Rollin Salisbury and the Establishment of Geography at the University of Chicago

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Rollin D. Salisbury was for many years a leading figure in American academic geography. He founded the first department of graduate studies in geography, at the University of Chicago (1903); he was a charter member of the Association of American Geographers (1904); and he served as president of that society (1912). Most often remembered by geographers today for his teaching, he was a master of the Socratic method.

Writers who knew Salisbury have presented a portrait of an intensely dedicated academician who came to the University of Chicago at its opening in 1892, to join in creating the Department of Geology with Thomas C. Chamberlin, the department's head. Later appointed dean of the Ogden Graduate School of Science, he held that post until his death in 1922. His career was marked by a helping relationship to Chamberlin, probably the greatest American geologist of his time. Their association had begun at Beloit College, where Salisbury had been Chamberlin's student, and it continued throughout the Chicago years. Succeeding Chamberlin at Beloit, Salisbury taught for nearly a decade there (save for a year in which he studied at Heidelberg University); he served briefly with the geology department of the University of Wisconsin, during Chamberlin's presidency of that institution; and he was invited to Chicago at Chamberlin's request.

The premise on which the present paper rests is that the relation of Salisbury to geography remains at best only partially understood. Taking a fresh approach to the entirety of geography's preprofessional and professional past in which Salisbury was active—about 1890 to about 1920—I propose that it be thought of as an episode in the life of an idea. Ultimately, this approach raises the question “What is the significance of earth conditions to human affairs?”—the query that Clarence Glacken

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has resolved into (1) the idea of a designed earth, (2) the idea of environmental influence, and (3) the idea of humanity as a modifier of the environment. The episode was a particular sequence of events in American academic history pertaining to the second of these conceptions.

In the pages that follow, better understanding of the episode is sought through a new look at Salisbury's opinions and actions, while better understanding of Salisbury is aimed at through a new analysis of the episode. For both purposes, reliance is placed upon Salisbury's published writings and upon archival materials, especially University of Chicago records and a collection of papers left by Salisbury, largely made up of letters he had received.

Invisible College

To read the papers of Salisbury for the years around 1890 is to become aware of his prominence in something known in our day as an invisible college. True to definition, it was an association of researchers held together by an intellectual interest, unassisted by common institutional ties or shared location. The work of the college was directed toward an understanding of surface materials and landforms. Membership came from state geological surveys, the United States Geological Survey, and universities; the roster included, besides Salisbury, G. K. Gilbert, Frank Leverett, and William Morris Davis. The ranks merged into those of the generality of geologists.

The tone of the college is struck in selections from two letters. In the first, Salisbury is confiding to a friend (outside the circle):

Well, I have had a good summer. Fortune has favored me ... and as a result I am credited with some discoveries.... I have had the same experience several times within a few years.... This year a second driftless area down in Illinois was found, and also some clinchers for the orange sand argument.... In New Jersey I was fortunate again. I have demonstrated that the drift limit as heretofore given is incorrect ... for the very states in which most work on the drift has been done.... To upset the old conclusions was not altogether unpleasant, you may be sure.

In the second excerpt, G. K. Gilbert is writing to Salisbury, regarding some kames near Rochester, New York:

They have always been a puzzle to me and a recent examination left
them still problematic. . . . I can exhibit them to geologists only as a
conundrum, but your special studies may enable you to suggest an
explanation. 7

The activities of Salisbury and company, it must be emphasized, were
wholly integrated into geology, a field that had been undergoing
systematic reconstruction on historical principles from at least the time of
Charles Lyell, two generations earlier. After Lyell, Joseph Le Conte had
said, "Geology may be defined as the history of the earth as revealed in its
structure, and as interpreted by causes still in operation." 8 The great
intellectual gain arising from historicization could be found in the
opportunities for inference that it opened to investigators. The landform-
studying geologists held, as indispensable assumptions, that the problems
they attacked were historical problems, and that they were looking into
the latest chapter in the history of the earth. 9 Parenthetically: Davis set
himself apart by bringing into the dialogue of the company, and insisting
upon, a cyclical scheme for imposition on that history. 10

I suggest that physical history was central to the geologists' pursuit of
earth history, and that this pursuit qualified geology, if anything did, for
consideration as a "rational enterprise." In this inquiry were to be
discovered, to quote from Stephen Toulmin, the "conceptual aggregates,
systems, or populations employed on a collective basis" that distinguished
the geologist's search for understanding. 11 Accordingly, the subject matter
of the landform-studying college lay within the scope of a geophysical
rationale, and so did that of an expansive teaching venture of theirs,
called by many of them physiography—a term taken over from Thomas
Huxley. The striking efflorescence of turn-of-the-century texts representing
the venture came almost entirely from the college. Said Salisbury, in a
two-page review of meanings introducing his own Physiography, "The
study has to do primarily with the surface of the lithosphere, and with the
relations of air and water to it. Its field is the zone of contact of air and
water with land, and of air with water." 12

Given this limitation on primary scope, I argue that, when the question
of the relation of contemporary life to earth conditions came up among
the landform-studying geologists, it was appropriate to opt not for
pursuit of it but rather for sponsorship of its pursuit by others. This was
the option taken by Salisbury; it was, for him, a commitment. Because the
period of his sponsorship corresponded closely with the years in which
Davis was similarly active, I am designating it the Davis-Salisbury
Episode.
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Guide to the Episode

The dominating question of the Davis-Salisbury Episode had two versions, one of sweeping inclusiveness, the other of specifically human reference. It ran, in the comprehensive version, as posed to the mind of Salisbury, what should be believed about “the influences of earth features and earth resources on the distribution, character, and activities of life—life of all kinds?” As posed for Davis, it went, what should be believed about relations between “the physical environment of life ... and responses which life has made to the physical environment?” In the version confined to humanity, the question for Salisbury was, what should be believed about “the influence of the [terrain], the climate, and the natural resources of [various] lands on their settlement, development, and present commercial and industrial status?” For Davis, it was, what should be believed about “the controls that [the fundamental facts of earth] exercise on human conditions?”

That their chosen issue, in either version, expressed the idea of environmental influence—as carried into their own time, society, and conceptual frame—should not be surprising, if only because it reserved to objects in which they had a vested interest the position of independent variable. It imparted justification to the pursuit of their science. Still, we should be reminded that both the idea of a designed earth and that of humanity as a modifier of environment were consciously selected against, by them. The rejection of the first has been long recognized; I can now confirm from a letter by Salisbury that the second, as found in the work of George Perkins Marsh, was thought about, too, but passed over.

Pursuit of the environmental influence idea—with variable emphasis on each of the two versions—occurred in phases, a key to which may be found in Merle Curti’s The Growth of American Thought, where impulses toward professionalization and popularization in the late nineteenth and early twentieth centuries are detailed. Application of the key follows.

In the opening phase—roughly the 1890s—the impulses found expression concurrently, as follows: (1) landform study, having achieved a research-defined professionalization in the late 1880s, was continuing to progress; (2) an associated effort to popularize landform awareness, by preaching and demonstration, was being pressed; (3) the idea of environmental influence was invoked as a strategem of the popularization campaign; and (4) tentative moves were made toward securing to that idea a professionalized, research approach.

In the next phase, all of these lines of work and thought continued, but with significant changes in standing: (1) landform science was, at the
opening of the phase, nearing the crest of its excitement, as then
formulated; (2) the program for popularization of landform awareness,
with its subtheme of environmental influence, kept making headway for a
while after the opening; (3) a concerted attempt was made to establish
professional pursuit of the environmental influence idea; and (4) as a
consequence, efforts to popularize that pursuit came into prominence.
Both Davis and Salisbury played a part in popularizing landform
awareness through the environmental influence idea, with Davis
registering a far greater impact, especially in the 1890s. And both invested
their reputations in the credibility of the idea as a broad research
challenge, eligible for professionalization. In the latter interest, Davis's
leadership went to the founding of a national society, Salisbury's to the
creation of a university department.

The Chicago Venture: School of Thought

Salisbury's commitment, at Chicago, was to the sponsorship first of a
faculty which, however provisionally qualified, would be ready to teach
and write in furtherance of the environmental influence idea. Beyond
that, it was a commitment to graduate students who would be,
theoretically, the first generation with adequate education and credentials
for the research and teaching that the idea demanded.
Thanks to a document discovered about two years ago, we know that
courses believed to embody the environmental influence idea were already
being taught at Chicago when Salisbury's new department was in the
planning stage.19 In a sense, then, although the courses concerned spread
across six departments, a "department" on the environmental question
already existed. This shadow department was most evident in botany and
zoology, where appropriately oriented courses were prominent. Of the
two individuals chiefly responsible—Henry C. Cowles and Charles M.
Child20—it was Cowles whose direct connection with the geophysical
program at Chicago can be more readily demonstrated.21 He had first
studied under Salisbury and Chamberlin, then proceeded to take a
dotorate in the botany department, where he stayed to teach.22
Also to be reckoned into the shadow department were history (for its
offerings on European and American expansion), sociology and
anthropology (for studies in ethnology and early social history), and
political economy (for courses in railway transportation, industrial
development, commerce, and agriculture).23 The record leaves no doubt
about awareness of and interest in these departments, in the Salisbury-
Chamberlin purview. Salisbury's correspondence reveals, for example,
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that he was giving attention as early as 1893 to the recruitment of an instructor for political economy, a William Hill, who had been trained in economics at Harvard.24.

The shadow department, however, could not have achieved the focus required for an attempt at professionalization. For this purpose, an independent department to be led by Salisbury was proposed, gaining approval in time for the university announcements for 1903-4. Salisbury, who was by now dean of the school to which both geology and the new department were assigned, was proud of what he had instituted. Today, the critical reviewer must ask what he had brought into being. It was at first an educational venture, comprising an environmentally defined variant on the social studies.

To follow the experience of two of the earliest candidates for a graduate degree—Chesley Posey and Helen Collins25—a core of studies was surrounded by courses in geology, mainly taught by Salisbury, where knowledge of the geophysical environment was developed; and by courses in botany and zoology, where nonhuman life was interpreted with special reference to that environment. The core itself, taken in the new department, consisted of courses in which human life received a comparable interpretation. Through the program, students were inducted into the point of view for which the new department had been opened: an earth-referring environmentalist school of social thought. In his M.A. thesis, Posey validated his membership in the school by writing on irrigation in the American West; in hers, Collins did the same by writing on the settlement history of Illinois.26

For the center to hold, in the beginning, the will and spokesmanship of Salisbury may have been necessary, but the substance of the center—the content of the five or so essential courses of the new curriculum—was owed to two students of his, J. Paul Goode and Harlan H. Barrows. Adding to what has been published already about these men, perhaps most memorably by William Koelsch about Barrows, I point to the fact that the professionalization which they were helping to initiate largely depended upon a special relation to teachers. They were teachers themselves, to be sure; but as theologians are to ministers, so they were consciously striving to become to teachers in the schools. A document from the hand of Goode firmly establishes this aim.27

Finally, note should be taken of the popularizing side of the early Chicago effort. To the popularization through teachers that was implicit in the Chicago approach to professionalization must be added the rôle filled by Goode from his first year onward as public lecturer in university extension, and the department's very close relations with a new citywide
layman's society. I suggest that even the part-time engagement of Ellen Semple, beginning in 1906, be regarded as a popularizing contribution, considering the manner in which she developed her themes on American history.

The Chicago Venture as "Geography"

Until now, I have refrained from referring to the new department by its title, "Geography." My aim has been to sharpen recognition, through the Chicago case, that the Davis-Salisbury Episode is to be remembered for two debatable legacies, the first a school of thought, the second an adopted name.

What was believed to be geographical about the venture? From statements by Salisbury, his faculty, and their students comes the answer that it was geographical insofar as conditions and events of recent earth history were related to its work. The frame in which "geography" referred to recent earth history had been operative already in the 1850s, when a chair for Arnold Guyot at Princeton was announced as a professorship in geography and geology. In the late 1880s, Davis had been thinking in the same frame when he spoke of geography as the study of the present in the light of the past, and of geology (or better, the rest of geology) as the study of the past in the light of the present. At the opening of the University of Chicago in 1892, it had been expressed in the designation of Salisbury as professor of geographic geology, and in the description of geology as a field composed of three sciences: geography, mineralogy, and petrology.

With the founding of the Department of Geography under Salisbury, in 1903, the title served as an indicator by which new courses could be known to differ from those of other departments of social thought. Terms of discourse signaling the difference at that time—and causing most geographers to wince today—were "geographical influence," "geographic factor," and "geographic condition." A minor monument to this usage was Harlan Barrows's study of the middle Illinois Valley, completed in 1908. Salisbury, as approving sponsor, is directly tied to it by a letter of that year.

This dimension of the Salisbury commitment showed the innocence of a generation long immersed in earth science. Salisbury was spared anxiety over the existence of an alternative tradition in which "geography" was understood to stand for knowledge organized around a locative principle. To quote from an important contemporary source, which was ignored
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with apparent equanimity, "That which distinguishes geography ... is that it localizes objects ... it indicates ... the distribution of being, organic and inorganic, upon the earth."

Where else were university voices applying the name "geography" to an earth-referring environmentalist school of social thought that was only incidentally concerned with place, location, and distribution? At Nebraska, George Condra was doing this, in a program whose early growth was contemporaneous with that at Chicago. At Cornell, a corresponding adopter was Ralph S. Tarr; at Yale, Isaiah Bowman. Indeed, the potential for emergence of the name in this meaning was present wherever there were geology faculties. The potential existed, too, where faculties with no vested interest in earth science saw an advantage in exploiting the pattern set by the geologists. The most notable demonstration came from the University of Pennsylvania's Wharton School, where an economics faculty recommended candidates for degrees under the same appellation.

As the Davis-Salisbury Episode reached about the halfway mark in its later phase, the naming legacy, regularly attached to the school-of-thought legacy, had become observable in many universities; but the Chicago case remained the one to watch especially, because there alone the name was borne by an autonomous department.

How, at Chicago, the Episode Came to an End

Over the succeeding years, Salisbury held to his vision of what a pursuit of knowledge called "geography" should be, confirming and clarifying it on two important public occasions. As applied at Chicago, it had resulted in the allocation of the study in its human concern to the Department of Geography, in its concern with nonhuman life, to zoology and botany.

Meantime, as that ideal was being maintained by Salisbury, at a level of general management and elder statesmanship, a new generation in geography was coming up, providing a chance to test decisively the professionalizing capability of it. Graduate students were presenting themselves for work on the doctorate, while holding hopes for careers in universities. At this juncture, one observes a turn toward self-consciousness at Chicago, as though these students and the younger faculty (a category that included Barrows, but not Goode) were asking themselves, "What ought being a member of a university department of geography mean?"
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The most evident innovations came in the years 1913 and 1914, when the departmental announcements spoke for the first time of training for research, when the first field courses were offered in geography, and when Salisbury made a limited entry into the department's teaching by convening a student-staff weekly seminar.34 These three breaks with custom signified that the group as a whole was not only following through in earnest on the idea of geography as research, but was also embracing the proposition that the best geographic research takes place in the field. Until now, typical geographic research had been literary. Thus it was with an isolated doctorate of 1907, and with the preponderance of master's level work.35 The leading purpose of the new seminar was to think together about geography as field research.

The Salisbury seminar, which was later made famous by its participants, ran from 1913 to 1919. It yielded a substantial corpus of field-based research, including doctoral dissertations by Stephen Visher, Wellington Jones, Carl Sauer, Charles Colby, and Robert Platt.36 The product was highly orthodox, and it gave warning of the end of the episode.

Reading the seminar output, one gets the impression that the environmental school of social thought, which continued to hold for Salisbury great intellectual promise, was becoming for the new generation an uncomfortably restrictive frame of reference. Sooner or later, all but one of the named alumni—the exception being Visher—were to assert their dissatisfaction. Sauer and Barrows would take revisionist positions, each in his own fashion rejecting the geologist's way—Salisbury's way—of asking the question with which the present paper began, while continuing to find his identity as a geographer in the question itself. Jones, Colby, and Platt were to become reconstructionists, moving slowly away from the question, and eventually finding their identities as geographers in the great tradition of locative pursuits to which Salisbury—along with Davis and others of his generation—had denied a defining function. Their vehicle of departure was to be the series of spring field conferences to which Preston James has been directing the attention of our profession in recent years.

Of the outright declarations of independence issuing from this company, the earliest—by Barrows—fittingly brings the present paper to a close. It was the presidential address "Geography as Human Ecology," given before the A.A.G. in 1922, three years after Salisbury had relinquished to Barrows leadership both of the Chicago seminar and of the Chicago department itself. This is the speech in which geographers everywhere were advised to limit themselves to human problems,
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formulating them "from the standpoint of man's adjustment to environment, rather than from that of environmental influence." Said Barrows, "The former approach is . . . likely . . . to minimize the danger of assigning to the environmental factors a determinative influence which they do not exert."

When read in the light of the present paper, this celebrated statement conveys a meaning interestingly different from that ordinarily drawn from it. Attention goes not only to "adjustment" (the usual object of interest), but also to "environment." It has generally escaped notice that Barrows, in nearby lines, undercut the motivation behind the Davis-Salisbury Episode by saying that geographers of his persuasion "of course mean [by environment] the combined physical and biological environments."

By this simple restatement, the reference base of the geographer ceased to be confined to the subject matter of Salisbury's old invisible college; geophysical facts lost their privileged position. The college itself, we must understand, had been maintaining a life of its own since the 1890s in any event, adding to its membership through departments of geology at Chicago and elsewhere. The Barrows address gave notice that the Department of Geography at Chicago would continue to represent an environmental approach to social thought, if under altered conceptual conditions that weakened the connection with geology. It also signified that scientists from botany and zoology could no longer be counted, in prevailing theory, as members of the geographic fellowship.

Would Salisbury, who had died less than six months before the Barrows address, have been disappointed? Beyond any doubt he would have been. Yet, to judge by the generosity and hopefulness toward younger workers frequently reflected in his correspondence, I wonder if he would not have been ready to say to Barrows and others whom he had sponsored, "It is your turn now; you should not be deterred by what I believed was the right thing to do, when it was mine."

Notes


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4. The Papers of Rollin D. Salisbury, University Archives, Department of Special Collections, Joseph Regenstein Library, the University of Chicago. Occupying five linear feet and stored in eleven boxes, this collection is grouped in the following categories: correspondence; lectures and notes; speeches; legal and financial papers; clippings; reviews and memorabilia; notebooks; and photographs. Reference will be made below to "Sal. Papers," and to box and folder by number.

5. An essay briefly characterizing invisible colleges appears in John Ziman, *Public Knowledge: The Social Dimension of Science* (Cambridge: Cambridge University Press, 1968), pp. 130-38. Salisbury's college was kept together by publications, correspondence, and national conferences. He played a key role from 1893 onward as editor for "the physiographic aspects of geology" of the *Journal of Geology*.

6. Copy of Salisbury to Horace Fiske (poet and scholar of American literature), 14 September 1891, Sal. Papers, Box 1, Folder 1.

7. G. K. Gilbert to Salisbury, 1 July 1892, Sal. Papers, Box 1, Folder 5. Gilbert was at this time chief geologist, U.S. Geological Survey.


16. William Morris Davis, "The State Map of Massachusetts as an Aid to the Study of Geography in Grammar and High Schools," *Sixtieth Annual
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17. Draft of letter from Salisbury, address not named, 9 March 1893, Sal. Papers, Box 1, Folder 7.


20. In the spring of 1903, relevant courses were being offered by Cowles under the titles "Geographic Botany," "Physiographic Ecology," and "Field Ecology"; by Child under the title "Field Zoology." Circular of Information, The Graduate Schools (Chicago: University of Chicago, April 1903).

21. Of the thirteen courses taken by Cowles during his first years of graduate studies (1895-96) at Chicago, twelve were in geology. "Records of Work, Henry Chandler Cowles," Office of the Registrar, University of Chicago.


23. The courses are listed in Circular of Information, The Graduate Schools (Chicago: University of Chicago, April 1903).


27. J. Paul Goode, section titled "Advantages" in typescript titled "Courses in Geography," dated 17 July 1902, Geography Collection, University Archives, Department of Special Collections, Joseph Regenstein Library, University of Chicago.

28. The organization was the Geographic Society of Chicago, founded in 1898 by Zonia Baber, then of Cook County Normal School, with the cooperation of Goode and Salisbury. Conditions at the time of founding are evidenced in Baber to Salisbury, 14 March and 5 April 1898, Sal. Papers, Box 3, Folder 1.


30. Programme of Courses in Geology, The University of Chicago, 1892-3 (Chicago: University of Chicago Press, 1892). The copy consulted is in folder titled "Geology Department," University Archives, Department of Special Collections, Joseph Regenstein Library, The University of Chicago.


32. [Extracts from resolutions of the congress] in George M. Wheeler, Report Upon the Third International Geographical Congress and Exhibition at
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33. See address by Salisbury in "The Dedication of Julius Rosenwald Hall," The University Record, n.s. 1, no. 2 (April 1915): 76-87; and his statements on geography made as chairman of Section E, American Association for the Advancement of Science, in "Geology in Education," Science, n.s., 47 (1918): 325-35.

34. See entries under "The Department of Geography," in Circular of the Departments of Geology, Geography and Paleontology (Chicago: University of Chicago, 1913 and 1914).

35. The isolated doctoral dissertation was published as Frederick V. Emerson, "A Geographic Interpretation of New York City," Bulletin, American Geographical Society 40 (1908): 587-612, 726-38, and 41 (1909): 3-21. Of the eleven pre-1913 studies for the master's degree at Chicago, only two were field based.

36. In order of completion, these were the dissertations: Stephen S. Visher, The Geography of South Dakota (1914), published as Bulletin 8, South Dakota State Geological Natural History Survey (1918); Wellington D. Jones, "Geography of Northern Patagonia" (1914); Carl O. Sauer, Geography of the Ozark Highland of Missouri (1915), published as bulletin no. 7, Geographic Society of Chicago (Chicago: University of Chicago Press, 1920); Charles C. Colby, "Geography of Southeastern Minnesota" (1917); and Robert S. Platt, "Resources and Economic Interests of the Bermudas" (1920). Productions directly bearing on the work of the seminar were an unpublished outline by Barrows for a field course in the Cumberland Plateau and southern Appalachians, and Wellington D. Jones and Carl O. Sauer, "Outline for Field Work in Geography," Bulletin, American Geographical Society 47 (1915): 520-525. Sauer with G. H. Cady and H. C. Cowles, Starved Rock State Park and Its Environs, bulletin no. 6, Geographic Society of Chicago (Chicago: University of Chicago Press, 1918) was also seminar related.