CHAPTER 13

GEOGRAPHY AT THE UNIVERSITY OF NORTH CAROLINA AT GREENSBORO: HISTORICAL EVOLUTION, 1940-2004

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The lead headline in the May 2003 issue of the Association of American Geographers Newsletter reads as follows: UNC Greensboro Gets a Green Light for Ph.D. Program. In less than a decade, the Department of Geography at the University of North Carolina at Greensboro had evolved from a growing undergraduate program in the mid-1990s to a fledgling doctoral program that began accepting students for the Ph.D. in geography in fall 2004. In this chapter, we examine the historical evolution of the geography program at UNC-Greensboro and articulate the strategic moves that allowed a small, undergraduate geography program at a mid-sized university in the southeastern United States to emerge on the intellectual landscape. In doing so, we attempt to provide some useful pointers in terms of lessons learned for other geography programs with ambitions for developing graduate programs in geography.

The Early Days: 1940-1964. The Department of Geography was established in 1940 with just two faculty—Edna Arundel (Yale) and Coy T. Phillips (North Carolina, Chapel Hill)—and three course offerings in General Geography, Elements of Regional Geography, and Industrial and Commercial Geography. From 1940 to 1956, the course offerings increased to ten, including a two-semester physical geography course, five specialized regional geography courses and two earth science courses especially designed for teachers in a National Science Foundation-supported program. The department had an almost exclusively service function, offering courses aimed specifically to meet the needs of the School of Education and the Department of Business Education with regard to certification requirements of their graduates. During the first 20 years of the department's existence, close liaison was maintained with the above-mentioned academic units with respect to curriculum planning. Physical geography was also used for meeting part of the Natural Science requirement within the University—a pivotal moment with hindsight because it exposed substantial numbers of undergraduates to geography for the first time, and provided a platform for proposing a major in geography. Mrs. Mary Parker (M.A. North Carolina, Greensboro) taught the physical geography labs from 1956 until her retirement in 1972.

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In the early 1960s, the department added two additional full-time faculty lines including Dr. Craig Dozier (Johns Hopkins)—who replaced Edna Arundel as Head of the Department—and Dr. Norman Schur (Syracuse). Dr. Schur would later leave to initiate the geography program at UNC-Charlotte. By the mid-1960s, the department's course offerings had diversified to include courses on the Soviet Union, Africa, East Asia, climatology, political geography, conservation, Middle America, and South America.

Developing the Geography B.A. Program: 1965-1995. In 1965, a major in geography was approved and, by 1969, the Department had graduated its first ten majors from the program. Since the late 1960s, the Department has grown steadily in faculty, number of course offerings, number of majors, and general enrollment. In an attempt to cultivate the intellectual life of the program, Dr. Gordon Bennett (Michigan State)—who replaced Norman Schur in 1967—organized the inaugural Kappa Phi Chapter of Gamma Theta Upsilon in 1969. Dr. Charles Hayes (Chicago), formerly Director of Research in the Greensboro Planning Department, was added to the full-time faculty in 1968 to teach urban and economic geography. Dr. Hayes had been a part-time lecturer in the Department since 1965.

The Department moved into the first floor of the new Frank Porter Graham building in 1970 and hired its first departmental secretary, Mrs Shirley Brown—currently one of the longest serving university employees on campus. By 1971, there were four full-time faculty, with the addition of Carl Dinga (Indiana State), whose main interests were geology and geomorphology.

By the mid-1970s, the course offerings had been expanded to include such courses as urban geography, population geography and field techniques, as the Department evolved away from a traditional regional approach to a more topical and applied orientation. The introductory general geography course was dropped and courses in earth science and cultural geography were added. Geology courses were introduced in 1971, since no Department of Geology existed at UNC-Greensboro, and later courses in hydrology and air photo interpretation were added. The Department began to develop a highly visible on-campus profile in both the natural and social sciences.

To facilitate the recruitment of undergraduate geography majors, the Department developed applied program concentrations in Urban Planning and Earth Science/Environmental Studies in the mid-1970s. By offering explicit course tracks in employment-friendly market niches, the Department was able to partially mitigate the stereotypical view of geography as a degree for only those who wish to teach geography. During the 1970s, nearly 40 majors graduated in geography.

In 1980, Dr. John Hidore (Iowa)—a highly regarded climatologist from Indiana University—was appointed as the new Head replacing Dr. Craig Dozier who had served as Head for the previous two decades. Another new tenure-track position was filled by Dr. Jeff Patton (Kansas) whose main interests were cartography,
remote sensing and geomorphology. Dr. Patton initiated what became the Department's highly popular summer field trip course to the West. During the early 1980s, several new courses were introduced, including courses in advanced cartography, environmental change, urban planning, remote sensing, and agricultural land use, as the Department continued to evolve away from its roots in area studies to a more topical orientation—reflecting broader trends in the discipline at the national level. Dr. Doug Carroll (North Carolina-Chapel Hill), Director of Planning for Winston-Salem/Forsyth County, taught urban planning and earth science during the 1970s and 1980s. In 1983, Dr. Dinga left to join AT&T in the private sector and was replaced by Dr. Michael Mayfield (Tennessee), who joined Dr. Patton in offering the western field trip. By 1985, the faculty had increased to six full-time and two part-time persons and nearly 30 students were majoring in geography. In 1985, Dr. Dozier retired and Dr. Joseph Benclowski (Penn State) joined the department for two years.

Another significant hire was the appointment of Dr. John Rees (London School of Economics) as the new Head in 1987. Dr. Rees had developed an international reputation for his scholarship on product life cycle theory and its spatial implications. In the following year, the Department replaced two faculty lines with Dr. Keith Debbage (Georgia) specializing in urban planning and transportation and Dr. Michael Lewis (Oklahoma) specializing in geomorphology and natural resources. Dr. Debbage replaced Charles Hayes who retired and Dr. Lewis replaced Mike Mayfield who went to Appalachian State University. Dr. Bennett was made Director of Undergraduate Studies and became Faculty Sponsor of both the student Geography Club and Gamma Theta Upsilon, as the Department began to develop specific strategies for nurturing enrollment and growing the number of geography majors. In 1989, Dr. Bennett organized the first biennial Alumni Night—this increasingly popular event often draws up to 100 people. Maintaining close contact with alumni has been helpful in both graduate recruitment and further developing our network of internship opportunities. During the 1980s, almost 90 geography majors received their degrees and the Department experienced a rapid growth in majors in the late 1980s.

As part of the on-going strategy to elevate the program's visibility within the discipline, the department hosted the annual meeting of the Southeastern Division of the Association of American Geographers (SEDAAG) in fall 1993. In 1992–1993, Dr. Ian Hamilton of the London School of Economics was appointed as Distinguished Visiting Professor. Also, the co-winner of the Warren Nystrom Dissertation Award for the best dissertation in geography—Dr. Usha Natarajan (Iowa)—filled an additional temporary position in 1993. During 1987–1993, courses were added in Industrial Geography, Tourism Planning and Development, the Non-Western World, and Geographic Information Systems (GIS). By 1994, the number of majors exceeded 100 as the Department experienced unprecedented growth. However, the limits to growth were reached, in effect, with the physical configuration of each classroom, even as the interest in geography on campus intensified, and most course offerings began to "close" early during class registration each semester.

In January 1995, Dr. Bennett was appointed Head, and in the fall of 1995 a new tenure-track position in GIS/Remote Sensing was filled by Dr. Roy Stine (South Carolina). During the late 1990s, the Department underwent several extensive physical renovations in the former Dean's office and the old seminar and cartography rooms as faculty and new programs exceeded office and classroom needs. In fall 1996, a new GIS lab director, Rebecca Roush (M.A., Miami-Ohio), was appointed to oversee the computer cartography/GIS/remote sensing laboratory. From fall 1994 to fall 1996, the number of part-time class sections doubled and student enrollment in geography courses rose by over 50%. A growing number of students were finding internships and employment in geography-related jobs while simultaneously completing their degrees. During this time, Dr. Debbage became Advisor to the Geography Club which was now averaging 40 students per meeting for its twice-monthly luncheon speaker series. Also, Dr. Lewis became Advisor to GTU—the honor society, and Dr. Patton became Director of Internships. The department had matured and developed a more sophisticated institutional structure to more efficiently cater to the explosive growth in the number of majors—it was also ready for the next important step in its evolutionary development.

DEVELOPING A GRADUATE PROGRAM IN APPLIED GEOGRAPHY: 1996–2003. In 1996, a new Master's in Applied Geography program was approved by the UNC system. The program was built on the foundation of the undergraduate Concentrations in Urban Planning and Earth Science/Environmental Studies and the enhanced GIS/cartography/remote sensing specialization. The degree emphasized the application of theory and methods in geography toward the understanding of environmental and population problems related to urban planning, economic development, and social well-being in different locational contexts: urban, regional, rural, national, and international. Also, the program offered a substantial number of graduate courses during the evening to facilitate the earning of the degree by those in jobs or internships in areas such as city planning and GIS.

Dr. Hidore was appointed as the inaugural Director of Graduate Studies in 1996, and additional graduate courses were added in advanced GIS/remote sensing, advanced research methods, natural resources, and regional planning, plus an undergraduate course in the historical geography of the Western World. During 1995–1998, Dr. Patton, Dr. Stine, and Ms. Roush greatly improved the Spatial Analysis Lab (computer cartography/GIS/remote sensing/spatial statistics lab) with the addition of nearly $175,000 in hardware and software as a result of grants from NSF and major increases in support from the Office of the Dean of Arts and Sciences and the Provost. Since its inception, the program has been extremely successful and nearly 20 students were enrolled in the program by 1997–1998.
In fall 1998, Dr. Jay Lennartson (Wisconsin-Milwaukee) joined the department, filling a new position in atmospheric sciences and air quality. He also became the Coordinator of the new Geography Field Camp on a 300-acre farm 10 miles from campus. In the fall of 1999, the Department welcomed Jim Nelson (M.A., San Diego State) as the new Director of the Spatial Analysis Lab and Dr. Elizabeth Nelson (South Carolina) from San Diego State University who filled a new tenure-track position in cartography/GIS. Dr. Debbage became the Director of Undergraduate Studies overseeing both the student Geography Club, GTU and undergraduate recruitment, while Dr. Lennartson offered a new graduate course in environmental planning to better integrate the urban planning and environmental studies areas. During the 1990s, over 150 students received their B.A. in geography.

In 2000–2001, the Department was approved to offer a Post-baccalaureate Certificate in GIS, which began in fall 2001. The Department was also given permission to plan a Ph.D. in geography to be submitted by fall 2002. In 2001, three new faculty joined the department: Dr. Zhi-Jun Liu (Iowa) in GIS programming and hydrology, Dr. Bill Walsh (North Carolina, Chapel Hill) in GIS and urban planning, and Ms. Bebe Hall-Brown (M.A., North Carolina–Greensboro) as a Lecturer and Director of the Physical Geography Lab. Dr. Patton became Director of Graduate Studies in spring 2001 following the retirement of Dr. Jack Hidore in December 2000, and Dr. Ray Stine became Director of the GIS Certificate program in fall 2001. The Department also added Tina McJim as a new secretarial assistant to Shirley Brown. In 2001–2002, new courses were being taught in Spatial Analysis, GIS Programming, Advanced Remote Sensing, and GIS Applications in Urban Planning. Throughout the early 2000s, the Department purchased an average of $100,000 of computer equipment per year primarily for the Spatial Analysis Lab and faculty research needs.

In 2001, the first annual Dorothy Stafford Mason Fellowship ($4,000 per year) was awarded to a graduating geography major at UNC–Greensboro who had been accepted into a graduate program in geography. Dr. Dorothy Mason (North Carolina at Chapel Hill) had previously taught in the geography program at UNC–Greensboro in the early 1960s and returned to teach earth science in 1997–1998 after her retirement from NC A&T State University. The Mason Fellowship has now supported several graduate students in geography and attracted additional student support from alumni, becoming an important part of the program’s recruitment strategy.

The Department also developed additional initiatives aimed primarily at outreach to the broader academic and local communities. To that end, in response to requests from other geography programs within the state, the UNC–Greensboro Geography Department agreed to host the North Carolina Geography College Bowl in 1999. Largely because of the Department’s central location in North Carolina, the annual Geography Bowl has remained at UNC–Greensboro since 1999. The Bowl routinely attracts over 60 of the best geography students in the state to the UNC–Greensboro campus, and it has consistently generated positive local media coverage for the geography program.

Additionally, in fall 2001, the inaugural meeting of the Department Outreach Committee further cemented the flourishing town-gown relationships between the geography program and the larger metropolitan area. The committee members included the former Mayor of the City of Greensboro, the Greensboro City Planning Director, both the city and county GIS division heads, heads of local economic development companies including Koury Corporation and Kotsis Properties, key personnel from major corporations such as Syngenta, the Park Superintendent of the Guilford Courthouse National Military Park, the Program Manager of the Air Monitoring Division of the Forsyth County Environmental Affairs Department, and Executive Director of the Piedmont Land Conservancy, among others. Most of the Outreach Committee members had already provided many of our students with various employment and internship opportunities, and developing a formal relationship with the Geography Department further cemented those relationships.

Finally, in fall 2002, the department also extended its course offerings by becoming the first program in the College of Arts and Sciences to offer a major in the Evening University Program at the undergraduate level, as well as a post-baccalaureate certificate and graduate degree. The UNCG Evening University initiative strives to provide a more flexible, convenient and user-friendly academic course schedule for students in order to facilitate retention and graduation rates. The Geography Department is featured prominently in many of the Evening University ads that appear in the local media.

During 1998–1999, the first 11 Master’s degrees in Applied Geography were awarded; by 2001, over 25 Master’s degrees had been granted, and in fall 2003, over 60 students were enrolled in the graduate program compared to just under 20 enrolled students in 1997–1998. The Geography Department had also doubled the number of faculty lines from six full-time faculty positions in 1994–1995 to 12 in 2002.

In fall 2002, Dr. Michael Lewis was appointed Director of Undergraduate Studies, while Dr. Lennartson became the Faculty Sponsor of the rapidly growing Student Geography Club and GTU. Additionally, in fall 2003, Dr. Patton was appointed Head replacing Dr. Bennett who had overseen one of the most rapid growth phases in the Department’s history. Dr. Nelson was appointed Director of Graduate Studies in fall 2003.

**DEVELOPING THE DOCTORAL PROGRAM IN GEOGRAPHY: THE FUTURE.**

The Department’s future strategy includes the continued development of its graduate programs, while maintaining a strong undergraduate major. A substantial part of this development included the initiation of a new doctoral program in geography at UNC-Greensboro. In fall 2002, the University of North Carolina System Board of Governors approved the establishment of North Carolina’s second doctoral program.
in geography and the Department began accepting students for the Ph.D. in Geography in late 2003 for fall 2004.

In fall 2003, Dr. Dan Royall (Tennessee) with interests in geomorphology and geology joined the program from the University of Alabama, and two additional faculty in transportation planning and GIS/public policy were recruited during the 2003-2004 academic year. New course offerings developed principally for the doctoral program included Transportation Planning, Earth Surface Processes and Landforms, Advanced Spatial Analysis, Research Design, and History of Geographic Thought, plus doctoral seminars in GIScience, Earth Science/Natural Resource Management, and Urban/Regional Economic Development and Planning. Another extensive round of physical renovations of the department’s facilities are also planned for summer 2004 and 2005, including additional space for faculty offices, seminar rooms, classrooms, and research labs primarily for faculty and advanced graduate students.

The emphasis of the applied doctoral program in geography is grounded in research that builds on the three preexisting specializations that the Department has traditionally offered at the Master’s, Certificate, and Bachelor’s levels. These three clusters include: urban and regional development and planning; geographic information sciences and spatial statistics; and earth science/natural resource management. The nontraditional, applied philosophy underpinning the doctoral program builds on the faculty’s reputation of combining traditional and applied research through collaborative projects with businesses, government agencies and private organizations. Much of this is achieved through the placement of students in internships, the effective mentoring of pragmatic problem-solving thesis work, and through faculty research grants and contracts. Thus, the Department’s doctoral program is explicitly tied to UNC-Greensboro’s formal mission of “linking the Piedmont Triad metropolitan area to the world through learning, discovery, and service.”

LESSONS LEARNED. Although each geography program has its own unique socio-economic milieu and place-contingency, several key pointers seem to have underpinned the intellectual evolution of the geography program at UNC-Greensboro. Some of these “lessons learned” at UNC-Greensboro may be transferable to other institutions of higher learning and may provide some useful insights for geography programs throughout the South that are grappling with similar issues of growth and intellectual development. They include nurturing social capital, developing a reputation as a student-centered program, cultivating support from the University Administration, developing a research niche (applied geography), being technologically innovative, embracing curriculum change and development, and developing a physical facilities plan.

Nurturing Social Capital. The geography faculty at UNC-Greensboro have consistently worked toward achieving consensus through a large number of formal and informal meetings and conversations, plus practicing an open-door policy with respect to both faculty peers and students. Social and physical proximity between colleagues was crucial in nurturing the necessary social capital and trust needed to build support for all the major initiatives that were implemented in the past decade. The Department consciously decided to keep all the faculty offices on one floor, to facilitate face-to-face contact, and to nurture communication. Partly due to the program’s collegial atmosphere and a careful recruitment policy, the Department has managed to retain virtually all the new faculty hires since 1980.

Develop a Reputation as a Student-Centered Program. The Department is committed to providing a student-centered program focused on preparing geography students for advanced professional careers and/or further graduate studies. To that end, the Department developed a highly successful student Geography Club that has received $2,000-4,000 in annual funding from the Student Government Association and sponsors a twice-monthly mid-week luncheon speaker series that largely features local practitioners who hire our students. The Geography Department also hosts two GTU membership pledges and Honor Society Lectures every year, conducts summer field-trips to the Western States, and provides funding for 15-30 students to travel to the annual meeting of the Southeastern Division of the Association of American Geographers (SEDAAG) each year. Over a dozen students have presented papers at SEDAAG both in the GTU and Graduate Honors paper sessions over the past few years. In addition, other students have participated and presented at a wide variety of alternative GIS and Cartography conferences. By providing a number of substantial extra-curricular activities, the Department has successfully nurtured an esprit de corps within the geography student body which has, in turn, facilitated retention and enrollment growth.

Cultivate Support from the University Administration. The intellectual road map for the Department was well articulated by a series of department heads with excellent leadership and communication skills. Departmental priorities have long been well-established and were developed through faculty consensus. The internal consistency in policy-making translated into all geography faculty “singing from the same hymn sheet.” The Department faculty were, thus, actively engaged in educating college administrators about the various strengths in geography while serving on numerous key committees at the University and College level. The substantial enrollment growth rates in geography triggered by a student-centered philosophy also made it easier for administrators to rationalize budget increases for the program. The end result was a positive reception for many of the Department’s major initiatives by key University administrators who played a central role in supporting many of the proposed program initiatives.
Develop a Research Niche: Emphasize Applied Geography. The Department of Geography at UNCG has historically focused on applied geography by linking theory to practice, encouraging internships, and producing research papers and theses that emphasize data-based problem-solving and logical positivism. Faculty research has included traditional activities such as publishing dozens of books and academic journal articles, including publications in the Annals of the Association of American Geographers, Economic Geography, Professional Geographer, Progress in Human Geography, Regional Studies, Journal of Applied Meteorology, Geographical Review, Land Economics, Transportation Quarterly, Journal of Air Transport Management, Annals of Tourism Research, Journal of Applied Gerontology, Photogrammetric Engineering and Remote Sensing, the Southeastern Geographer and others. However, the Department faculty has also generated a significant number of research grants and contracts with federal, state and local agencies, as well as with the private sector. These include the National Science Foundation, the U.S. Economic Development Administration, the U.S. Bureau of the Census, the National Park Service, the National Endowment for the Humanities, the N.C. Office of Budget and Management—State Planning Division, and numerous local governments and private companies. In many cases, the faculty-sponsored research activity generated internship opportunities for our students with local city planning departments, GIS-based firms, and various environmental agencies.

Be Technologically Innovative. Since the mid-1990s, the Department has maintained a state-of-the-art research and teaching lab for GIS, Digital Image Processing, Air Photo Interpretation, and Spatial Statistics. The two labs currently feature a networked system of over 50 advanced PCs, color and black and white printers, GPS equipment, and various software packages. The University holds a site license for all ERDAS and ESRI products (Arc/Gis, ERDAS Imagine, Arc/Info, MapObjects, Arc/IMS, ArcView). In addition, the Geography Department holds licenses for Surfer, Adobe Photoshop and Illustrator, SPSS/SAS and numerous other packages used in geographic visualization, animation and statistical analysis. Several classrooms have been completely refurbished to provide multimedia capabilities, and students are encouraged to make full use of all the facilities. The Department philosophy of maintaining a student-centered program focused on applied geography, plus the rapid enrollment growth since the early 1990s, encouraged University administrators to provide the necessary budget support so that the Department’s lab facilities could remain “cutting edge.”

Embrace Curriculum Change and Development. Historically, the curriculum in the geography program has undergone continual change and adaptation to reflect the dynamic changes in both the broader institutional context at UNC-Greensboro and the more specific needs of graduating geography students. The Department has been actively engaged in broader curriculum matters on-campus and contributes significantly to the general University education requirements, particularly in terms of the natural science and social science requirements. Also, geography is strongly involved in contemporary curriculum initiatives related to writing-intensive courses, speaking-intensive courses, Freshman Seminars, the Evening University program, the Honors Program, and Residential College. Within the Department, the geography program has also continually reshaped the curriculum to reflect realities of the marketplace by conducting surveys with graduating students, alumni, employers, and other graduate programs that have admitted UNCG geography majors. Based on the survey findings and faculty discussions, the Department has greatly expanded its course offerings with a special emphasis on GIS, spatial statistics, city planning and economic development, and environmental studies.

Develop a Physical Facilities Plan. The Department has been highly effective in articulating its physical space requirements to College and University administrators and has successfully procured the necessary space to build additional labs, offices, seminar rooms, and classrooms to sustain growth. A key element in developing a successful strategy for renovating the physical facilities for the geography program over time was developing a coherent long-term facilities plan. Consequently, University administrators were alert to the Department’s needs well ahead of time and were largely in agreement with the Department’s long-term goals and vision. A co-operative working relationship was developed with key University administrators so that when rapid budgeting decisions were made (as often happens at universities), the Department was well represented in those discussions.

SOME CONCLUDING REMARKS. In many ways, the historical evolution of the geography program at UNC-Greensboro has mimicked the post-WWII evolution of the “New South.” The Department has experienced a period of unprecedented expansion and growth, especially since the late-1980s as the program matured and became a significant intellectual growth pole in its own right. Just as the major metropolitan areas of the “New South” have experienced growing pains, the Department of Geography at UNC-Greensboro has yet to fully come to terms with the remarkable growth curve it has experienced in the past ten years.

By fall 2004, the Department will have evolved into a doctoral program with 15 full-time faculty, approximately 80 enrolled M.A. students, 15-20 Post-baccalaureate GIS Certificate students, and 60-80 B.A. majors, with an estimated 4-6 Ph.D. students entering the program for the first time in the Department’s history. The Geography Department faculty look forward to the challenges of the coming years as we continue to develop our program and implement the applied, student-centered philosophy that is at the heart of everything we do here at UNC-Greensboro.