both groups in the other sections of the country.

With the tremendous efforts of able and sincere men, Negro and white, in the U.S. Office of Education, this program is making headway against the Southern pattern. It is slow and unsatisfactory perhaps, for a few men in one section of the country can do little when the local administrators insist upon giving priority to local prejudices. Johnson reports that a spokesman of the Nashville branch of the Vultee Aircraft Company asserted baldly:

... we do not believe it advisable to include colored people with our regular working force. We may, at a later date, be in a position to add some colored people in minor capacities such as porters and cleaners.

In discussing this matter with some members of the Board of Education, they have advised that they are considering starting courses in occupations in which colored people would experience no difficulty in obtaining employment. These courses, I believe cover such subjects as auto repair, construction work, cement finishers, molding, etc.

The Engineering, Science and Management War Training Program (ESMWT)—the second program under the U.S. Office of Education was established to assist in furnishing the large number of people with training in the physical sciences and manage-
ment for the war effort. It succeeds the Engineering, Science, and Management Defense Training Program of 1941-1942 (in which 196 institutions participated with 438,000 trainees and a budget of $18,000,000) and the Engineering, Defense Training Program of 1940-1941 (in which 144 institutions participated with 120,000 trainees and a budget of $6,140,000). The second session of the 77th Congress on June 30th, 1942, in Public Law 647 authorized $30,000,000 to continue the training of engineers, chemists, physicists, and production managers for war service for the year ending June 30, 1943.

Organization of Courses. Tax-exempt colleges and universities offering recognized degrees with majors in engineering, chemistry, physics, or production supervision, are eligible to participate in ESMWT. Before a course is organized, the sponsoring college or university determines the need for the contemplated training through consultation with nearby industries and the ESMWT regional adviser for the area concerned and prepares an estimate of the probable number and qualifications of those available for the training. If conditions are favorable, one or more short courses are designed to prepare available trainees for the jobs in which a shortage was found. Pertinent information including estimates of costs, is sent to the U.S. Office of Education in a formal proposal to give each course that is planned. Those proposals that meet all legal, educational, and practical standards are approved, and the institution may begin as soon thereafter as qualified trainees can be enrolled. Additional proposals may be submitted as other training needs are established.

Types of Instruction: Regional differences in facilities and in war training needs dictate wide variations in the courses offered. Some are designed to prepare persons for new fields of work; others to fit those already employed in war activities for more difficult and responsible assignments. Classes may meet on the college campus or elsewhere; many institutions are conducting courses simultaneously in several cities. All classes receive personal instruction from qualified teachers, except for a few specialized correspondence courses in the subject matter of mathematics and physics which are offered to prepare high school teachers to conduct courses in those subjects. Some are given after working hours for the benefit of employed persons. The time required to complete a course varies from a few weeks to several months, depending upon the extent and nature of the training. Subjects range from basic courses, such as engineering drawing and precision inspection, to refined specialties, such as geometrical optics and the X-ray diffraction analysis of metals. In general, the war training needs of an area determine the courses offered there, but some courses are conducted to meet Nation-wide needs of the armed forces and government war production activities.

Sixty-five Negro colleges are participating in the ESMWT program. Only 12 hold direct contracts with the U.S. Office of Education. The remainder are sub-contractors. For example,


Alabama: Miles Memorial College, Selma University, Talladega College, Tuskegee Institute; Arkansas: A. N. and Normal College, Arkansas Baptist College, Philander Smith College, Shorter College; Delaware: State College for Colored Students; Georgia: Atlanta University System, Clark University, Georgia State College, Morehouse College, Morris Brown College, Paine College, Spelman College; Kentucky: Kentucky State College; Louisiana: Dillard University, Leland College, Southern University and Agricultural and Mechanical College, Xavier University; Maryland: Morgan State College, Princess Anne College; Massachusetts: Alcorn Agricultural and Mechanical College, Campbell College, Jackson College, Rust College, Tougaloo College; Missouri: Lincoln University, Stowe Teachers and Junior College; North Carolina: Agricultural and Technical College, of North Carolina, Bennett College, Johnson C. Smith University, Livingstone College, North Carolina College for Negroes, St. Augustine's College, Shaw University; Ohio: Wilberforce University; Oklahoma: Oklahoma Agricultural and Mechanical College, Talladega College; Pennsylvania: Cheyney Training School for Teachers, Lincoln University; South Carolina: Allen University, Benedict College, Claflin College, Colored Normal, Agricultural, and Mechanical College of South Carolina, Morris College; Tennessee: Fisk University, Knoxville College, Lane College, Le Moyne College, Tennessee Agricultural and Industrial State Teachers College; Texas: Texas College, Houston College for Negroes, Jarvis Christian College, Paul Quinn College, Prairie View State College, Samuel Huston College, Tillotson College; Virginia: Hampton Institute, Virginia State College for Negroes; West Virginia: Bluefield State Teachers College, Storer College, West Virginia State College; District of Columbia: Howard University."
in Alabama, the Alabama Polytechnic Institute had about 85 ESMWT courses in 20 centers in the state; three courses were designated "for Negroes": Engineering Drawing I, Pipe Drafting, and Fundamentals of Radio. The University of Alabama held contracts for 146 courses in 20 centers in Alabama, two were "for Negroes": Foremanship and Supervision and Industrial Chemistry. Since four Negro colleges in Alabama had ESMWT courses, we presume that the "for Negroes" courses used their facilities.

For the period July 1, 1942, through January 31, 1943, the Negro colleges with direct contracts gave 74 courses; 69 were part-time and 5 were full-time. Howard University had 14 part-time and 2 full-time; Atlanta University, 3 part-time; Southern University, 2 part-time and 1 full-time; A. and T. College of North Carolina, 6 part-time; North Carolina College for Negroes, 15 part-time; Wilberforce University, 2 full-time; Langston University, 6 part-time; Colored Normal, Industrial, Agricultural and Mechanical College, South Carolina, 6 part-time; Fisk University, 1 part-time; Hampton Institute, 7 part-time; Virginia State College, 6 part-time; West Virginia State College, 3 part-time.

In February and March, 1943, seven of these colleges were authorized to begin 26 part-time and 2 full-time courses: Howard University, 1 part-time and 1 full-time; Atlanta University, 3 part-time; A. and T. College, 2 part-time; Hampton Institute, 6 part-time and 1 full-time; Virginia State College, 4 part-time; West Virginia State College, 2 part-time. Some of the colleges with direct contracts also participated as sub-contractors in certain fields where they could not meet the ESMWT requirements for a direct contract.

The number of Negro colleges participating in the ESMWT program is larger than one would expect considering the stringent requirements for a program. The technique of seeking sub-contracts when the institution cannot qualify for a direct contract is sound and strategic. The particular

<table>
<thead>
<tr>
<th>TABLE I</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISTRIBUTION OF ESMWT COURSES BY FIELDS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>College</th>
<th>Chemistry</th>
<th>Engineering</th>
<th>Management</th>
<th>Mathematics</th>
<th>Physics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Howard</td>
<td>5</td>
<td>10</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Atlanta</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A and T</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southern</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>North Carolina College</td>
<td>4</td>
<td></td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wilberforce</td>
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<td></td>
<td></td>
<td>1</td>
<td></td>
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<tr>
<td>Langston</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colored Normal, etc., South Carolina</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisk</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hampton</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Virginia State College</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>1 1/2</td>
</tr>
<tr>
<td>West Virginia State College</td>
<td>2</td>
<td></td>
<td></td>
<td>1 1/2</td>
<td>3 1/2</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>27</td>
<td>34</td>
<td>7 1/2</td>
<td>3 1/2</td>
</tr>
</tbody>
</table>

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subjects stressed by the colleges seem to result less from a study of the needs among Negroes than from what energetic person wishes to give a course and what courses have been popular in white colleges. The Negro colleges have missed entirely the opportunity afforded by ESMWT to conduct correspondence courses for training high school teachers. The concentration in chemistry almost to the exclusion of physics reflects the fact that the Negro college is stronger in this field. The job opportunities are just the reverse. For this is a physicist's war with emphasis on devices. Possibly the chief weakness of the ESMWT program in the Negro college is the failure to plan full-time courses around nation-wide needs. There are many fields in which the Negro has not had opportunity for employment and training now seeking personnel. With a large federal appropriation and the possibility of securing grants from the U.S. Office of Education in the loan-fund plan for college science majors, many Negro colleges could have and should have had full-time programs in fields allowed for by ESMWT.

The problem of the Negro woman in the ESMWT program becomes increasingly significant as the armed forces cut more and more into the dwindling manpower. Negro women with the educational prerequisites for ESMWT courses need re-orientation. Those who possess the abilities and aptitudes for filling technical positions are too often timid or so impressed by their clerk's job at $1,620—which could be performed efficiently by a high school student—that they cannot look to engineering, chemistry, or physics as a career. There is good logic in their contention that the preparation is too arduous for a position which will only last out the war. If the post-war world realizes any of the things we are fighting for, we may find our young people maintaining the positions gained in the war. An intensive national campaign conducted by some colleges with well-planned and balanced full-time ESMWT programs to draw the many Negro women who have majored in mathematics or biology in college into physics, chemistry, and engineering is eminently desirable.

Too few Negroes participate in the ESMWT program. Of the 112,616 students, only 1,174 are Negroes, little more than one per cent. The number of courses given in all of the Negro colleges with direct contracts is less than those given by many single schools such as Alabama Polytechnic Institute and equals about half the number given by Pennsylvania State College. Mississippi with over a million Negroes has one course: Mechanical Drawing.

With over 5,000 Negroes graduating from college each year over the last five years and approximately 30,000 from secondary schools and most of them looking towards teaching, medicine, law, dentistry, pharmacy, or social work, one would expect an unusual percentage of these young people in re-training programs fitting themselves for fuller service in the war effort. The failure to enlist more of these young people in positions making more use of their specialized abilities and capabilities is a national loss. Many men in government service sensitive to our manpower needs must realize the stupidity of continuing to
allow 10 per cent of our potential technical brainpower to go largely unused for failure to cut sharply and resolutely across some social prejudices. The Negro college can certainly do more in re-orienting and re-training, but the chief burden must be borne by government. Nevertheless, any law which allows the use of our manpower to be decided by local need for personnel is dangerous for the Negro since it allows too easily the pigeonholing of Negro abilities and the assignment to positions traditionally Negro. But let us return to that later.

The training program of the National Youth Administration (NYA) has a commendable history of effectiveness and equal opportunity in the training of Negroes. The agency has conducted two programs, a student-aid program to help students in colleges and graduate schools and NYA trade classes. The chief emphasis since the war seems to be the vocational training program in trades vital to the war economy. The number of young people in training as of February 17, 1943, was:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Total</th>
<th>Negro</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shop activities</td>
<td>58,328</td>
<td>11,057</td>
</tr>
<tr>
<td>Clerical activities</td>
<td>1,801</td>
<td>312</td>
</tr>
<tr>
<td>Other activities</td>
<td>55</td>
<td>20</td>
</tr>
</tbody>
</table>

Shop activities included machine, sheet metal, welding, foundry, forge, radio, woodwork, industrial sewing, etc. The greatest concentration of Negroes was in machine (2,462), sheet metal (1,468), arc welding (2,105), and industrial sewing (1,757). Negro women (6,392) exceeded the men (4,665) with half of the women concentrated in machine (1,507) and industrial sewing (1,756). Of the 312 Negroes in clerical activities, 307 were women.

The NYA divides the country into 11 geographic regions: Region I (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, New York) 816, 14.8 (the first is the number of Negro trainees, the second the percentage in that region); Region III (Delaware, New Jersey, Pennsylvania) 1,482, 18.5; Region IV (District of Columbia, Maryland, North Carolina, Virginia, West Virginia) 1,808, 28.0; Region V (Kentucky, Michigan, Ohio) 1,326, 18.8; Region VI (Illinois, Indiana, Wisconsin) 1,563, 18.7; Region VII (Alabama, Florida, Georgia, Mississippi, South Carolina, Tennessee) 1,978, 27.5; Region VIII (Iowa, Minnesota, Nebraska, North Dakota, South Dakota) 188, 5.4; Region IX (Arkansas, Kansas, Missouri, Oklahoma) 1,380, 21.9; Region X (Louisiana, New Mexico, Texas) 675, 15.3; Region XI (Colorado, Idaho, Montana, Utah, Wyoming) 53, 4.1; Region XII (Arizona, California, Nevada, Oregon, Washington) 120, 9.6. In most of these regions the Negro participates in a percentage larger than his relative population percentage.

The relatively large number of Negro trainees may be indicative of the inability of the young Negro to find employment. In the NYA program, the enrollees are paid a fair hourly wage during the training period. The rate, particularly in the South and border states, is higher than that the Negro is accustomed to receive in the busboy-messenger-Janitor-jobs open to them. This should not detract, however, from the real fact that NYA gives training of high quality on excellent equipment. We need more of it.

The data on training programs of
private industries are meager. Verbal reports indicate that Negroes participate on the skilled and semi-skilled levels but never in the ratio approximating the population ratio. There are several advanced engineering programs for women for which Negro girls have applied, unsuccessfully. The Curtiss-Wright Corporation has a ten-months' engineering training course for women in cooperation with engineering schools. Women have been assigned to Cornell, Iowa State College, Minnesota, Pennsylvania State College, Purdue, and the University of Texas. The curriculum includes mathematics, job terminology and specifications, aircraft drawing and design, elementary mechanics, and aircraft materials. None of these courses require equipment not easily placed in many Negro colleges.

Fortune's recent survey of management opinion indirectly points to the probable fate of the Negro in industry's training program. When 47.5 per cent of management reported that they employed no Negroes, 34.8 per cent stated that they employed less than 10 per cent and 38.9 per cent insisted that they could employ no Negroes efficiently and 27.8 per cent that they could not employ more than 10 per cent efficiently, Fortune editorialized:

Theoreticians, even practical theoreticians, may take exception to the executives' collective estimates of the ceilings of usefulness of Negroes. . . . Obviously business management wants little part of them. . . .

The responses indicate, however, that businesses not now hiring Negroes believe that they can use them efficiently. I do not know that such businesses are training Negroes.

In-service training is the pattern common to a large number of industries. A person is hired and sent to special classes for a short period to learn specific duties. Negroes experience the initial difficulty of getting hired.

The over-all picture of the training of Negroes for war industries has brightened considerably in recent months. Wilkerson's study of the Vocational Education Program emphasized that as of October 15, 1940, of the 90,000 enrollees only 5,000 or approximately 5 per cent were Negroes. Approximately 1,500 were in the 13 Southern states with segregated schools. There is corresponding growth in the ESMWT program.

The only solution to the training problem lies in a strong government program directed to the development of skills irrespective of race, color, or creed. The Kilgore bill, introduced into the Senate on February 11, 1943, appears to be an excellent instrument assuring the use of Negro abilities.

Item 8 under Purposes of the Act reads:

To promote interest in scientific and technical education, and to provide for all qualified persons the means of scientific and technical training and employment....

Item C under Powers of the Office states:

To formulate and promote projects and programs for the development and use of scientific and technical facilities and personnel and, when necessary, to initiate and carry out such projects.

The bill proposes a National Scientific
and Technical Committee with representatives of the consuming public, labor, business, and government. The initial appropriation requested is $200,000,000.

The hope-inspiring feature of the Kilgore bill is that unlike ESMWT where the requirements for a program eliminated most Negro schools, this bill leaves the particular machinery of formulating and promoting projects and programs to be determined by national need. Heretofore many of the special problems in the scientific and technical education of Negroes could not be successfully approached. With a blanket provision “to formulate and promote projects and programs . . . and, when necessary, to initiate and carry out such projects,” the Negro college could look toward more effective selection and training of young people in the physical sciences.

Two other provisions of the act are of interest:

Powers of the Office:

(i) To finance by loan, grant, exchange, purchase, or otherwise the operations or functions, or any of them, authorized by this Act, and, or the same purposes, to make or acquire any contract, . . . and to enter into any transaction necessary or appropriate for the performance of its duties or powers.

(o) To conduct such research and investigation touching upon the use and development of scientific and technical facilities and personnel as the Office may deem necessary and appropriate to carry out the purposes of this Act.

The War Manpower Commission is at work on a Civilian Training bill which will request approximately $60,000,000. I do not know the specific provisions, but it will absorb the war-loan program of the U.S. Office of Education.

In reviewing the Kilgore bill and the elaborate training programs necessitated by World War II, one is impressed by the tremendous difference between the technological demands of World War II and World War I. World War I seems to have ended just as it was entering the device stage. No elaborate national program was required. Although World War I has been called a chemist’s war in comparison with World War II, a physicist’s war, even the requirement of personnel with training in chemistry was much less than now. So few Negroes were concerned with technical and scientific work at that time that our colleges took little notice of any contribution they could have made. The outstanding mathematicians, physicists, and chemists were used in research, but on a much smaller scale. The increasing significance of technology in war is not unusual. It seems that wars exploit the technology of an era more completely than does peace.

In spite of the growth in enrollment and extension of training programs, there remains the general weakness that all of the programs have not enlisted enough Negroes to render their participation in the technical side of the war program efficient. The extremely small number of Negroes receiving scientific training for war work in contrast to those who are learning to manipulate the appliances of our technology without any scientific knowledge or training is certain to weaken us in the super-scientific world predicted for the post-war period. Unquestionably there are many factors at work to hinder and thwart the Negro, but there remains the conviction that the government agencies, our schools,
and industry have not reached their optimum efficiency within the limitations of the social pattern. To reach this level will require increased attention by Negro schools and generous assistance by government. Tactics will have to be devised for circumventing petty prejudices in local or national officials.

In a survey of the Negro college and the war training program, conducted in the last half of 1942, L. L. Woods\footnote{L. L. Woods, "The Negro College and the War Training Program," School and Society, 57: 19-20, J 2, 1943.} concluded that within their limitations the colleges are doing a good job. Lack of more and better integrated programs was charged to:

1. Indifferent preparation of students. Since most of the students of the Negro colleges come from poorly staffed high schools it has been found that when they reach college much time must be spent in teaching that which they should have been given before reaching college.

2. Administrative apathy. The unwillingness of school administrators to establish and properly provide for the intensive scientific training merely because the cost per student is higher and because classes are smaller in the sciences than in the other departments.

3. Lack of proper public and governmental support. Negro colleges usually have a hard time maintaining existing programs and the amount of direct interest shown by federal agencies, by their support, is far short of what it should be.

I would add to these:

4. The traditional vocational interests of Negro students. The courses now in demand have been almost exclusively pre-professional courses in Negro colleges. There is need for a change of attitude.

5. A much alive, widespread belief that the war should interfere as little as possible with the life of the individual unless he is called for service. The student is looking to the post-war world with the conviction that the job opportunities will be the same as now. Something can be done to combat this attitude.

When one considers all of the factors involved in the war training program for Negroes—numbers of Negroes with sufficient educational background, teaching personnel, equipment needs, advertising of job opportunities in the technical fields—it becomes clear that the only real hope lies in a sincere government program which will consider the task of recruiting and training Negro brainpower with the objective calmness that one considers the metallurgical problem of extracting magnesium from sea water. Now that we are preparing to hit Hitler's fortress Europe, it may be necessary to look to the better utilization of this 10 per cent of our most essential war material.\footnote{The author wishes to thank Mr. E. P. Westmoreland, U. S. Office of Education, and Mr. Charles P. Browning, National Youth Administration, for generous assistance in securing data and for their counsel.}