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## RISE OF ECONOMICS AS AN ACADEMIC DISCIPLINE: THE FORMATIVE YEARS TO 1900

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### I. INTRODUCTION

Economics, before 1870, was an obscure topic struggling for survival in the curricula of American colleges and universities.<sup>1</sup>

In three decades that followed, economics achieved recognition as an independent discipline, provided strong leadership for the social sciences in their struggle with the rigidities of the classics, rose to top levels in student population.

In these same three decades professional training evolved through stages of self-training, study abroad, first and second level cultural degrees and finally, the third level professional doctorate, standards for which have remained almost unaltered to the present.

This paper will devote major attention

<sup>1</sup>The term economics did not become common as replacement for the term political economy until almost 1900. The term appeared in administrative records, although not in the catalog, at Columbia, as early as the 1870's. See Joseph Dorfman, "The Department of Economics," Ch. IX in *A History of the Faculty of Political Science, Columbia University*, Columbia University Press, New York, 1955, p. 171. One of the earliest uses in a catalog was at Oberlin College in 1878. See, *Catalogue of the Officers and Students of Oberlin College for the College Year 1878-79*, printed at the News Job Room, Oberlin, 1878, p. 50. The Harvard catalog of 1891 listed only political economy. The catalogs of 1892-1896 used both political economy and economics in indexing the same courses. In 1897 the term political economy was dropped and thereafter only economics was used. A similar transition was completed by almost all schools by 1900, hastened by the use of the term economic in the title of the American Economic Association founded in 1886. (See further discussion, Part V.)

to the economic, social and cultural forces which influenced the breakout of economics from theology and the classics and to the internal processes and strategies with which a small but extremely effective group of young economists raised the discipline from neglect and disorganization to high professional status during this period.

To facilitate analysis, 28 leading colleges and universities were selected for study of faculty appointments and course offerings in economics, 1870-1900.<sup>2</sup>

<sup>2</sup>Of the 28 schools, ten were high endowment, ten were high enrollment and eight were prominent smaller institutions. The ten high endowment schools were: Chicago, Columbia, Cornell, Harvard, The Johns Hopkins, Massachusetts Institute of Technology, Northwestern, Princeton, Stanford, and Yale. The ten high enrollment schools were: California (Berkeley), Illinois, Indiana, Michigan, Michigan State, Minnesota, Ohio State, Penn State, Pennsylvania and Wisconsin. The eight smaller schools were divided between three eastern schools: Amherst, Brown, Dartmouth; three "western" schools: Oberlin, Western Reserve and Vanderbilt; two women's colleges: Bryn Mawr and Smith.

Only 22 of the above schools were operating in 1870, 25 in 1880 and 27 in 1890. Founding dates of those not in operation in 1870 were: Smith, 1870; Vanderbilt, 1872; The Johns Hopkins, 1876; Bryn Mawr, 1885; Leland Stanford, founded, 1885, opened, 1891; Chicago, incorporated 1890, founded, 1891, opened, 1892. Several of the institutions in this early period operated under legislative restrictions as to course offerings, particularly Michigan State and Penn State.

Economists were defined as those men who achieved professorial rank while devoting a *major part* of their time to economics. This definition arbitrarily eliminated some men who achieved prominence in economic literature but held professorial rank in other disciplines.

The subject matter lends itself to chronological treatment. Part II is concerned with the years before 1870 when there was little or no formal academic training available in the United States and economists had to train themselves. Part III reviews the period when American economists went to Germany for formal training. This phase began around 1870 and was about over by 1900. Part IV considers the confused and "chaos everywhere" transition decade, 1870–1880, when the first glimmerings of a formally organized profession emerged in this country. And, Part V considers the two momentous decades 1880–1900 when economics rose from the fringe of academia to prominence.

## II. THE YEARS OF SELF-TRAINING BEFORE 1870

Prior to the 1870's economists were largely self-trained. A majority of institutions of higher learning did not offer formal courses in political economy.<sup>3</sup> Of the 28 selected leading schools (22 operating in 1870) 14 offered one course, two offered two courses and none offered more than two.

Even among the pioneering few, political economy led a precarious, ephemeral existence.<sup>4</sup> It would appear, disappear, and

<sup>3</sup>J. Laurence Laughlin, "Courses of Study in Political Economy in the United States in 1876 and in 1892–93", *Journal of Political Economy*, December 1892, Appendix I, pp. 143–151.

<sup>4</sup>The "first" teaching of political economy as an independent subject is largely a matter of definition. The honor has many claimants. Course offerings appeared in the 1820's in the catalogs of such institutions as Columbia College, Harvard, Washington and Lee, University of Pennsylvania, Yale and University of Virginia. The literature on early offerings includes: E. R. A. Seligman, "The Early Teaching of Economics in the United States," in *Economic Essays Contributed in Honor of John Bates Clark*, Jacob A. Hollander, ed. (Macmillan, New York, 1927); Elbert Vaughan Wills, "Political Economy in the Early American College Curriculum", *The South Atlantic Quarterly*, April 1925, pp. 131–153; Charles F. Dunbar, "The Academic Study of Political Economy", *Quarterly Journal of Economics*, July 1891, pp. 397–416; Gladys Bryson, "The Emergence of the Social

reappear in the catalogs depending on the year-to-year success of college administrators in persuading some faculty member to take on the teaching task.

The reasons for the low status of political economy at this time are not hard to find. Until after 1870 the college curriculum was dominated by the inflexible classical requirements of Greek, Latin, Hebrew, literature, mathematics and moral philosophy.

The role of moral philosophy was fundamental. Knowledge was viewed as a relatively fixed quantum of truth. The primary task of the college teacher was to get as much of this "corpus of Christian truth into the heads of the undergraduates as possible." Crowning the undergraduate curriculum was the course in moral philosophy usually taught by the college president and always to the senior class. Its major function was to "summarize, synthesize and justify this...body of...truth." The findings of political economy had to fit into the summation along with ethics, logic, moral principles, religious insight, the lessons of history. There wasn't much room.<sup>5</sup>

Political economy was not only tightly constrained within the compass of moral philosophy, it was often under attack as "soulless" and the "enemy of religion."<sup>6</sup> It was frequently in the crossfire of free trade and high tariff politicians.<sup>7</sup> When it sought to be "scientific" it aroused the ire of sectarian sponsors who viewed ris-

Sciences from Moral Philosophy," *The International Journal of Ethics*, April 1932, pp. 304–323.

<sup>5</sup>Gladys Bryson, "The Comparable Interests of the Old Moral Philosophy and the Modern Social Sciences", *Social Forces*, Vol. XI, 1932–33, pp. 19–27 and Richard Hofstadter and C. DeWitt Hardy, *The Development and Scope of Higher Education in the United States* (Columbia University Press, New York, 1952), pp. 28–29.

<sup>6</sup>Joseph Dorfman, "The Department of Economics", *op. cit.*, p. 164.

<sup>7</sup>Thomas Hewett Waterman, *Cornell University, A History* (New York: The University Publishing Society, 1905), p. 128.

ing real wages as affirmation of the truth that "a divine and providential hand" guided economic affairs on this favored continent. Political economy could not and should not claim identity outside theological doctrine.<sup>8</sup> As late as 1888, Francis A. Walker in his presidential address before the American Economic Association complained of the "...subjection of political economy to the supposed claims of natural theology, especially in the United States where the two chairs were often united..."<sup>9</sup>

In consequence of these difficulties, political economy was not an independent discipline before 1870. It was a pendant of other established and presumably more respectable fields. In a few of the 28 selected schools it was a subdivision of history or literature. In a few it was placed under mathematics or jurisprudence. In the majority it was placed under the safe jurisdiction of moral philosophy taught by ordained ministers.

In this early restricted environment, economists trained themselves through extensive reading and "practice,"<sup>10</sup> supplemented by travel and study abroad.<sup>11</sup>

<sup>8</sup> Thomas Edward Cliffe, *Essays in Political Economy* (Dublin, 1888), p. 137.

<sup>9</sup> *Report of the Proceedings, Third Annual Meeting, American Economic Association, December 16-19, 1888, Publication Vol. IV, No. 4, 1889, p. 24.*

<sup>10</sup> Francis Walker, first president of the American Economic Association was a steady contributor on economic subjects to national journals before he was 18 years of age. See James Phinney Monroe, *A Life of Francis Amasa Walker*, Henry Holt and Company, New York, 1923, p. 28.

<sup>11</sup> Of the first five presidents of the American Economic Association, four, Walker, Charles F. Dunbar, John Bates Clark and Arthur T. Hadley, never had more than one undergraduate course in political economy, never earned more than a four year degree, all traveled abroad. One of the most influential economists of the period, Carroll D. Wright, first U.S. Commissioner of Labor and later, President of Clark University, never had a formal course in economics or statistics, never obtained an academic degree and never studied abroad. (Appendix, Table A.)

### III. THE ERA OF GERMAN STUDY

By 1870 ambitious young American students of political economy wanted something more than "one course" or "one book" training.<sup>12</sup> Since they could not get more in this country, they turned to Europe, especially to Germany.

There were many reasons why American students in almost all disciplines at this time went to Germany for advanced training. The German universities placed much more stress on advanced work than institutions in this country.<sup>13</sup> They utilized the seminar system which permitted professors more specialization in subject matter and more time for research and writing.<sup>14</sup> The seminars were kept small, permitting an intimate teacher-student relationship with stress on independent reading and research by the student.<sup>15</sup> In contrast many prominent American college teachers were

<sup>12</sup> As late as 1875 Richard Ely said all one had to do to become an "economist" was to read "one good book." At least that was the extent of his training at Columbia College. See his *Ground Under Our Feet* (Macmillan, 1938), p. 125.

<sup>13</sup> None of the 28 leading schools selected for special study in this paper had graduate seminars in 1870 and only a few had them in 1890. In the latter year the best American schools had only one or two men teaching political economy. In 1890 the University of Berlin offered 102 hours of instruction per week, given by 21 lecturers, plus much additional work in special seminars. See Leo S. Rowe, "Instruction in Public Law and Political Economy in German Universities," *Annals of the American Academy of Political and Social Science*, July, 1890, p. 80.

<sup>14</sup> For a discussion of the development of the German seminar system see, Mary V. Bean, *Development of the Ph.D. Program in United States in the Nineteenth Century* (unpublished doctoral dissertation, Ohio State University, Columbus, 1953), pp. 36-38, and the excellent work by Jurgen Herbst, *The German Historical School in American Scholarship* (Cornell University Press, 1965).

<sup>15</sup> James Morgan Hart reported the average German institution had over three times as many teachers per 100 students as comparable schools in this country, e.g., Marburg and Princeton each had about 420 students in 1873. Princeton had 18 professors and tutors, Marburg, 62. See James Morgan Hart, *German Universities*, (New York: G. P. Putman and Sons, 1874).

bogged down with large classes of undergraduates.<sup>16</sup>

It was easier to obtain a broad range of study under many top scholars in Germany, not only because of the greater physical proximity of their schools, but because credit for time spent at one institution was fully acceptable at all others. Many American students attended three or four German universities in an academic year.<sup>17</sup>

Although many of the leading German universities were younger and less well endowed than their counterparts in America,<sup>18</sup> their library facilities were vastly greater and much more accessible.<sup>19</sup>

The excellence of German research and learning was acknowledged the world over. Leading American universities imported German scholars. They gave preference to American teachers trained in Germany.<sup>20</sup>

Over and above these general factors involving all disciplines were some very special and particular reasons why students of political economy went to Germany for advanced training.

There was great admiration for the dynamic expansion then under way in the German economy. Young American economists were curious to know what combination of factors brought this about. Political economy as a subject was held in very high esteem in Germany. Germany's academic economists exercised great influence in both industry and government. As late as 1880 political economy held no such position in this country.

Many, if not a majority, of the big names in political economy at this time were German: Gustav Schmoller, Adolph Wagner, at Berlin; Eugen Böhm-Bawerk and Carl Menger at Vienna; Karl Knies at Heidelberg; Bruno Hildebrand at Marburg, Zurich and Jena; Wilhelm Roscher at Göttingen; Johannes Conrad at Halle; and many others.<sup>21</sup> American economists were deeply impressed with the prodigious output of these German scholars.<sup>22</sup> Probably about two-thirds of the annual output of

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that all of its faculty, with few exceptions, had "spent more or less time at German universities, 13 of them have received abroad the degree of doctor." See L. Viereck, in "German Instruction in American Schools," *Annual Report of the U.S. Department of the Interior*, Vol. I, Commissioner of Education (Washington, D. C.: U.S. Government Printing Office, 1901), p. 43.

Leading undergraduate schools also gave this emphasis. In the case of Amherst it was reported "... by 1883, one third of the ... faculty had at least been exposed to German masters". See Thomas H. LeDuc, *Piety and Intellect at Amherst College*, Columbia University Press, New York, 1946, p. 50.

<sup>21</sup> See Henry M. Seager, "Economics at Berlin and Vienna," *Journal of Political Economy*, March 1893, pp. 236-262.

<sup>22</sup> The 1890 issue of the *Annals of the American Academy of Political and Social Science* cited the "astonishing" list of writings of German economists. When *Annals* editor Edmund James reviewed the 1,046 page 1890 edition of *Handwörterbuch der Staatswissenschaften* by Johannes Conrad and others, he said: (Vol. 1, p. 687) "All American students of economics and politics should pray for the time ... when an American publisher will be able to undertake a similar work and American scholars will be able and willing to carry it through ... no student of economics can afford to be without it."

<sup>16</sup> William W. Goodwin, writing of his work at Harvard, complained, "... in the first year (1860) in which I held the Eliot Professorship of Greek, my whole work consisted in hearing three lessons a week, recited four times over by four sections of sophomores. Under this system no thought of graduate teaching was possible." See his "The Growth of the Graduate School," *Harvard Graduates' Magazine*, December 1900, p. 173. (See also f.n. 35.)

<sup>17</sup> Leo S. Rowe, *op. cit.*, p. 79.

<sup>18</sup> In 1850 when Harvard was 214 years old, Göttingen was 116 and Berlin just 43 years old. See William W. Goodwin, *op. cit.*, p. 169.

<sup>19</sup> In 1840 Yale reportedly had 15,000 volumes, Harvard, 52,000, Columbia, 15,000, Göttingen, 200,000. In Germany the libraries were open long hours per day and week. Over here students complained the chief interest of librarians was "protecting the books." E.g., as late as 1857, Columbia College allowed only members of the three upper classes to have access to the library and ... the library was open only two hours a day. See Charles Franklin Thwing, *The American and German University* (New York: Macmillan, 1928), pp. 131-133.

<sup>20</sup> The Johns Hopkins announced with great pride at its opening as a graduate school in 1876



literature in this subject was in the German language.<sup>23</sup>

Germany's great economists welcomed American students, took them into their homes, urged them to pursue the subject, encouraged them in academic careers.<sup>24</sup> American students admired the fact German economists were free of sectarian and political pressures.<sup>25</sup>

The German Ph.D. in economics was recognized as a superior degree. It stood for high level scholarly achievement. The American Ph.D. before 1890 carried no comparable prestige.<sup>26</sup>

Almost all the young American economists took their four year baccalaureate

degrees in this country before going to Germany. They then spent about a year, perhaps a year and a half, in full time, specialized study of political economy in German seminars before taking doctorate examinations. The German Ph.D. for them represented a five year second level degree, although in terms of class hours it represented less than required of students earning bachelor's degrees with majors in economics in leading institutions today.<sup>27</sup>

Once the trek to Germany got under way, it tended to build on itself. Young teachers favorably impressed by German standards returned to urge their own students to study there. This took on very practical meaning. German training helped young economists obtain academic appointments and promotion.

Of the 76 economists in the 28 selected leading U. S. schools, 1870-1900, 53 studied in Germany. Eighteen of the 53 obtained German degrees (Appendix, Tables A and B).

After a brief interlude in the early 1880's, the era of German study reached a peak in 1890-94. By 1900 noticeable decline had set in. Some of the rising young German scholars were not held in as high esteem as the men they replaced. The growing criticism of the United States and the growing insistence of German economists on Germany's need for more "Lebensraum" cooled enthusiasm. Interest of American scholars shifted to the leading British economists whose theoretical contributions became widely adopted in this

<sup>23</sup> As a result, a large part of American library resources in political economy was in German. This was further emphasized by the purchase of German collections by schools on this side of the Atlantic. E.g., the University of Michigan announced with great satisfaction in 1871 its library resources had been greatly "aided by the purchase of the library of the late Professor Karl Heinrich Rau, distinguished professor of political economy, University of Heidelberg, Germany." The collection contained 4,000 volumes. See Z. Clark Dickinson "The Department of Economics" in *The University of Michigan, An Encyclopedic Survey*, Vol. III, *The College of Literature, Sciences and the Arts*, University of Michigan Press, 1943, p. 533.

<sup>24</sup> Colorfully described by Richard T. Ely in his *Ground Under Our Feet* (Macmillan, 1938).

<sup>25</sup> Commenting on this fact, Charles Dunbar of Harvard said Germany has succeeded "for some years past...in maintaining the first place in this branch of learning as in so many others. Complete intellectual independence there has been conspicuous among the favoring conditions of intellectual progress." Dunbar went on to say appointments in political economy in many state universities in this country were based more on politics than on scientific training. See his "The Academic Study of Political Economy," *Quarterly Journal of Economics*, July 1891, pp. 394-400.

<sup>26</sup> This criticism did not apply just to economics, of course. One critic said, "...American colleges and universities, with some few exceptions, are so reckless in distributing their paper that there is not a single degree given in America that necessarily means anything. A degree from a first class German university means something definite and becomes more definite by having itself graded." See Mattoon M. Curtis, "The Present Condition of German Universities," *Educational Review*, June 1891, p. 39.

<sup>27</sup> In the 1870's the German student could offer himself for doctorate examinations (only degree given) after three years of university study. However, the German student under more intensive secondary education was probably at least a year ahead of students entering higher education in this country. Hence, the American students going to Germany and taking doctorate examinations did so after the equivalent of four or five years of university training. For an excellent discussion of this matter see, *The Annual Report of the President of the University of Michigan*, 1881, p. 15.

country. By 1910 the migration to Germany had almost ceased.

IV. THE BEGINNING OF "ADVANCED"  
STUDY IN AMERICA,  
1870-1880

Overshadowed by the great prestige of study in Germany, formal academic training in political economy in this country advanced slowly during the years 1870-1880. The number of courses in the subject offered in the 28 selected institutions averaged less than one in 1870 and only slightly over one in 1880. Yet these were significant transition years for political economy. Three institutional achievements laid the groundwork for future accelerated growth.

*The First Professorships in Political Economy.* The first professorships in political economy were established in the 1870's reflecting a slowly forming consensus that the subject warranted specialized teachers for the first time.

The first chair with the title of "Professor of Political Economy" was established by Harvard in 1871 with Charles Dunbar as the occupant. Actually it was not an exclusive chair in political economy for Dunbar also taught jurisprudence for some years.

Yale's claim to a first is probably about as good, for in 1872 it appointed Francis A. Walker as "Professor of Political Economy and History." Although the title was multi-discipline, the record shows Walker spent almost all of his time in the area of political economy, if industrial history be included.

Carleton College has a claim to a teaching first in this early period. Carleton created a professorship called a "Lecture-ship in Economics and History" in 1875. This is probably the first instance of use of the term "economics" in a professorial title. The appointee was the first of the young American economists to be formally trained in Germany, John Bates Clark.

Illness prevented him from accepting the appointment until 1877.<sup>28</sup>

At The Johns Hopkins, President Daniel Coit Gilman offered Walker of Yale a "Professorship of Political and Economical Science" in 1876. Walker declined, but did accept a part-time lectureship in which he gave 20 lectures on "finance." Walker was considered so much a part of The Johns Hopkins' faculty that he gave the school's first doctoral examination in political economy in 1878.<sup>29</sup>

There were a number of prominent "itinerant" economists in the 1870's and early 1880's. Institutional sharing of professorships provided full employment to the new economists at a time when it was sometimes difficult to equate the market on a full-time basis.<sup>30</sup> It gave university administrators an easy way to cancel appointment if the practitioner of the new "economical science" got into trouble with his ideas. This happened rather frequently.

*The First Graduate Courses in Political Economy.* The first graduate courses in political economy were established during this decade as a logical accompaniment and consequence of the first specialized teachers. Harvard announced its first course in political economy "primarily" for graduate students in 1875.<sup>31</sup> At this

<sup>28</sup> *Annals of the American Academy of Political and Social Science*, Vol. 1, p. 291.

<sup>29</sup> John C. French, *A History of the University Founded by Johns Hopkins*. (Baltimore: The Johns Hopkins Press, 1946), p. 341.

<sup>30</sup> Even in an institution as advanced as The Johns Hopkins, the trustees in 1881 "felt political economy did not deserve a major appointment . . . it was appropriate for some young scholar . . .". Richard T. Ely was appointed for half a year at \$600. See, Hugh Hawkins, *Pioneer: A History of The Johns Hopkins University 1874-1889* (Ithaca, N. Y.: Cornell University Press, 1900), p. 178.

<sup>31</sup> It should be kept in mind that leading institutions had graduate students long before they had graduate courses. E.g., Henry Farnam said Yale offered its first course to graduate students in 1846 and that 23 courses were available by 1871. These appear to have been undergraduate courses opened up to students with baccalaureate degrees, particularly for graduates of other institutions. See his "The Graduate School" in *The Book of the*

time Harvard offered undergraduates one required sophomore course and two elective junior-senior courses in political economy. Professor Charles Dunbar would meet students once a week for "conference and instruction."<sup>32</sup>

About the same time, Yale, which had one required and one optional undergraduate course in political economy, announced the addition of a third course for "graduate" students. Professor Walker would present the course by means of "lecture . . . recitation . . . oral and written discussion . . . and courses of reading."<sup>33</sup>

The Johns Hopkins University, founded in 1876 as the first exclusively graduate school, offered no formal courses in political economy but announced that students could register for "study and guidance" in the subject.<sup>34</sup> The first registrant, Henry Carter Adams, apparently never had any previous formal preparation in political economy. Before coming to The Johns Hopkins he had been studying for the ministry.

By later standards these early "advanced" study offerings were extremely limited in scope and depth. They were nonetheless significant. Advanced study in political economy moved from self-guided reading outside academic institutions to self-study with professional guidance inside institutions. The new advanced elective courses justified granting specialized teachers more time to work with fewer and more interested students in a single subject area.<sup>35</sup>

Pageant, George Henry Nettleton, ed. (New Haven, Conn.: Yale University Press, 1916), pp. 145-146.

<sup>32</sup> *Harvard University Catalogue, 1876-77*. See also, Paul Buck (ed.), *Social Sciences at Harvard 1860-1920* (Harvard University Press, 1965), 320 pp.

<sup>33</sup> *Catalogue of the Officers and Students in Yale College, 1876-77* (New Haven, 1876), pp. 48-50.

<sup>34</sup> *The Johns Hopkins University Register for the Second Year, 1877-78* (Baltimore, 1877), p. 13.

<sup>35</sup> The difficulties of the faculty at even the best institutions before 1870 have been well de-

*The First Ph.D.'s in Political Economy*. The first earned American Ph.D.'s in political economy were awarded during this decade. Harvard awarded the first in 1875.<sup>36</sup> Yale awarded the second in 1877.<sup>37</sup> The Johns Hopkins awarded the third, and only other such degree in the decade, in 1878.<sup>38</sup>

By present standards these early Ph.D.'s were weak. Preparatory course work, as already noted, was limited to one or two formal undergraduate courses and one or two years of formal and informal guidance and consultation. The dissertations were brief—40 to 70 pages—no greater than would be required today of senior honors theses in leading institutions. The language requirements were heavy and included Greek, Latin, French and German. The early degrees were as much cultural as professional. They represented a two-year, third level degree by virtue of the fact that in the early 1870's the master's degree was changed from unearned to earned status.

That these early Ph.D.'s were pioneering and experimental is indicated by the fact that after awarding its first Ph.D. in political economy in 1875, Harvard did not award another for 20 years. After its first degree, Yale did not award another for

scribed by William Goodwin's account of developments at Harvard. Prior to 1867 "all work of the college was required." The time of professors was taken up "hearing lessons recited by small alphabetical sections of the constantly increasing classes." Under this system "no thought of graduate teaching was possible." In 1872 Harvard instituted "graduate work and graduate degrees" by declaring 74 undergraduate courses "elective." The results, said Goodwin, were "not too high at first . . . we sometimes had to shut our eyes to the obvious fact that many of our graduates were below many of our best undergraduates in scholarship." See his, "The Growth of the Graduate School", *loc. cit.*, pp. 169-179 (f.n. 16).

<sup>36</sup> *Doctors of Philosophy and Doctors of Science, Harvard University, 1873-1926*, Harvard University, Cambridge, 1926.

<sup>37</sup> *Doctors of Philosophy of Yale University, 1861-1915*, The University, New Haven, April 1916.

<sup>38</sup> *Fifth Annual Report of the Johns Hopkins University*, Baltimore, 1880, pp. 42 and 50.



seven years. The Johns Hopkins did not award a second political economy Ph.D. until after a lapse of ten years.

Yet these early Ph.D.'s did much for the discipline. They served to raise its status as an academic subject.<sup>39</sup> They served to fortify and justify the new professorships in political economy. They provided a means of getting around the inflexible undergraduate classic curriculum, a maneuver which will be discussed in greater detail in Part V. The beginning Ph.D. program represented the first inking, however slight, of slowly rising confidence and pride in advanced training in this country. Some sponsors hoped the new program would "keep the boys home from Germany."

#### V. TRAINING BECOMES PROFESSIONAL, 1880-1900

*The "New" Environment for the Study of Political Economy.* Richard Ely returned with a Ph.D. in political economy from Germany in 1879 "enthused but unemployed." He soon found employment. So did the other returnees. After 1880 America became a "new" environment under the unparalleled expansion of industrial capitalism.<sup>40</sup> Three major changes occurred of particular significance for the teaching of political economy.

For one, the period brought a wide range of new "problems." The nation became increasingly concerned over the value of money, bank failures, agricultural prices and land policy, urban unemployment,

taxes, corporate trusts and monopoly, railroad regulation.

With these problems came a new and vigorous *interest* in the nature of and alternative solutions for the problems. The educated read and the uneducated listened to proposals and counter proposals. The young economists offered both.

Third, the new environment provided the *means* by which both the new problems and the new interest could be brought together in the universities. A growing middle class was not only eager for knowledge, it could pay for it. Money began to flow into the academic world. Invigorated by the spirit of investigation brought over from Germany, great new universities were started from scratch, free of the rigidity of the classics and the regimen of ecclesiastical control: Cornell, 1868; The Johns Hopkins, 1876; Clark, 1889, Leland Stanford, 1891; Chicago, 1892.<sup>41</sup> The new intellectual atmosphere invaded the older institutions as well.<sup>42</sup> Among other things the new spirit of investigation called for abundant library resources. In 1890 these were not available.<sup>43</sup> Harvard had the only first rate re-

<sup>41</sup> The launching of Cornell and The Johns Hopkins began the secularization of higher learning. Clergymen were replaced on boards of trustees by bankers, merchants, industrialists and railroad men. These men... "while not anticlerical, emphasized the practical things which... slowly eroded religious and sectarian influences to higher education." When The Johns Hopkins was formally opened, the speaker was T. H. Huxley, exponent of the new science. There was no opening prayer nor benediction. For years the "religious" community reviewed the university's work with "suspicious surveillance." See, Richard Hofstadter and C. DeWitt Hardy, *The Development and Scope of Higher Education in the United States* (New York: Columbia University Press, 1952), p. 35.

<sup>42</sup> At Harvard after the inauguration of Charles W. Eliot, 1869; Michigan under James D. Angell, 1871, etc. See, Arthur E. Bastor, Jr., "The Transformation of American Scholarship 1875-1917," *The Library Quarterly*, July 1957, pp. 164-179.

<sup>43</sup> In 1890 only 5 colleges and university libraries possessed 100,000 volumes or more. In 1910 this had risen to 23. See, *American Universities and Colleges*, 8th Edition, p. 40.

<sup>39</sup> The Ph.D. had been conferred in a natural science (physics) as early as 1861 at Yale. See Russell H. Chittenden, *History of the Sheffield Scientific School of Yale University* (New Haven, Conn.: Yale University Press, 1928), Vol. I, p. 86.

<sup>40</sup> J. Laurence Laughlin said the Civil War was the "convulsion which brought into existence a desire for the study of political economy in the United States." See his, *The Study of Political Economy* (New York: D. Appleton and Company, 1885), p. 24. The Civil War was unquestionably a major factor but the actual translation into change came after 1880 as shown by his own study of five leading universities (pp. 28-29).

search library in the country. It contained 225,000 volumes. Yale ranked a poor second with a mere 55,000 volumes. And below Yale, college libraries could be described only as "lamentable." The infusion of new money was so great that at the end of just two decades leading American institutions were able to offer professional research libraries the equal of any in the world. Between 1875 and 1900 Harvard's library resources increased from 212,000 to around 500,000 volumes; Columbia's from 32,000 to 250,000; Chicago's from 18,000 to 320,000; Cornell's from 49,000 to 200,000.<sup>44</sup> The economists were quick to utilize these enlarged resources. Their scholarly output began to rival that of the great German writers.

*The Economists Respond: The New Offerings in Political Economy.* The ambitious group of young economists exploited the new environment with unbridled gusto and ingenuity.<sup>45</sup> For every economic problem they could develop a college course. Political economy began to unfold in every direction. It literally exploded. There are few parallels in the history of higher education.

Offerings in political economy in the 28 selected schools expanded from the total of 35 or an average of slightly over one in 1880 to a total of 132 for an average of five in 1880. By 1900 the schools offered over 300 courses in the new economics for an

average of 11 each.<sup>46</sup> Five institutions were offering 20 or more courses by 1900 led by Chicago with 31.

At the beginning of this period many classicists expressed fear that if the social scientists led by the economists were given too much freedom to introduce "practical" courses the students, unwittingly, might swarm into them.<sup>47</sup> They were right. In 1870 Latin courses in the 28 selected schools outnumbered political economy 7:1. In 1880 this ratio had increased in Latin's favor to 10:1. But by 1890 the ratio was down to 3:1 and by 1900 had been reduced to less than 2:1. By 1900 some of the leading schools offered more courses in political economy than in Latin<sup>48</sup> and in numerous others political economy had risen to a level of equality with Latin.<sup>49</sup> All this took place within a single generation. Little wonder the classicists were alarmed.

It might appear offhand that the economists had made (along with the other social scientists) a frontal assault on the classicists, rammed the academic ramparts and built up a big new curriculum in the center of the enemy. Actually they did no such thing. They outflanked the classicists.<sup>50</sup> In many institutions the curriculum

<sup>44</sup> This confirms Charles Dunbar's comment in 1891 that "... it is probably safe to say that in the six or eight leading American institutions, the number of hours of instruction given per week to economics has increased on the average six or seven fold since 1876." See his "The Academic Study of Political Economy," *The Quarterly Journal of Economics*, July 1891, p. 400.

<sup>45</sup> Actually they might well have been grateful to the social scientists. From 1840 to 1870 American colleges lost appeal. The ratio of students to total population declined steadily. The reason said President Barnard of Columbia, was the colleges were "not meeting the needs of the community." See Richard Hofstadter and C. DeWitt Hardy, *op. cit.*, p. 28.

<sup>46</sup> Harvard, Illinois, Massachusetts Institute of Technology, Pennsylvania, Wisconsin.

<sup>47</sup> Columbia, Cornell, Dartmouth, Ohio State.

<sup>48</sup> The economists in the older institutions were greatly aided by the competition from the "new" universities. For example when Cornell opened in 1868 President Andrew D. White said "... the

<sup>44</sup> U.S. Department of Interior, Bureau of Education, *Public Libraries in the United States of America*, Special Report, Part I, GPO, Washington, D. C., 1876; Federation of Graduate Clubs, *Graduate Courses 1898-99*, University of Chicago Press, 1898.

<sup>45</sup> Writing in 1925, Frank A. Fetter said of this group (Clark, James, Farnam, Patten, Ely, Hadley, Seligman, Small, Taussig, Gardner, Gay, Daniels): "It would be hard to find anywhere in the history of scholarship a higher average degree of success and achievement than this little band of pioneers attained." To this list one would have to add the name of Fetter himself. See his "Economists and the Public", *American Economic Review*, March 1925, p. 4.

in political economy was cautiously "built down" rather than "built up," a development that requires brief explanation.<sup>51</sup>

As noted earlier, most institutions had one undergraduate course in political economy around 1880. To the classicist that was enough. When the economists could not squeeze into the inflexible four year classic curriculum they went around it and added a course for graduates at the top. Hence the second course in political economy in many institutions was a course for graduates. In some it was the first. It was often easier to add a second course for graduates than to try to force a second undergraduate course in the regular four year baccalaureate requirements.

Another stratagem was to "open up" the undergraduate curriculum to graduate students, since, as noted earlier, many institutions had graduate students long before they had graduate courses.<sup>52</sup> Presumably the graduate students were mature enough not to be taken in by the flashy new economics "problems" courses. Gradually these courses were then opened up to "advanced undergraduates" as well

time has fully come when...Latin and Greek should cease to hold...a place so important as that of scientific studies..." (*Cornell University Register, 1869-70*, p. 35). This announcement did not impress other college administrators at the time. But the following developments did: by its third year of existence Cornell outnumbered in students "any three colleges combined of the State of New York, colleges which had been in existence half a century."

<sup>51</sup>This is why many institutions awarded the earned Ph.D. in political economy before the earned MA and why for a few of the early economists the earned Ph.D. was their first and only earned degree.

<sup>52</sup>Harvard reported "graduate study (meaning graduate students) as old as the college itself." Names were not listed in the catalog until around 1865. Yale reported graduate students in residence as early as 1836 but no provision made for their instruction until around 1846 (f.n. 31). They were first listed in the catalog in 1869. For a discussion of developments in other institutions see, Bean, *op. cit.*, pp. 78-79, 189-207 and *Report of the Commissioner of Education, 1889-90*, Vol. II (Washington, D. C.: U. S. Government Printing Office, 1893), pp. 816-817.

as graduates. With persistence as well as ingenuity the economists worked their way down through the curriculum. By 1900 they were able to offer political economy even to freshmen.<sup>53</sup>

*The Graduate Seminar Becomes Professional.* Political economy began its academic existence as a one course subject under the old "recitation" system. The student bought a text, memorized, recited back to the teacher. The text was authoritarian. It was not to be questioned.

Then came the period of study abroad under the German seminar system. Under it the educational process was reversed. The student listened. The learned professor recited. It too was authoritarian.

When the young economic pioneers returned from Germany they were not content just to establish the German *group seminar* system.<sup>54</sup> They modified it. In one variation all members of the seminar investigated the same topic and came together to discuss it with the professor. In another, students carried out investigation on separate topics and came together for evaluation and discussion by the professor. A third variation was the individual seminar in which the student investigated a subject on his own with regular individual consultation with the professor.<sup>55</sup>

<sup>53</sup>In some leading schools the classicists held out much longer. At Yale, English did not replace the classics as the "backbone of the humanities" until 1910. But the economists had not been idle. By 1912 "next to English more men majored in economics than in any other subject." See George Wilson Pierson, *Yale College 1871-1921* (New Haven, Conn.: Yale University Press, 1952), p. 301.

<sup>54</sup>Reportedly introduced in this country first by historian-economist Charles Kendall Adams at Michigan in 1871. See Charles Forster Smith, *Charles Kendall Adams, A Life Sketch*, University of Wisconsin Press, 1924, p. 14.

<sup>55</sup>The advantages and disadvantages of these various seminar systems were reviewed at the Second Conference on the Teaching of Economics held at the University of Chicago in 1911. Papers from the conference were published in *The Journal of Political Economy*, February 1912, pp. 153-179. See especially J. Laurence Laughlin, "The Economic Seminar," pp. 169-175.

The American seminar was a revolutionary step toward professionalism. Scientific investigation became the authority. Both teacher and student contributed to the subject matter. The number of topics to be covered could be expanded greatly. Professional skill in research, analysis, presentation, became more important than the accumulation of facts. More abundant library resources permitted specialization which in turn led to more productive scholarship and the basis of all professions—a large and growing literature.

*The Ph.D. Becomes Professional.* It will be recalled the German Ph.D. in political economy was a baccalaureate degree for German students and a second level, one or two year degree for most American students. The first American Ph.D.'s in political economy in the 1870's were third level, two year degrees beyond the bachelor's. Between 1880 and 1900 as the number of courses and graduate students grew rapidly the economists joined other disciplines in upgrading the Ph.D. to a third level, three year professional degree.

A growing body of literature made possible two years of course work with an additional year for the dissertation. A major change occurred in language requirements. In the 1870's language requirements were not often specified because it was not necessary to do so. Most undergraduate curricula required Latin, Greek, (sometimes Hebrew), French and German, although the latter two were often optional. As graduate work moved toward professionalism the "research languages" French and German were added.<sup>56</sup> By 1890 schools began to drop Latin and Greek as not very useful in advanced study of current economic problems.<sup>57</sup> Once again the

<sup>56</sup> This change was led by The Johns Hopkins which in 1888 said Latin and Greek were being dropped because they were "a formal rather than a practical need" in graduate research. See Bean, *op. cit.*, p. 342.

<sup>57</sup> Some leading schools had very limited offerings in German before 1870. President Andrew

economists outflanked the classicists by adding on at the top and then taking away from below.

Dissertations became longer, more sophisticated and more specialized, i.e., they were no longer the mark of a cultured gentleman but the demonstration of professional skill. By 1900 the Ph.D. in political economy had won out over all other degrees and the "no degree" school as the symbol of top level professional training. Its statistical growth was impressive. In the 1870's only three institutions awarded a total of three Ph.D.'s in political economy. In the 1880's, five institutions awarded a total of eleven. In the 1890's, twelve institutions awarded 95 degrees.<sup>58</sup>

#### VI. ECONOMICS: THE NEW PROFESSION

Before 1880 there were very few jobs for economists. Only three men in the 28 selected leading schools in 1880 devoted most of their time to political economy. The unprecedented expansion in course offerings after 1880 sent college administrators looking for trained economists. By 1890 there were 20 chairs in political economy in the 28 schools. By 1900 there were 51.<sup>59</sup> If nothing else the "pioneer" economists created full employment for themselves.<sup>60</sup>

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White of Cornell said when he graduated from Yale in 1850 "no instruction whatever in German was offered to students." See L. Viereck, "German Instruction in American Schools," *Annual Report of the U.S. Commissioner of Education, 1900-1901*, Vol. I (Washington, D. C.: U. S. Government Printing Office), p. 563.

<sup>58</sup> Based on author's review of all schools offering the Ph.D. in economics during the period.

<sup>59</sup> All of the 28 selected schools had at least one professorship, except two which still operated under legislative restrictions as to course offerings.

<sup>60</sup> Not without difficulties of course. Although relatively free from theological pressures in the new institutions, there was often plenty from the new benefactors—the business community. The first American Ph.D. economist, Henry C. Adams in 1886 expressed some "radical" views during a strike on the Gould railroad system (he urged collective bargaining). This so displeased an influential member of Cornell's Board of Trustees he was dismissed from his post. See, *Dictionary of*



As one might expect from a growing profession, the economists formed a national organization in 1886, the American Economic Association.<sup>61</sup> The name itself is significant. It was national in scope. It was "economic," not "political economy." The latter was too "popular" and too "unscientific."<sup>62</sup> The economists wanted distinction from the other social sciences.<sup>63</sup>

The new profession came to the end of the century self-assured and confident. Economists were no longer at the fringe of the academic world.<sup>64</sup> They now filled the highest academic posts.<sup>65</sup>

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*American Biography*, Vol. I, p. 68. Ely had similar problems at The Johns Hopkins. There was the E. A. "Ross affair" at Stanford, and others.

<sup>61</sup> A. W. Coats, "The First Two Decades of the American Economic Association," *American Economic Review*, September 1960, pp. 555-574.

<sup>62</sup> William Folwell in *Proceedings*, American Economic Association, First Series, July 1889, p. 382.

<sup>63</sup> In addition to the *American Economic Review*, ten other journals specializing in or related to economics were begun 1886-1906. See Henry W. Farnham as cited in Thwing, *op. cit.*, p. 169. See Joseph Dorfman, *The Economic Mind in American Civilization*, Vol. III, The Viking Press, 1949, pp. 240-241.

<sup>64</sup> Joseph Dorfman in his classic work, *The Economic Mind in American Civilization*, refers to the last decade of the 19th century as the "heart-breaking nineties." In terms of social unrest, conflict between economic groups, unresolved economic and social problems this description is quite appropriate. (See his Vol. III, Part III.) But in terms of public interest in economics, the growth in number of trained economists and in academic teaching the decade might well be called the "triumphant nineties."

<sup>65</sup> Leading presidencies included Francis A. Walker, Massachusetts Institute of Technology; Arthur Hadley, Yale; Carroll Wright, Clark; Charles K. Adams, Wisconsin; Alisha B. Andrews, Brown; Edmund J. James, Northwestern and

The new professional organization began its existence modestly with just 182 members. By 1890, the American Economic Association had enrolled 500. The enthusiastic Secretary, Richard T. Ely, said that there was no reason why membership "shouldn't reach 10,000."<sup>66</sup> It reached 800 by 1900.<sup>67</sup> Membership did eventually reach the first Secretary's 10,000, although perhaps a little later than he anticipated, i.e., by 1960.<sup>68</sup> Other equally enthusiastic members proudly announced economics had now become, in the academic world, the "uppermost" subject.

Whether one agrees or not that economics had risen to "uppermost," one may readily concede its rise from obscurity to professional status in a few decades was indeed a remarkable achievement by a remarkable group of men.

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Illinois, and David Kinley, Illinois. The list might well include Woodrow Wilson, Princeton, for he taught as much in political economy as in political science during his early teaching career. Wilson apparently created quite an impression when he lectured to the History and Political Science Association at The Johns Hopkins on "Recent American Economists." See *The Johns Hopkins Circular*, March 27, 1885. See also Joseph Dorfman, *op. cit.*, pp. 336-337.

<sup>66</sup> *Proceedings*, American Economic Association, First Series, July 1889, p. 320.

<sup>67</sup> *Papers and Proceedings*, 13th Annual Meeting, American Economic Association, 1900, pp. 19-40.

<sup>68</sup> Membership reached 10,159 in 1959 according to the "report of the Secretary" in *Papers and Proceedings*, 72nd Annual Meeting, Vol. L, No. 2, May 1960, Exhibit II, p. 681. Professor Ely would also undoubtedly be pleased to learn from the 1959 Secretary's report that "the saturation point in our membership does not yet seem to have been reached" . . . and that business, government and other professional fields continue to show "increasing interest in economics." *Ibid.*, p. 720.



APPENDIX

TABLE A: ACADEMIC BACKGROUND OF 14 AMERICAN ECONOMISTS WHO DID NOT EARN PH.D.'S BUT WHO HELD IMPORTANT TEACHING POSTS IN 28 LEADING COLLEGES AND UNIVERSITIES 1870-1900

Economist	Earned Degrees	Honorary Degrees	Foreign Study	Institutions in Which Taught
Dunbar, Charles F.	A.B. Harvard 1851	LL.D. 1891	Europe 1869-71	Harvard
Folwell, William W.	A.B. Hobart 1857 A.M. Hobart 1860	LL.D. Racine 1870 LL.D. Hobart 1878	Berlin 1860-61	Kenyon Minnesota
Walker, Francis Amasa	A.B. Amherst 1860	A.M. Amherst 1863 A.M. Yale 1873 Ph.D. Amherst 1875 LL.D. Amherst 1881	Germany 1892	Oberlin Yale M.I.T.
Wright, Carroll D.	None (b. 1840)	A.M. Tufts 1883 LL.D. Wesleyan 1894  Ph.D. Dartmouth 1897	None	The Johns Hop- kins Catholic U. of America Columbia Harvard Dartmouth Clark
Adams, Charles K.	A.B. Michigan 1861 A.M. Michigan 1862	LL.D. Chicago 1878 LL.D. Harvard 1887  J.U.D. Glasgow	Berlin Heidelberg 1869- 1871 Leipzig Munich Paris	Cornell Wisconsin Michigan
Sumner, William G.	A.B. Yale 1863	LL.D. U. of East- ern Tennessee	Göttingen Oxford 1865-66	Yale
Andrews, Elisha B.	A.B. Brown 1870	A.B. Yale 1873 LL.D. Nebraska, Brown, Chicago D.D. Colby 1884	None	Brown
Clark, John Bates	A.B. Amherst 1872	Ph.D. Amherst 1890 LL.D. Princeton 1896 LL.D. Amherst 1897	France 1872 Heidelberg Zurich 1873-75	Carleton Smith Amherst Columbia
Mayo-Smith, R.	A.B. Amherst 1875	None	Germany 1876-77	Columbia
Hadley, Arthur T.	A.B. Yale 1876	A.M. Yale 1886 LL.D. Harvard and Yale 1879 LL.D. Columbia 1900	Berlin 1878-79	Yale Berlin Oxford
Caldwell, William	A.M. Edinburgh 1884	None	Germany <sup>1</sup> France <sup>1</sup>	Cornell Chicago Northwestern
Miller, A. C.	A.B. California 1887 A.M. Harvard 1888	None	Paris <sup>1</sup> Munich <sup>1</sup>	Harvard California Cornell Chicago
Daniels, Winthrop M.	A.B. Princeton 1888 A.M. Princeton 1890	None	Leipzig 1890	Wesleyan Princeton
Commons, John R.	A.B. Oberlin 1888 A.M. Oberlin 1889	LL.D. Oberlin 1915	None	Wesleyan Oberlin Syracuse Wisconsin

<sup>1</sup> Years not known.  
Source: See Table B.

APPENDIX

TABLE B: SOURCE OF DOCTORATES AND EXTENT OF FOREIGN STUDY OF 62 MEN WITH MAJOR RESPONSIBILITY FOR TEACHING ECONOMICS IN 28 LEADING COLLEGES AND UNIVERSITIES 1870-1900<sup>a</sup>

Economist	Earned Ph.D.		Studied in							
	Institution Awarding Degree	Year	Germany					France	England	Other
			Berlin	Göttingen	Heidelberg	Halle	Other			
			1873-1879							
Moses, Bernard	Heidelberg	1873			x					
Adams, Herbert Baxter	Heidelberg	1876			x					
Laughlin, James Laurence	Harvard	1876					x <sup>b</sup>			
James, Edmund J.	Halle	1877					x	x		
Adams, Henry Carter	The Johns Hopkins	1878	x		x			x	x	
Farnam, Henry Walcott	Strassburg <sup>c</sup>	1878	x	x						
Patten, Simon N.	Halle	1878				x				
Ely, Richard T.	Heidelberg	1879	x		x	x		x		
			1880-1884							
Taussig, Frank William	Harvard	1883	x							
Knight, George W.	Michigan	1884	x			x	x			
Veblen, Thorstein B.	Yale	1884								
			1885-1889							
Bemis, Edward Webster	The Johns Hopkins	1885								
Jenks, Jeremiah Whipple	Halle	1885				x				
Seligman, Edwin R.	Columbia	1885	x		x	x		x		
Dewey, Davis R.	The Johns Hopkins	1886								
Gould, Elgin Ralston	The Johns Hopkins	1886								
Tuttle, Charles	Heidelberg	1886								
Wilson, Woodrow	The Johns Hopkins	1886								
Falkner, Roland Post	Halle	1888	x				x	x		
Taylor, Fred Manville	Michigan	1888								
Warner, Amos Griswold	The Johns Hopkins	1888								
Schwab, John Christopher	Göttingen	1889	x							

TABLE B—Continued

Economist	Earned Ph.D.		Studied in								
	Institution Awarding Degree	Year	Germany					France	England	Other	
			Berlin	Göttingen	Heidelberg	Halle	Other				
Keasby, Lindley Miller	Columbia	1890		1890-1894							
Gardner, Henry Brayton	The Johns Hopkins	1890					x <sup>b</sup>			x	
Hicks, Frederick C.	Michigan	1890	x					x		x	
Clark, Fred Converse	Michigan	1891	x			x					
Furber, Henry Jewett, Jr.	Halle	1891	x	x			x			x	
Fisher, Irving	Yale	1891	x					x			
Plehn, Carl C.	Göttingen	1891		x							
Ross, Edward A.	The Johns Hopkins	1891					x <sup>b</sup>				
Sherwood, Sidney	The Johns Hopkins	1891									
Willcox, Walter Francis	Columbia	1891									
Woodford, Arthur Burnham	The Johns Hopkins	1891	x					x			
Bourne, Edward Gaylord	Yale	1892									
Gray, John Henry	Halle	1892	x			x	x	x			
Hill, Joseph Adna	Harvard	1892									
Hull, Charles Henry	Halle	1892	x	x		x	x <sup>b</sup>				
Lindsay, Samuel McCune	Halle	1892	x			x	x	x		x	
Scott, William Amasa	The Johns Hopkins	1892									
Johnson, Emory Richard	Pennsylvania	1893					x <sup>b</sup>				
Hourwich, Isaac A.	Columbia	1893								x	
Kinley, David	Wisconsin	1893	x	x							
Ripley, William Zebina	Columbia	1893					x <sup>b</sup>				
Carver, Thomas Nixon	Cornell	1894									
Cummings, John	Chicago	1894									

TABLE B—Continued

Economist	Earned Ph.D.		Studied in							
	Institution Awarding Degree	Year	Germany					France	England	Other
			Berlin	Göttingen	Heidelberg	Halle	Other			
Fetter, Frank A.	Halle	1894				x		x		
Hollander, Jacob H.	The Johns Hopkins	1894								
Bullock, Charles Jesse	Wisconsin	1895			1895-1899					
Dixon, Frank Haigh	Michigan	1895							x <sup>b</sup>	
Jones, Edward D.	Wisconsin	1895	x				x			
McVey, Frank	Yale	1895								
Emery, Henry C.	Columbia	1896	x							
Page, Thomas Walker	Leipzig	1896						x	x	x
Aldrich, Morton Arnold	Halle	1897	x				x	x		
Bogart, Ernest Ludlow	Halle	1897	x				x			
Hatfield, Henry Rand	Chicago	1897								
Sprague, Oliver M. W.	Harvard	1897								
Urdahl, Thomas K.	Wisconsin	1897	x							
Hammond, Matthew Brown	Columbia	1898	x					x		
Mitchell, Wesley Clair	Chicago	1899					x	x		
Crook, James Walter	Columbia	1898	x							
Clark, Victor S.	Columbia	1900		x	1900					

<sup>a</sup> For names of the 28 selected institutions see text, Part I. Excluded were visiting professors, part-time instructors, tutors, lecturers, etc. Excluded also were men prominent in economics writing, but whose professorial appointments were in other fields. (See discussion Part I.)

<sup>b</sup> Specific institutions not known.

<sup>c</sup> Degree of R. P. D. (Rerum Politicarum Doctor)

Source: College catalogs and histories, *Who's Who in America*, *Who Was Who*, *Dictionary of American Biography*; "List of Members," *Publications of the American Economic Association*, Third Series, Vol. VI, No. 2, May, 1905, pp. 203-265; "Personal Notes," various issues of the *Annals of the American Academy of Political and Social Science*; *Graduate Courses 1894-96*, Committee of the Graduate Club of Harvard, Alfred Mudge and Son, Boston, 1891, individual biographies and autobiographies.