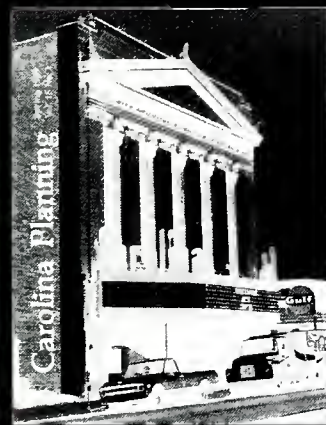
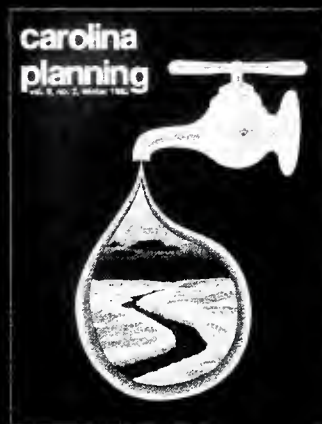
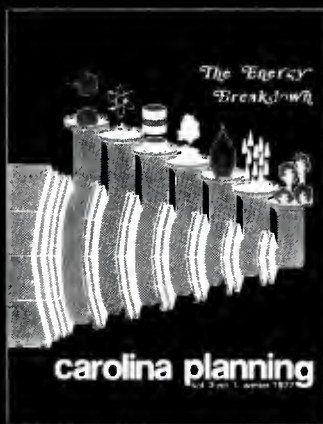


Carolina Planning

Volume 21
Number 1



20 YEARS



Editors' Note

With this issue of *Carolina Planning*, we celebrate twenty years of publication. Thanks to the support of the North Carolina Chapter of the American Planning Association and the Alumni Association of the Department of City and Regional Planning at the University of North Carolina at Chapel Hill, *Carolina Planning* has continuously explored issues of planning in the southeastern United States.

In this issue, we examine how several aspects of planning have changed over the past twenty years:

- At the start of the journal is a short article celebrating our twenty years of publication. Lee Corum, one of the founders of *Carolina Planning*, tells how the journal began, how it has changed, and its prospects for the future. He also thanks the many people who helped with its production over the twenty years.
- Rick Carlisle discusses how economic development policies in North Carolina and the nation have changed in the last twenty years, and shares his thoughts on some of the reasons for and implications of these changes.
- Steven French and William Drummond describe the sweeping changes in the use of computers by planners, from the punchcard mainframes of two decades ago to the word processors and geographic information systems of today. The authors then look to the future and discuss how the World Wide Web will be the next wave in technology for planners.
- James Svava writes about regional planning councils in North Carolina. He discusses their original mission, their changing roles and functions, and how they might best be used to assist planning at the local, regional, and state levels.
- Private consultants have played an important and changing role in public planning over the years. This role is explored through interviews with Glenn Harbeck, a private consultant, and George Chapman, the Director of Planning for the City of Raleigh.
- Michael Hibbard and Wes Hankins look at the trends in planning education programs, with a particular focus on undergraduate survey courses.
- In a Viewpoint article, Randy Schenck shares his opinions on how planning and environmental protection work together, and he lays out an agenda for the future.
- This issue also contains the winning entry from the third annual Weiss Urban Livability Contest. The essay by John Paul Floom explores the issue of demilitarization in the South.

At the end of the journal is a list of Masters Projects and Doctoral Dissertations completed by students at the Department of City and Regional Planning at the University of North Carolina, Chapel Hill in 1995. Also included is an index of the articles published in *Carolina Planning* over the last ten years.

Finally, we ask for your input regarding *Carolina Planning*. A mail-back survey is included on a perforated page in this journal. Please take a few minutes to complete the survey and return it to us. Your input will enable us to better serve your interests with this journal. You can also reach the editors via e-mail at: cp.dcrp@mhs.unc.edu. We look forward to hearing from you regarding the survey, ideas for the journal, or potential articles.

Merritt Clapp-Smith
Karen Kristiansson

EDITORS

Joseph Bamberg

Merritt Clapp-Smith

Karen Kristiansson

Mark Shelburne

Carolina Planning is published twice a year by students in the Department of City and Regional Planning, University of North Carolina at Chapel Hill, with the assistance of funds from the John A. Parker Trust Fund, Department of City and Regional Planning, and the North Carolina chapter of the American Planning Association and the Department of City and Regional Planning Alumni Association.

Subscriptions to *Carolina Planning* are available at an annual rate of \$12.00, or \$20.00 for two years. Back issues are available for \$6.00 per issue.

Carolina Planning welcomes comments and suggestions on the articles published. Please address all correspondence to: *Carolina Planning*, University of North Carolina at Chapel Hill, Campus Box # 3140, New East Building, Chapel Hill, North Carolina 27599-3140. You can also reach the editors via e-mail at: cp.dcrp@mhs.unc.edu. Submissions are always welcome.

Clarification: A version of the article by Dwayne Anderson entitled "Public-Private Partnerships for Historic Preservation" appearing in *Carolina Planning* Volume 20 #2 was previously published in *Historic Preservation Forum* and was reprinted with permission. *Historic Preservation Forum* highlights preservation news and activities at the local, state, and national levels. For subscriptions or more information concerning *Historic Preservation Forum*, call (202) 673-4296.

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Carolina Planning

A Student-Run Publication of
The University of North Carolina at Chapel Hill
Department of City and Regional Planning

Volume 21
Number 1

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The Founding of *Carolina Planning*: A Modest Proposal

Lee L. Corum

The Department of City and Regional Planning (DCRP) at the University of North Carolina (UNC) at Chapel Hill is celebrating the twentieth anniversary of *Carolina Planning*. The students of DCRP began what has become the twenty-year tradition of *Carolina Planning* with the publication of the first issue during the summer of 1975. This article reviews the efforts of DCRP students, faculty, staff, and alumni who have contributed to the founding and success of *Carolina Planning*.

The idea for *Carolina Planning* was developed by Nancy Grden, Jim Miller, and myself, three UNC planning graduate students, during our 1974 summer internships in Washington, D.C. Fresh from the completion of our first year of graduate planning education, excited by our first contact with professional planning practice, and undeterred by practical considerations, we undertook a modest endeavor. We began to discuss and develop a proposal for a student-run journal addressing public policy issues in the planning field.

From our contact with fellow students at the UNC Law School we were aware of the tradition of University support for a student-edited law review. To us this model seemed to have equal application to the professional and academic development of the planning field. Dinner discussions in Georgetown during

Lee L. Corum, a founder of Carolina Planning and 1977 graduate of the Department of City and Regional Planning and the Law School at the University of North Carolina, Chapel Hill, is an attorney with a general practice including housing, economic development, environmental, and historic preservation law in Durham, North Carolina. He is currently serving on the Chapel Hill District Commission and is Secretary of the DCRP Alumni Association.

the summer of 1974 led to a proposal which was submitted to DCRP Chairman George Hemmens.

Initial correspondence with Chairman Hemmens led to serious consideration of our proposal for publishing *Carolina Planning*. After we returned to Chapel Hill for the fall semester, DCRP approved our proposal, subject to our securing the necessary funding for this new publication.

The Start-Up

The 1974-75 academic year was devoted to the establishment of what we were convinced would become a planning student institution at UNC.

Nancy Grden had served as editor of the student newspaper at Bucknell University before arriving at UNC. Due to her experience, ability, and leadership, she was the natural selection for the first editor. Jim Miller accepted the duties of assistant editor. John Carroll, a graduate of the N.C.S.U. School of Design joined the student team and designed the new publication. Jim Foerster, Wanda Lewis, and Chuck Roe made valuable contributions while serving as the first members of the Editorial Board. While house-sitting for DCRP founder and former Chairman John Parker, I provided the venue for student staff meetings. It is fitting that the roots of *Carolina Planning* can be traced to Jack Parker's lovely home and garden

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|-------------------|
| Brower, David |
| Burby, Raymond |
| Erschine, Robert |
| Gilbert, Gorman |
| Godschalk, David |
| Goldstein, Harvey |
| Hemmens, George |
| Hill, William |
| Howes, Jonathan |
| Luger, Mike |
| Malizia, Emil |
| Rohe, William |
| Stegman, Michael |
| Weiss, Shirley |

Table 1: Faculty Who Have Assisted *Carolina Planning*.

Baldwin, Bertina
 Barger, Brenda
 Bisher, Catherine
 Brady, Michael
 Coke, Patricia
 Cooper, Asta
 Cyphert, Carroll
 Drake, Linda
 Egan, Bruce
 Felton, Mollie
 Geer, Betty
 Gould, Katherine
 Hagner, Mary Ellen
 Holman, Bill
 Jones, Carolyn
 Pettis, Mary
 Rhine, Cynthia
 Schwalberg, Renee
 Theobald, Joyce
 Thomas, Janie
 Whitt, Marsha
 Yates, Judy

Table 2: Staff Who Have Assisted *Carolina Planning*.

where so many other contributions to planning education were discussed and nourished.

Faculty support and encouragement during the first year was led by Chairman Hemmens. Professors David Godschalk and Gorman Gilbert joined him on the first *Carolina Planning* Editorial Board. Other faculty members, particularly Jonathan Howes, made contributions that insured a successful start-up.

Financial Support

As with most new enterprises *Carolina Planning* was in need of an "angel" who would underwrite its initial working capital requirements. Answering this need, the Z. Smith Reynolds Foundation of Winston-Salem awarded a generous grant which made possible the publication of the journal during its second and third years of operation.

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|----------------------|---------------------|----------------------|
| Ademeluyi, Steve | Feibel, Charles | Morris, Cathy |
| Allenstein, Karen | Ferland, Kathey | Morrison, Michael |
| Anders, James Jr. | Fleishman, Daniel | Morton, Elizabeth |
| Anton, John | Foerster, Jim | Mosher, Carolyn |
| Axler, Norman | Foster, Becky | Paik, Dick |
| Bachle, Laura | Gaadt, John | Parham, David |
| Bamberg, Joseph | Garner, Nancy | Petterson, Lynne |
| Barlow, Bill | Gleason, Rick | Pfeffer, Cindy |
| Barnard, Chase | Godwin, Stephen | Pollock, Blair |
| Barnes, Karen | Gould, Trina | Ponticello, Stacey |
| Becker, John | Grden, Nancy | Powell, Heidi Walter |
| Beiro, Noreen | Hafrey, Anne | Randall, Nancy |
| Berusch, Russell | Hafrey, Anne | Redmond, Michael |
| Biber, Joe | Harrison, Ted Olin | Richardson, Craig |
| Blaha, Kathy | Hegenbarth, Jane | Robertson, Ken |
| Bland, Thomas | Hendricks, Sara | Roe, Chuck |
| Blieve, John | Herzberg, Steve | Sadler, Forrest |
| Blomberg, Georgiana | Hill, Laura | Sandorf, Marilyn |
| Bollens, Scott | Hillstrom, Doug | Sauve, Joanne |
| Bollens, Scott | Hollifield, Shea | Scopaz, Valerie |
| Boykins, Irving | Hyman, Eric | Shambaugh, Claudia |
| Broun, Dan | Jones, Susan | Shambaugh, Julie |
| Broun, Daniel | Klein, Robert | Shaw, Carol |
| Buckwalter, Jane | Knopf, Bruce | Shelburne, Mark |
| Carroll, John | Kristiansson, Karen | Silverman, Ann |
| Cate, Dennis | Kron, Paul | Snaman, Sue |
| Clapp-Smith, Merritt | Lebens, John | Springer, Kirsten |
| Cobb, Priscilla | Lewis, Wanda | Stein, Jim |
| Crews, Jean | Leyden, Kathleen | Stewart, Margaret |
| Cunningham, Ellen | Mack, Joanna | Stichter, Steven |
| Davis, John | Manuel, John | Stiftel, Bruce |
| Deese, William | Marling, John | Stroh, Dan |
| Dingfelder, Jackie | Mason, Martha | Taylor, Louise |
| DiTullio, John | McCullough, Julie | Vant-Hull, Julia |
| Dopp, Steve | McDonald, Sam | Waitz, Judy |
| Einsweiler, Lee | McGuire, Patricia | Wallace, Ralph |
| Engel, Marla | McKell, L. Dale | Webb, Laura |
| Epstein, Andy | Merkel, Heidi Tolo | Weidner, Ruth Ann |
| Epstein, Larry | Meserve, Don | Weissman, Seth |
| Evers, Kathy | Miller, Jim | White, Karen |
| Faust, Ginny | Morris, Catherine | |

Table 3: Students Who Have Assisted *Carolina Planning*.

Over the years *Carolina Planning* has enjoyed financial support from many quarters. The John Parker Trust Fund and DCRP have contributed financial assistance in the form of scholarships to student staff members and ongoing operating support beginning

with the first issue and continuing for the journal's entire tenure.

The North Carolina Chapter of the American Planning Association (N.C.A.P.A.), which provides *Carolina Planning* subscriptions for its membership, has provided years of underwriting support. The DCRP Alumni Association has followed the example set by the N.C.A.P.A. Chapter by also providing subscriptions for its members. It has been the support of these friends of *Carolina Planning* and our loyal subscribers that has made a twentieth anniversary observance possible.

DCRP Faculty and Staff Support

The faculty and staff of DCRP have always answered the call when *Carolina Planning* was in need of guidance. Professor David Godschalk has given the longest service on the Editorial Board and has remained a frequent contributor of articles. Other principal faculty supporters are shown in Table 1.

Not a single issue of the journal was produced without significant assistance from DCRP staff. Later members of the Center for Urban and Regional Studies also made contributions for which the student staff must remain forever grateful. Bertina Baldwin, Pat Coke, and Asta Cooper are representative of staff members who have always provided indispensable assistance. Other key staff are shown in Table 2.

A Student Publication

More than 120 students have served on the staff of *Carolina Planning* since its founding in 1975. Students have edited, managed, designed, and laid out each and every issue. The total number of hours required to publish *Carolina Planning* over the past twenty years is beyond calculation. Because of this enormous effort, I feel it essential to recognize these students for their service. See Table 3.

Resolution

*adopted by the Commission of the
American Institute of Certified Planners
Commending
Carolina Planning*

Whereas, Carolina Planning has been published continuously for 15 years by students in the graduate program in City and Regional Planning at the University of North Carolina at Chapel Hill, and

Whereas, Carolina Planning in its design and content has achieved a level of outstanding quality and

Whereas, Carolina Planning, through distribution by the North Carolina Chapter of the American Planning Association to chapter members continues to advance the field of planning by providing a lively forum for students, practitioners, public officials, and planning educators, and

Whereas, the 1991 AICP Student Awards jury in awarding an Honorable Mention for the Spring 1990 issue recommended to the Commission that Carolina Planning receive a special recognition on its fifteenth anniversary, now be it

Resolved, that the Commission of the American Institute of Certified Planners recognizes Carolina Planning for its contribution to the field of planning, commends the students of the graduate program in City and Regional Planning at the University of North Carolina at Chapel Hill for their talent and commitment in publishing Carolina Planning continuously for fifteen years, and sincerely wished Carolina Planning continued success in the future, and further

Resolved, that a suitable engrossed copy of the resolution be presented to the University of North Carolina at Chapel Hill, Department of City and Regional Planning for public display.

March 22, 1991

**AICP
Executive Director**

Figure 1: Commendation to *Carolina Planning* from AICP.

Service to the Planning Field

As stated above, *Carolina Planning* was originally founded with the model of the student-edited law review in mind. Therefore, unlike other academic journals, *Carolina Planning* is unique because, like law reviews, it is both professional and academic in purpose while it is controlled and edited by graduate students. The unique character of this model has allowed *Carolina Planning* to serve the field of planning in three facets: it has been useful to the academic development of planning, to practitioners, and has provided a valuable experience for planning students.

Carolina Planning's contribution to the planning field cannot be fully measured. In its twenty years of publication, the journal has presented over 270 articles, book reviews, and comments by over 315 authors. (See the index of articles for the last ten years elsewhere in this issue.) This body of work was prepared by planning students, faculty, and practitioners and reflects their diverse interests, rich variety of viewpoints, and professional life experiences. *Carolina Planning*'s unique contribution is that it attempts to stimulate rigorous academic discourse among planning students, practitioners, and faculty on issues of public importance.

Carolina Planning was recognized by the American Institute of Certified Planners in 1991 with a special commendation. This award is an indication of the twenty-year legacy of high quality service to the planning field. (See Figure 1 for the full text of the commendation.)

Carolina Planning has achieved many of the original objectives identified by its founders over twenty years ago. As the journal begins another decade of service, it should strive to continue this work while reaching all those who may contribute to and benefit from this forum. **CP**

Twenty Years of State Economic Development Policy: North Carolina and the Nation

Rick Carlisle

Over the last twenty years, state funding, action, and capacity for economic development policy and practice have grown tremendously while federal involvement has waned. We enter the middle part of the last decade of the 20th century with unprecedented state involvement in funding for economic development policy and practice. At the same time, we face greater state vulnerability to changes in the global marketplace, to global shifts in capital and technology, to international trade agreements, and, consequently, to the declining ability of state policy makers to shape the direction of their economies. Fundamental shifts in the international and national structure of economic production are reshaping state economies, placing new demands on infrastructure, tax and regulatory systems, education and training systems, and research and development capacity in higher education. The rise of industrial competitors in developing countries and the rapid spread of technology are changing the structure of employment. They are pushing down some industry wages, reducing the rate of growth in blue collar jobs, and increasing the reliance on a bifurcated service sector of high wage and low wage jobs. State government will play a significant role in responding to the challenges that these changes create.

Rick Carlisle is Economic Policy Advisor to Governor James B. Hunt of North Carolina. Mr. Carlisle has held policy and management positions in state government, with a national trade association in Washington, and in university and non-profit settings. He is a graduate of the Department of City and Regional Planning at the University of North Carolina, Chapel Hill, and of Duke University.

Federal Disengagement

A little over twenty years ago, the Nixon Administration's "New Federalism" promised a new era of federal, state, and local cooperation. The federal government would give state and local governments greater flexibility in economic and community development policies and programs. Specific, rule driven, categorical programs would be combined into more flexible block grants to state and local governments. State and local governments, in turn, would assume greater responsibility for their own destinies. The Community Development Block Grant and the Comprehensive Employment Training Act promised federal funds without direct federal control.

A little over a decade later, much of the promised flexibility had not materialized or had been undone by creeping regulatory controls implemented in response to real or perceived inadequacies in state and local controls or due to disagreement with state and local priorities. In the 1980s, the Reagan Administration reintroduced New Federalism with renewed zeal for block grants, local flexibility in decision making, and the policy-making abilities and priorities of state government. This second round of block grants signaled a return of obeisance to the greater wisdom and knowledge of state and local officials. With greater freedom, however, came less funding. While budget reductions were never as deep or as widespread as initially proposed, the implicit understanding was that greater flexibility and control would be accompanied by declining federal funding.

In 1995, just over a decade later, state policy makers face another round of proposed block grants. Unlike prior programs, these block grants move far beyond the consolidation of categorical, discretionary programs into a combined block grant for states

to administer. Proposals governing welfare, food stamps, and Medicaid would turn over to states many of the "safety net" entitlement programs designed to catch those that fall through the cracks of the market economy. In addition, in discussions among interest groups, think tanks, and congressional staff, policy makers have pondered dismantling direct federal funding for economic development, rural development, and small businesses, and combining those funds into various block grants for states. As in the 1980s, the 1995 proposals would reduce or freeze program funds, with prospects at best for no real growth, and at worst for further reductions in real program funding. The twenty year trend, with some fits and starts, has included a polite but firm withdrawal of the federal government from policy making in community and economic development, a reduction in federal expenditures, and a "devolution" of greater flexibility and greater responsibility to state government.

While the block grant process has captured much of the press and public attention, a less marked but consistent retrenchment has taken place in other federal initiatives to stimulate state and local economic development. The Economic Development Administration, the Appalachian Regional Commission, the Title V Commissions, Urban Development Action Grants, and economic development funds within the Farmer's Home Administration have all been reduced or eliminated. There was a brief respite from this process in the early proposals of the Clinton Administration, which envisioned federal action to stimulate and invigorate the manufacturing economy, increase federal funding for research and development, and expand federal programs to increase financing for community and economic development. At the time this article was written, Congress appeared poised to dismantle the manufacturing and technology programs of the National Institute for Standards and Technologies and perhaps to eliminate the U.S. Department of Commerce. Following the flurry of federal action in the 1960s and early 1970s to provide both funding and policy direction for state and local economic development, the past two decades have seen a general federal withdrawal—a trend that seems likely to continue in the near future. What has been the state response to these changes?

State Engagement

In 1989, David Osborne released an influential book on state economic development policy, *Laboratories of Democracy*. Osborne argued that while federal involvement in state and local economic development had languished, states had become increasingly active and creative in designing public policy to stimulate economic activity. At the state level, new approaches to build a stronger economic base tended to reflect some common understanding or themes. Osborne argued that these state development policies focused on nine basic elements:

1. intellectual infrastructure,
2. a skilled and educated workforce,
3. quality of life,
4. the entrepreneurial climate,
5. adequate risk capital,
6. markets for new products,
7. industrial modernization,
8. an industrial culture of cooperation and flexibility, and
9. a social system that supports innovation and change.

In his book, Osborne profiles six states' policies and programs that address one or more of these elements. These innovations were actually relatively widespread in the nation and in the Southeast. In the 1980s, for example, North Carolina launched many of its initiatives to promote new technology development and commercialization, to increase cooperation between businesses and universities, to provide high risk capital for entrepreneurs, and to provide technical services and training for small businesses. Like most states, however, North Carolina did not abandon its traditional economic development policies that served it well throughout the 1960s and 1970s. The new initiatives were additions to the policy arsenal, which meant new money and increasing expenditures for economic development.

A common theme of policy initiatives launched in the 1970s is that they were new and experimental. Many of these efforts were centered in industrial states whose economic strength was threatened by the industrial recruitment policies of the Sunbelt states. However, for all the attention generated among policy makers, and for all the real energy and innovation these initiatives represented, they were quite modest in terms of funding and their relative portions of state expenditures on economic development. For example, the Ben Franklin Partnership of Pennsylvania, a model for connecting state government, business, and universities for technology transfer and commercialization, was launched with only a few hundred thousand dollars. By 1994, expenditures for the program had grown to about \$20 million, while Pennsylvania's total expenditures on technology related economic development still totalled under \$35 million. In North Carolina in 1994, direct state expenditures for technology transfer, commercialization, and industry modernization were estimated at \$37 million—a significant but still small portion of the estimated total direct state expenditures of \$150 million for economic development programs.¹ The new initiatives of the 1970s and 1980s were real, but in most states these expenditures were marginal compared to total spending on economic development.

Transitions in State Development Policy

Followers of state development policy at the Corporation for Enterprise Development characterized the transitions that took place in state development policy in the last two decades as the three waves of development policy.

Wave 1: Industrial Recruitment

The first wave comprised the industrial recruitment policies pioneered by the southern states. While popular wisdom has these recruitment/incentive programs beginning with Mississippi's "Balance Agriculture with Industry" economic development initiative of the 1930s, they actually date back to southern industrialization efforts of the 19th century. Legislative committee reports of the North Carolina General Assembly from the mid-1800s speak of the need to provide incentives for northern capital to invigorate the southern industrial economy until such time as the South has sufficient capital to invest in itself. A century later in the 1960s, industrial recruitment, combined with investments in transportation, infra-

structure, and worker training, was a well established economic development policy in southern states. This first wave of development policy was certainly not limited to the southern states, but in the 1970s they were its primary beneficiaries.

Wave 2: The Individual Firm Approach

The second wave of state development policies was characterized by the initiation of the types of activities Osborne lauded in *Laboratories of Democracy*. Many of these were launched in the northeast and midwestern industrial belts to counter the successful industrial recruitment efforts of the Sunbelt states. Industrial revitalization and modernization policies were intended to introduce new technologies and production practices to make industrial plants more competitive. Technology commercialization and entrepreneurial policies were designed to create new firms or introduce new products in companies losing market share. The latter strategies gained nationwide attention in the 1980s, largely because of David Birch's analysis of sources of new jobs. Birch's widely reported findings argued that the principal sources of new job creation were small companies. Birch also argued that the differences in rates of growth of various states and localities were explained by the differential birth rates for small firms. Places that, for whatever reason, had higher than average growth in new enterprises also had higher levels of job growth. Although Birch's methodology was later criticized, his report had an immediate impact on state and local development policy. While few states had small business programs in 1980, by 1993 they were present in every state. By the late 1980s, most states had a combination of initiatives aimed at small businesses and entrepreneurship, technology commercialization, technology transfer, modernization, and financing. In 1980, North Carolina had only a modest program to assist small businesses located in the Department of Commerce, but by the 1990s the state had the following programs:

- the Small Business and Technology Development Center program, which housed small business services on the state's 16 university campuses;
- the Small Business Center program, which located center directors to coordinate small business courses and workshops in most of the state's 58 community college campuses;

- the Technology Development Authority, which provided capital to new ventures;
- the North Carolina Biotechnology Center, to stimulate start-up companies and commercialization of university research in biotechnologies;
- the Microenterprise Program, to provide loans and technical support to very small enterprises; and
- the North Carolina Enterprise Corporation, which used state investments and tax credits to develop venture capital for rapidly growing companies.

What is striking about the initiatives of the 1980s and early 1990s is their focus on intervention at the individual firm level. Throughout much of the 1960s and into the 1970s, most state economic development policy centered on investments in training and basic infrastructure. Development policies for constructing highways, financing water and sewer, creating technical and community colleges for worker training, and reducing taxation of manufacturing enterprises were all designed to improve the competitiveness of places through public investment or investment in education. In the era before block grants, major federal programs to improve the competitiveness of states and localities, such as the Economic Development Administration and the Appalachian Regional Commission, principally provided funds for public investment in infrastructure. By the 1980s this had changed and state policies that directed assistance to improving the competitiveness of individual enterprises were the rule.²

In part, the individual firm approach reflects the expansion of industrial recruitment activity as direct financial assistance and tax breaks to firms became more prevalent to attract new investment. To a large extent, however, this transition to intervention at the firm level was also fueled by the increasing emphasis on small business and the commercialization of new technologies. Traditional infrastructure policies were of little use to small companies. Traditional tax

incentives also offered few benefits to small firms that had little investment in real property, limited inventory, and, particularly in early years of the company's life cycle, no tax liability because the company was not yet profitable. Financial assistance, technical and engineering assistance, and general business assistance delivered on the firm by firm basis were of greater value to these companies.

As experience with these types of programs grew, some of the more thoughtful policy makers identified several problems with state economic development policies that depended on the survival of individual companies. The first was scale. Given the large size of the small business sector and the limited number of companies any program could serve in a given year, policy makers questioned whether the impact on the economy justified the expenditure. In North Carolina, for example, there are 140,000 individual

enterprises and thousands of births and deaths of companies annually. In contrast, a generous estimate of the outreach capacity of all of the state's technical assistance programs suggests the potential of contacting about 3,500 firms annually—and this assumes only a minimal level of assistance. Are programs that provide direct assistance

In the Southeast, the policy issue of incentives to attract new investment or encourage expansions of existing plants promises to be more visible and contentious.

to less than three percent of the companies in a state annually really effective in strengthening a state's economy?

The above question raises the second shortcoming—the selection of firms to receive assistance. If only three percent of the state's firms receive assistance annually, how do you choose the most appropriate firms to maximize economic development impact? And among the thousands of firms that are born and die annually, how does a state program with limited capacity select the most likely candidates for financing and assistance? In fact, most state services tend to be provided on a "first come, first served" basis and little or no selection takes place. Alternatively, services are rationed through cumbersome application processes that only the most desperate of firms are willing to wade through. These firms may not be the most desirable in terms of economic impact.

A third concern that accompanied the individual firm strategy was raised by Birch in his discussion of "mice" versus "gazelles." Mice are the thousands of small companies that remain small, adding few if any new jobs over their life cycle; they begin with one or two employees and remain at that level. Only a small percentage of companies become gazelles and create the growth in investment, income, and employment that is typically the goal of state development policies. Should state policy for small business development be indiscriminate, or should it attempt to focus limited resources on the gazelles? If state policy attempts to discriminate, how do technical services and financing programs differentiate among the thousands of potential clients in order to identify the gazelles? And if state policy elects to discriminate in favor of high growth companies, will this require a higher level of more specialized technical assistance than generic small business assistance?

Wave 3. Beyond the Individual Firm Approach?

There have been a number of attempts by state policy makers and other designers of development policy to devise solutions to concerns raised by the individual firm approach. The Corporation for Enterprise Development dubbed these efforts the "third wave" of state development policy. This wave, however, never fully formed. A number of programs have adopted design principles to address problems of scale and focus, as well as related issues such as leverage, decentralization, inter-firm cooperation, and program accountability. As a result, these principles are more likely to be considered in policy development. Still, the process appears more incremental than transformational.

The Current Environment and Policy Challenges

The mid-1990s finds conflicting influences at work on state economic development policy. States find themselves with greater responsibility, fewer dollars, and more susceptibility to economic forces outside their borders. Despite evidence of an economy with low inflation and stable, if subdued, growth, people remain anxious about their economic futures—and with some reason. Real reason for concern comes from stagnant real incomes; corporations' continued adapting to competition by reducing labor costs; employment instability from downsizing, mergers, and restructuring; and a high percentage of new job

creation in lower wage sectors of the economy. The national and state economies are continuing a process of restructuring. While the long-term prognosis may be positive, in the short-term structural changes produce both winners and losers. A significant challenge for state economic policy over the next decade is to maximize the winners and minimize the losers, while ameliorating the negative consequences for people and communities that suffer from this structural change.

Over the last two decades, net manufacturing employment in North Carolina increased by about 107,000. During that same period the labor force grew by ten times that amount, about 1.3 million workers. Most of the balance was absorbed by growth in the trade and service sectors, which, like manufacturing in an earlier period, grew principally through additions to the work force rather than increases in capital investment and productivity.³ In at least some sectors, however, non-manufacturing technology is producing the same types of structural change and productivity improvements that occurred in manufacturing. If the technological revolution produces the same types of employment effects in service and related industries as occurred in manufacturing, similar turmoil will be felt in that segment of the economy.

Innovations in information and communication technologies are making possible new alliances that will dramatically alter some industries. Bank mergers, alliances between financial institutions and financial software companies, and the advent of on-line banking services will produce new products, alter the nature of customer interactions with banks, and rearrange the location and employment patterns of financial institutions. Growth in financial services, especially banking, made strong contributions to the growth in North Carolina's gross state product. The application of information and communications technologies will restructure markets, products, customer relationships, job classifications, and investment and employment patterns in the financial services industry—with likely positive, but for now unpredictable, effects on economic activity within the state. Similar effects are probable in other non-manufacturing sectors.

These structural forces will particularly challenge the State's abilities to solve conflicts in place-based policies and to deal with the thorny issue of rural development. As noted earlier, "rural" is something of a misnomer and is not a very useful term for understanding the problems of economies struggling to make the rapid transition from agriculture to manu-

facturing to information and service-based economies. In the short term, the state will face extremely difficult policy choices. Investment in research and development, higher education, urban infrastructure, and higher level training programs will likely pay the greatest dividends in gross state product. These investments will do little, however, for less developed local and regional economies where the technology infrastructure, workforce, business services, and education and training opportunities are better suited for agriculture or lower technology manufacturing. As more companies require access to the amenities generally available only within a reasonable proximity to metropolitan areas, competitive forces will place greater pressure on these communities. States will, of course, create policies to serve both urban and rural areas. The challenge will be balancing resources to promote opportunities for less developed places while continuing to make the level and kind of investments needed to keep the overall state economy competitive.⁴

A second major theme that will shape state economic development policy is the movement to rethink the scope and reach of public policy in general. Recent state and national elections have elevated this issue in the popular arena, but even prior to 1994, narrowing the scope of government (if not the size) had proponents in both

conservative and liberal policy discussions. In the economic policy arena, this was usually accompanied by increased respect for the operations of private markets and growing skepticism about government intervention in those markets. The array of small business services and financing programs that proliferated in the 1980s, for example, attracted greater scrutiny in the 1990s. Ron Ferguson and Dewitt John argued that the first responsibility of state development policy was to focus on the fundamentals: tax policy, regulatory policy, education, and infrastructure.⁵ The "innovative" programs that attracted so much attention were, in their view, unlikely to compensate for inadequate infrastructure, poor education systems, or tax and regulatory policies that created high costs or inefficient business environments. Challenged both by progressive policy thinkers and conservative proponents of reducing governmental expenditures, state

development policies that embraced firm by firm intervention will be reassessed in the next decade.

The policy issue of incentives to attract new investment or encourage expansions of existing plants also promises to be more visible and contentious. State and federal incentives to stimulate private investment or influence the behavior of individual firms have a long history. Over the last few years, however, the use of financial incentives, whether by direct payments or tax credits and concessions, has spread throughout the South as well as the country. Initially limited to "trophy" firms that were nationally or internationally known and that committed large investments, incentive programs were extended by statute to any firm that met qualifying criteria. Competition among states for economic investment is keen, and enterprises show growing interest in any action that will lower costs. These forces provide a "push" that threatens to escalate into incentive wars. It is a war most states prefer not to fight, but they are leery of unilateral disarmament. A counter force

Competition among states for economic investment is keen, and enterprises show growing interest in any action that will lower costs.

comes from both conservative and liberal critics who view extreme forms of such incentive-driven policies as market distorting, as corporate welfare, or as eroding tax bases that would generate revenues to invest in the fundamentals. Add to this the recent decision by a North Carolina

court that incentive payments violate the constitutional requirement that all government expenditures have a clear public purpose, and the resolution of this issue becomes tricky.⁶ States must serve new investment if they are to meet economic development goals. Thoughtful policy makers will struggle to balance reasonable competitive responses against the more extreme policies of some states.

Conclusion

A state policy maker who slept through the last two decades and awakened in the 1990s would find a landscape that is quite familiar in some respects, but quite different in others. States continue to devise strategies to attract new investment, but they also devote significant resources to small business development and improving the competitiveness of exist-

ing industry. The impact of technology on manufacturing, an issue on the horizon twenty years ago, has become a fundamental force in economic restructuring. The rapid growth of the microprocessor, as well as communications and information technologies in non-manufacturing sectors, will further alter the competitiveness of industries, people, and places. Federal dollars for economic development have declined, international investment and international competition have increased, and firms driven to lower costs are more sensitive to state and local taxes and regulations. State policy makers are asked to shoulder greater responsibility amidst a heightened awareness of the limited tools the public sector can bring to bear on a global market economy and a growing skepticism of government's ability to achieve outcomes that improve the quality of people's lives. It is a time when state governments cannot afford to squander scarce dollars, energies, or public confidence. The demand for critical policy analysis and policy development has grown and will continue to grow. **CP**

Endnotes

- ¹ From resource audits and surveys by the North Carolina Alliance for Competitive Technologies. Information on initial funding for Ben Franklin Partnerships from interview with Walt Plosila, Executive Director of NC ACTs and former Deputy Secretary of the Pennsylvania Department of Commerce.
- ² This discussion is drawn from a presentation by the author, published in *Cooperation and Competitiveness*, Proceedings of the International Conference in Lisbon, October 1993.
- ³ Information from the United States Bureau of Economic Analysis.
- ⁴ This discussion was presented at greater length in *Rethinking Rural Development*, Corporation for Enterprise Development, 1993.
- ⁵ From a presentation by Ferguson and John at a state policy forum sponsored by the Aspen Institute's State Policy Program.
- ⁶ Using a 1968 NC Supreme Court decision as legal precedent, a Forsythe County Superior Court found that use of public subsidies to directly benefit a private company were unconstitutional, in violation of the provision in the North Carolina Constitution that all public funds be applied to a public purpose. A later opinion in a different county ruled that incentives are constitutional if they promote broader economic development goals. Both decisions have been appealed.

The Rapidly Changing Technology of Planning

Steven P. French and William J. Drummond

While the incorporation of microcomputing in planning education and practice over the past dozen years has not completely revolutionized the field, computing technology has significantly changed the business of planning. Planners can now evaluate more options and have access to a wider array of data to support planning and decision making. It has also significantly changed the set of skills that entry level planners are expected to possess.

The use of computing technology is certainly not new to planning. In the late 1960s, planners and regional scientists developed a number of large scale urban models that ran on mainframe computers. Models such as the Lowry Model and its many derivatives sought to understand urban spatial structure using the principles of urban economics. The models allocate housing and other land uses given land price and transportation constraints. While these models provided new and improved understanding of the urban development process, they did not directly affect the day-to-day practice of planning due to the fact that they were expensive and poorly suited to many

of the decisions planners face. The focus of this article will be on the more recent and widespread impact of microcomputers.

We view the impact of microcomputers on the planning profession over the past twelve years as a series of three overlapping but distinct waves. The first wave was the adoption of the same office automation technology that has been deployed throughout white collar industry in recent years. The second wave consists of the wide scale use of geographic information systems (GIS), which are more appropriate to planning than to many other professions. The third wave, which has just begun to break, is the enhanced communication and data access provided by the Internet and the World Wide Web (WWW). We will use these three waves to review the impact of microcomputer technology on the practice of planning over the past dozen years.

The First Wave: Automating the Planning Office

The first wave began in 1983, when the original IBM-PC began to find its way into planning offices. The IBM-PC was originally released in 1981, but it was not until the introduction of electronic spreadsheet software such as VisiCalc, SuperCalc, and most particularly Lotus 1-2-3 that it attracted serious attention from planning practitioners and educators. In addition to spreadsheets, word processing and to a lesser degree database management were the dominant applications in this wave.

A 1986 survey of over 500 city and county planning agencies in California (Sanchez, 1987) documents the rather slow initial diffusion of microcomputer technology. Today, it is hard to believe that a

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mere nine years ago less than 60 percent of planning agencies were using word processing and less than 40 percent were using either spreadsheets or database management applications. Other applications such as business graphics, project management, and thematic mapping were used by only 10 to 15 percent of the planning agencies in California. After this somewhat halting beginning, adoption took off dramatically. In a survey of the same California planning agencies two years later, French and Wiggins (1989) found that nearly 90 percent were using word processing, and spreadsheets and database management software had increased to 60 and 50 percent, respectively. Interestingly, the use of other types of software continued to languish, with only about 10 percent of the agencies using them.

Microcomputers begin to appear in the planning literature in the mid-1980s. The first instance was the Spring 1985 issue of the *Journal of the American Planning Association*, in which Sawicki (1985) introduced readers to the basic concept of an electronic spreadsheet and raised several concerns about potential problems inherent in the microcomputer revolution. Shortly thereafter, Ottensman (1985) and Brail (1987) published books on microcomputers and their role in planning and other public agencies. This attention to microcomputers in the planning literature marks the growing acceptance of the technology and the rising tide of the first wave.

While this first wave was characterized by the adoption of generic office automation software, planners were quick to modify this software to their own particular needs. Sipe and Hopkins (1984) published and distributed a set of spreadsheet templates designed to estimate the fiscal and economic impacts of development proposals. Originally designed for use by Florida local governments, these templates were widely used in both practice and education across the country. The first spreadsheet template published in the *Journal of the American Planning Association* was a shift-share model developed by Landis (1985). This was soon followed by population projection (Levine, 1985) and other template applications.

By 1990, the first wave had largely washed over the planning profession. Most documents were prepared using word processing which permitted the production of more drafts. Spreadsheets allowed planners to test the results of more alternative assumptions in quantitative areas such as demography and finance. Significant numbers of planners had discovered the power and convenience of database management software for organizing land parcel or project files. However, as pointed out by Ferreira (1987), these tended to be personal databases on individual machines rather than enterprise databases on shared networks. Planners had adopted this software and developed unique tools, particularly spreadsheet templates, to meet their particular professional needs.

The Second Wave: Location, Location, Location

The second wave consisted of the widespread adoption of geographic information systems. This wave began in 1984 when the first microcomputer mapping packages became available. The progress of this wave was somewhat slower than the first, although it may ultimately prove to be more powerful.

Geographic information systems (GIS) address planners' concerns with the locations of various natural, man-made, and social phenomena. Planners often need to manipulate spatially distributed data, a need that is not shared by a wide array of business users. Hence, mapping and GIS represented a narrower, more specialized market and, as a result, commercial software vendors were slower to develop tools to meet these needs.

Historically, there have been two basic types of GIS systems: vector systems that link map elements to a relational database, and raster systems that assign values to a grid of rectangular cells to represent area features. Much of the early development in mapping and GIS was done at the Harvard Computer Graphics Laboratory to meet the needs of planners and landscape architects. The ability to perform an automated version of the land suitability analysis techniques popularized by McHarg was a particular focus of this software development effort. In the 1970s

Planners had adopted this software and developed unique tools to meet their professional needs.

several mainframe raster systems, including Symap and ImGrid, were developed at Harvard and distributed to other academic institutions. There was, however, little or no penetration of this mainframe software into planning practice.

While planners naturally wanted to use the computers they had acquired in the first wave for mapping and spatial analysis applications, early microcomputers did not have sufficient processing power or storage capability to support full GIS applications. A 1989 survey found that only 36 planning agencies among the nearly 500 California planning agencies were using GIS, and over a third of these systems were implemented on minicomputers rather than personal computers (PCs) (French and Wiggins, 1990). Budic (1994) found a similarly limited adoption among planning agencies in four southeastern states several years later.

One of the key impediments to the widespread adoption of GIS technology was its extremely high cost. In 1985, a typical GIS application required a \$700,000 minicomputer and a \$100,000 software license. The data acquisition costs, especially for a complete parcel level base map, could easily run the total cost to several millions of dollars. Is it any wonder that relatively few jurisdictions chose to adopt this technology? However, with the advent of powerful UNIX workstations and more powerful microcomputers in about 1987, hardware and software costs dropped by approximately 90 percent. While GIS was still costly, primarily due to the data acquisition costs, hardware and software were no longer prohibitively expensive.

In the mid-1980s planners began to experiment with a variety of mapping software that would run on microcomputers, including Computer Aided Design (CAD) and thematic mapping packages (Wiggins, 1986). These packages usually sold for less than \$1,000, and many came with a limited set of pre-packaged geographic features and attribute data. This brought the cost of thematic mapping of census data down to a level comparable with basic office automation applications. These packages demonstrated that basic mapping could be done on a microcomputer platform, but they were never widely adopted in practice. While census data at the tract level is useful, many planning applications require parcel level base maps and attribute data.

Real GIS capability first appeared on the microcomputer platform with the introduction of PC Arc/Info. The package was cumbersome, slow, and ex-

pensive (about \$10,000 for a complete installation), but it represented a major breakthrough by bringing GIS into the budget range of most local planning agencies. The price decline accelerated further as several of the thematic mapping packages added features to grow into desktop geographic information systems. In 1989 we see the addition of a range of GIS capabilities to Atlas*GIS and Mapinfo. These systems were available for less than \$2,500.

At this same time, the U.S. Bureau of the Census began to release TIGER files. While these files did not provide parcel level maps, they did provide complete street networks that could be used to construct any level of census geography down to the individual block. For metropolitan counties, these files included address ranges that could be used to locate any data record for which an address was available. These street network files were released on CD-ROM for \$250 per state. By 1992 the Census Bureau began to release population and housing data down to the block level on CD-ROM. Most files were available for less than \$200.

The availability of basic data at a nominal cost, relatively cheap software, and continually more powerful microcomputers and UNIX workstations combined to accelerate the adoption and implementation of GIS in planning agencies. The second wave may finally be about to engulf much of the planning profession. A recent survey of the 68 Florida counties found that nearly half report using some type of GIS. Many of these systems are shared with other local government agencies. Facilitating data exchange among agencies is considered to be one of the major benefits of the systems.

GIS first appeared in the planning literature in 1987 with a comparison of CAD and GIS capabilities (Ducker, 1987). After this initial foray we see a marked increase in the frequency of GIS related topics. Levine and Landis (1989) compared several desktop GIS approaches. French and Wiggins (1990) examined the use of these systems in local agencies and found that the majority were using them to support traditional planning activities, including comprehensive planning, zoning, and vacant land inventories. A widely used GIS text that focuses primarily on planning applications appeared in 1990 (Huxhold, 1990). Soon thereafter, Budic examined the requirements for effective implementation of GIS in a local government setting. A recent article by Drummond (1995) discusses the ways that address matching with GIS can be used in planning. The frequency of GIS ar-

ticles in the planning literature appears to parallel the rate of adoption of this technology within the profession.

Geographic information systems are now becoming common among planning agencies even though there are still problems. While software is becoming easier to use, many agencies report problems in getting and retaining qualified personnel to run the systems. Although the parcel level database is still the desired base for most planning agencies, the cost of creating these digital base maps remains high due to the need for expensive aerial photography. Nonetheless, by the end of this decade a digital base map linked to an assessor's database should be available to the majority of metropolitan planning agencies.

When planners can access individual parcel information electronically and compare it with data from secondary sources, such as the U.S. Census, planners will be able to see relationships that were not apparent before. Planners will also have access to more data as municipal computer systems become more integrated, providing closer connections to other local departments. Planners have yet to develop models that take advantage of this new level of data. A whole range of traditional planning models (i.e., transportation models) will need to be rewritten to incorporate this fine grained data. Thus, the second wave is well upon us, but its full effects are only beginning to be felt.

The Third Wave: Connected to the World

Although the planning profession has not yet fully absorbed the impact of GIS, it now appears that the initial swell of the next technology wave is arriving. The most recent trend in planning-related computing is the explosive growth of national and global information networks. These networks include commercial services (e.g., America Online, Prodigy, CompuServe, and the Microsoft Network), and the global public-access network known as the Internet. Because all the commercial networks are now (or soon will be) connected to the Internet, the following discussion will emphasize Internet resources, since they are so widely available to planners.

The Internet is a global network connecting millions of computers through the use of a well-defined set of public protocols. Although the major Internet users are educational institutions, governmental agencies, and businesses, the general public can gain ac-

cess to the Internet through small, often local, Internet providers, large telecommunications corporations, and commercial online services.

While the Internet was originally developed for the Department of Defense and later sponsored by the National Science Foundation, no single entity actually owns or controls the network. Individual universities, businesses, and government agencies are linked through high-speed data connections which often take the form of leased telephone lines. Basic services available through the Internet include electronic mail (email), direct computer-to-computer file transfer (FTP), and an immense collection of news-discussion groups including, for example, "alt.urban.planning," "sci.econ," and "comp.infosystems.gis."

However, the glitziest and fastest growing portion of the Internet is the World Wide Web (WWW), often known simply as the Web. The Web is essentially a colossal, cross-linked, multimedia application that includes digital information in the forms of text, graphics, photographs, audio, and video. Anyone connected to the Internet can obtain a free piece of software known as a browser. Once the browser is running, the user can "surf" from Web site to Web site by simply pointing and clicking with a mouse. Pages of Web material from any one site on the Web can be directly linked to pages at any other site, so the complex, global pattern of hypermedia linkages indeed does resemble a web.

Persons interested in "publishing" Web material can obtain free Web server software and use a relatively simple markup language to develop text, incorporate graphics, and add links to other Web sites. Most Internet providers and several of the online services now allow subscribers to easily publish their own material.

These developments have had, as yet, little impact on the planning profession. However, the Internet (and its successors) will transform planning in at least three major ways. First, over the short run, planners will soon realize the tremendous information resource provided by the Internet in general and the World Wide Web in particular. For example, nearly all the 1990 Census data and TIGER files can be downloaded from the Web at no cost. As the Web grows, it is rapidly becoming the method of choice for obtaining timely, accurate, and free computer data of all types. (See the sidebar for a brief listing of major WWW sites of interest to planners.)

Second, planners will increasingly use the Internet to publish their own materials, solicit feed-

back, and conduct public discussions. For example, economic developers in many state and local governments are already sponsoring Web sites. Within the next several years we can expect draft comprehensive plans (with full-color maps and supporting analytical spreadsheets) to be posted to the Web for public comment through email and public discussion groups. Direct comparisons between the plans of adjacent (and distant) jurisdictions will become routine. A new form of multimedia comprehensive plan will combine text, graphics, photographs, analysis, links

to regional and statewide plans, and the public record of discussion about the plan.

Third and perhaps most importantly, over the long run the global information network could have dramatic effects on the form and function of cities themselves. Telecommunications technology essentially allows the movement of data (bits) to substitute for the movement of people and things (atoms). Even with the current primitive state of email and FAX technology, increasing numbers of knowledge workers can forego traditional offices and work from home. In the near future, global information networks may radically alter both business and residential location decisions, resulting in very different forms of city and community. Ultimately, computing technology may transform not only the way that planners work, but the nature of planning itself.

Conclusions

It is astounding to consider how the first two waves have affected the practice of city and regional planning over the past dozen years. A mere dozen years ago planners were fascinated by the idea of an electronic spreadsheet, and the idea of parcel level GIS was a distant dream. The rate of change is likely to continue to increase. Before the profession can completely incorporate the advances of one wave, another is already beginning to break. If this pattern continues, it is difficult to speculate on where the profession will be twelve years from now. Clearly, by the turn of the century microcomputers will be thoroughly integrated into planning practice, both as office automation tools and in the form of integrated GIS that ties tax records, public works information, land use, and permit history data to each land parcel. We are already beginning to see examples of network communication among jurisdictions and with state and regional agencies.

These new technologies virtually guarantee that planners in the 21st century will operate in a data rich environment. This is a marked contrast to the conditions faced by earlier generations of planners. While they will clearly have more information, better information will not necessarily lead to better decisions. Technology has empowered planners to acquire and manipulate vast amounts of information. Hopefully, our educational institutions can equip planners and their elected and appointed

WWW Sites of Interest to Planners

<http://www.arch.buffalo.edu/pairc/>

The best single collection of WWW links to material of interest to city planners, developed by the State University of New York at Buffalo.

http://www.city.vancouver.bc.ca/commsvcs/cityplan_report.html

The draft Vancouver city plan, which (unfortunately) contains only text.

<http://www.census.gov>

A gold mine of planning information, with very easy lookup of all kinds of historical and projected demographic information.

<http://www.lib.virginia.edu/socsci/reis/reisl.html>

Lookup access to the Bureau of Economic Analysis REIS CD-ROM, which contains dozens of county, state, and metro-area annual variables for the last 25 years.

http://cedr.lbl.gov/pdocs/feas/pop/census_resources.html

The University of California WWW collection of over 300 CD-ROM disks, including most 1990 Census disks, TIGER files, County Business Patterns, and County and City Data Book.

http://www-mitpress.mit.edu:80/City_of_Bits/index.html

The WWW version (including full text) of William Mitchell's visionary book, *City of Bits*, about planning and architecture in the coming digital age.

decisionmakers to use that information to create more livable communities. **CP**

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Regional Councils and Regional Action in North Carolina: Past, Present, and Prospects

James H. Svava

The vitality of North Carolina depends on strong and vibrant regions. Regions are the interconnected places where people live, work, and recreate. They are also the places where local government problems like environmental protection, traffic, and solid waste spill across municipal boundaries and become shared concerns. More and more one hears the opinion that independent but interrelated places must develop the capacity to work together if these problems are to be addressed and a desired future is to be secured. To paraphrase an old saying about the United Nations, if regions didn't exist, we would have to create them. Numerous sources have affirmed the importance of regions. For example:

- *Measure by Measure*, a 1992 report by the Southern Growth Policies Board recommends: "think, plan, and act as metropolitan regions." It advocates the use of regional districts for planning infrastructure improvements.
- The Commission for a Competitive North Carolina called for the state to enlarge its vision and protect the state's lifestyle by considering regional solutions defined by a "community of interest," rather than geographic boundaries.

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- Florida, Georgia, Oregon, Vermont, and Washington have all assigned regional councils a review role in state managed growth initiatives.

In North Carolina, regional councils are the vehicle for focusing attention on interjurisdictional concerns and fostering a higher level of cooperation. They also provide direct and indirect support to local government activities. Yet despite the importance of regions as a plane for action, regional councils in practice have lost some of their regional orientation. While the councils continue to provide a regional forum and assist in multi-jurisdictional efforts, their focus has shifted to administering federal and state programs and providing services and assistance to individual governments. Their substantial base of information, experience with cooperative ventures, and record of involvement with local planning would be tremendously helpful in regional planning efforts.

Rediscovering planning as part of a new commitment to regional goal setting is a prospect for the future, but it will not happen without a stronger overall state recognition of the importance of regionalism. The rest of this article examines the history of regional councils in North Carolina, outlines their present activities, and makes recommendations for the future of regionalism.

History of Regional Councils

Origin of Regional Councils

In North Carolina as elsewhere, regional councils have a number of purposes: planning, intergovernmental coordination, and services to member governments. The councils' functions and their relationships with the state and local governments have been

defined over the years by a series of executive orders.

- **1970** Governor Scott issued the first executive order to create Planning Regions to facilitate the delivery of better public services. In the following year the state announced its Lead Regional Organization (LRO) policy.
- **1974** Governor Holshouser sought to strengthen the role of LROs by giving them responsibility for consolidating special and multi-purpose planning activities, for promoting intergovernmental program coordination, and when appropriate, for administering governmental services. In addition, state agencies were to use LROs to help construct state-level plans. While direct subsidies to LROs were ruled out, they could receive state and federal funds available for specific planning tasks. The LROs were to be the creation of local government and were not to be viewed as substate administrative units or a new level of government.
- **1978** Governor Hunt reaffirmed the LRO concept and encouraged state agencies to make their administrative subdivisions coterminous with the LRO boundary lines or combinations of LROs. State financial support was to be limited to grants to carry out specific tasks imposed by state government which necessitate coordination and planning for local governments. The LROs' powers and duties were enumerated in Section 160A-475 of the General Statutes.
- **1986** Governor Martin reaffirmed the principles of earlier orders and allowed funding for tasks which involve a coordinated state-wide activity and are beneficial to both State and local governments.

The Changing Face of Regionalism

Beyond the multiplicity and ambiguity in the purpose of regional councils, the state has not clearly set forth a regional policy—a set of goals and expectations for what is to be accomplished in the regions of the state. The executive orders regarding regionalism have focused on the functions, structure, and boundaries of the regional councils but have not addressed these matters within the context of a policy on regionalism. As a result, some regional councils have moved away from traditional regional activi-

ties and into such roles as government service provision. In addition, the planning function of regional councils has been eclipsed by the "Lead Regional Organization" emphasis on intergovernmental coordination and cooperation.

Balancing the need to confront regional issues with the need for local government support and state and federal funding can create difficulties for regional councils. Jim Youngquist of the Southeast Regional Directors Institute recently concluded that the regional organizations "have perhaps gotten away from the overall regional agenda," and that "there appears to be a void that can, and should, again be filled by regional councils."¹ A policy on regionalism could reorient the focus and purpose of regional councils, and set performance standards for regional councils and other regional organizations in the future.

Present: The Functions of Regional Councils

Regional councils perform eight major functions: serving as a regional forum, planning and goal setting, service and assistance, data and geographic information system (GIS) support, promoting environmental protection, promoting economic development, and administering intergovernmental programs. The following evaluation of regional councils in meeting each of these functions is based on information gathered from meetings with state officials, local elected officials and administrators, interest group representatives, and officials in regional organizations. The information from regional organizations includes the results of a 1994 survey of organization directors in state designated planning regions.

Each region is designated by a letter of the alphabet, A through R, extending from west to east across the state. Five of the regional organizations in North Carolina are organized as Economic Development Commissions (A, B, C, Q, and R), and the remaining are Councils of Government. For convenience, these initials are used when referring to specific regions in lists and tables. Figure 1 is a map of the regional councils. For simplicity, the term regional council is used in this report to refer to all these organizations.

Serving as a Regional Forum

The most commonly mentioned and praised activity of regional councils is that they are the only place where officials and citizens from different jurisdictions formally come together to discover and



There are, however, three sources of dissatisfaction regarding this role. First, regional councils are sometimes faulted for being all talk and no action. A related concern is that councils are reluctant to confront controversial issues. The third complaint is that the boundaries of state designated planning regions do not correspond with people's varying perceptions of the "real" boundaries of the region. The value of the council as a regional forum depends on the participation of all interdependent and interacting areas of the region.

Regional councils have substantial involvement in land use, infrastructure, and water related planning, in addition to planning done in connection with state and federal programs. This planning is generally carried out for portions of the region or specific jurisdictions. There is little planning that is regional in scope and comprehensive in nature.²

for an 18 county area in the two states. The Triangle J Council of Governments held a World Class Region Conference in 1993 and organized the Greater Triangle Regional Council as a follow-up to the conference.

Providing service and assistance to member governments and other organizations has become a major activity of regional councils and one of the most important sources of local government support in many regions. In 1993-94, regional councils served over 630 governments and other organizations with more than 7,000 person hours. Of the 630 projects, 381 were conducted without charge and approximately 255 were conducted for a fee with revenues exceeding \$1.7 million. All regional councils provide at least some assistance without charge, particularly in helping governments seek grants. The service and assistance projects included:

- In addition to the service and assistance activities of regional councils, technical assistance is the

primary purpose of the field offices in the Division of Community Assistance (DCA). DCA seeks to improve the economic and community development status of local governments and other organizations. Specific types of assistance include strategic planning, growth management, appearance and image improvement, downtown revitalization, and natural resource conservation. DCA has a staff of 31 professional and support personnel in seven regional offices with a state-funded annual budget of \$1.8 million. DCA regional offices typically work with over 300 local governments each year with no charge to the government.

Data Centers and GIS Support

Regional councils have active data centers through which information about the region is made available to governments, non-profit and business organizations, and citizens. Most regional councils also have geographic information system (GIS) capacity (B, C, D, E, F, G, I, J, K, M, N, O, and Q), which they may share with local governments or use to offer assistance. The other five regional councils do not have GIS capacity, although Region H has a working arrangement with the city of Rockingham for GIS services. In addition, Region L conducted a survey of members in 1995 to determine possible GIS applications and Region P is investigating GIS software and hardware.

The range of GIS applications varies greatly. The most common applications are land use, population characteristics, environmental monitoring, and transportation. The regions most actively involved in GIS are E, F, and J. Seven regional councils (B, E, F, J, K, O, and Q) provide GIS services on a fee basis.

Sponsoring and Facilitating Cooperative Ventures Within and Between Regions

Regional councils have a substantial track record of fostering cooperative activity. In many instances, regional councils work on projects with counties outside their region or with other regional councils. Fourteen such cross-regional projects were in progress in 1994. Examples of these projects include: the Western North Carolina Housing Partnership; the Yadkin

River monitoring project; the Triad Partnership Data Center; the Cape Fear River Assembly; and the Roanoke-Chowan Narcotics Task Force.

Regional councils are not the only sponsor of cooperative activities among jurisdictions. Seven economic development partnerships and commissions covering the entire state have been created and now receive state support to foster marketing and recruitment efforts. DCA has initiated several projects in areas sharing common interests or facing a special challenge in inter-governmental cooperation. These projects include the following:

- Yadkin-PeeDee Lakes Project: a six county citizen-based strategic planning effort which has developed goals for tourism, economic development, and environmental protection.
- Fort Bragg/Pope Air Force Base Joint Compatible Land Use Study: a land use policy plan to protect mission capabilities of Fort Bragg and Pope Air Force Base.
- Cherry Point Project: fostered planning regarding the Marine Air Station and related growth in Craven, Pamlico, Carteret, and Jones Counties.
- I-40 Economic Impact Study: joint planning for development around the I-40 corridor from Raleigh to Wilmington. This also involved regional councils.
- The Partnership for the Sounds: a four-county education and development organization based in Columbia which seeks to promote a sustainable economy in the Albemarle and Pamlico Sounds area.

These are just a small sample of the numerous regional partnerships in North Carolina.

Promoting Environmental Protection and Coordinated Use of Natural Resources

Regional councils take on a wide variety of projects that deal with environmental protection and coordinated use of natural resources, some of which overlap with planning activities and the cooperative

Regional councils have a substantial track record of fostering cooperative activity.

projects previously discussed. Water quality and solid waste are common concerns of regional efforts across the state. The role of regional councils in promoting quality growth is to focus on data collection, planning assistance, and local plan and project review. Regional council directors do not favor giving their agency the power to approve local plans and projects.

Promoting Economic Development

Five of the councils are specifically organized as economic development commissions, although all of the regional councils carry out a variety of economic development related activities. These include technical assistance and grant preparation for infrastructure and community development, data centers with mapping, data analysis and statistical information, and the activities shown in Table 1 below.

There are varying levels of cooperation and direct interaction between the economic development partnerships/commissions and regional councils. The Western Economic Development Commission, for example, has the closest interaction by using the four western regional councils to access local governments.

Other special projects for entire regions or larger areas include industrial site planning (Region A), tourism promotion (B), child care (D), regional marketing (E), a regional atlas (F), foreign trade zone (J), expanding regional telephone service (J), the South-

eastern Entrepreneurial Roundtable (M), the Cape Fear River Research Program (O), and revolving loans (A, K, and Q) or microenterprise loan funds (M and R).

Administering Federal and State Programs

Regional councils administer a number of state and federal programs which are shown in Table 1.

Prospects: Recommendations for Regions

The North Carolina state government needs to create a "Policy on Regionalism" which would:

- Establish goals for the regions in the state.
- Identify the roles of regional councils, economic development partnerships/commissions, and DCA.
- Specify how state government agencies will interact with regional councils.

| Region | Aging | Emergency Management | Job Training Partnership Act | Senior Employment | Small Business Administration 504 | Economic Development Administration | Farmers Home Administration | HUD Section 8 | Land and Water Conservation Fund | Appalachian Regional Commission |
|--------|-------|----------------------|------------------------------|-------------------|-----------------------------------|-------------------------------------|-----------------------------|---------------|----------------------------------|---------------------------------|
| A | X | X | X | X | | X | X | | X | X |
| B | X | X | | X | | X | | | X | X |
| C | X | X | X | X | X | X* | X | X | X | X |
| D | X | X | X | | X | X | | | X | X |
| E | X | X | X** | | X | | X | X | | X |
| F | X | X | X** | X | X | | | | | |
| G | X | X | | | | | | | | |
| H | X | X | X | X | | | | | | |
| I | X | X | X*** | | X | | | X | | X |
| J | X | X | | X | | | | | | |
| K | X | X | X | | X | X | | | | |
| L | X | X | X | X | | | | | | |
| M | X | X | X*** | | X | | | | | |
| N | X | X | X | X | | | X | | X | |
| O | X | X | X | | | | | | | |
| P | X | X | X | X | X | X | | | | |
| Q | X | X | X | X | | X | X | | | |
| R | X | X | X | X | X | X | X | | | |
| Total | 18 | 18 | 15 | 10 | 8 | 8 | 6 | 3 | 5 | 6 |

* Eligible to receive EDA funds, but not a designated Economic Development District.

** Does not include all counties in the regional council.

*** Does not include all counties in the regional council, but includes counties outside council boundaries.

Table 1: State and Federal Programs Administered by Regional Councils in North Carolina.

- Offer guidelines for state funding of regional activities.

The potential value of regional councils to state government lies in the fact that they are locally controlled and accountable. They are able to carry out certain state-determined functions with an orientation that is sensitive to local concerns. It is appropriate for the state to identify goals for regional councils and to provide support for those activities, and it can do so without undermining local control. These bodies were originally designated by state government and they serve clear state interests. It is also important for the other "owners" of regional councils, member governments and regional governing boards to examine what actions they should take to strengthen regional councils.

Unfortunately, State expectations for, and local government input to regional councils has been hampered by confusion over "ownership." The State views regional councils as primarily local government entities. Local governments view regional councils as organizations established by the state or serving state purposes in administering intergovernmental programs. Therefore, local governments feel limited in how they can shape the organizations and determine their purpose. Regional councils themselves have been constrained by lack of clear definition of purpose. A constructive approach to regionalism requires actions by state government, local governments, and regional councils.

State Goals for Regions

The state seeks to promote certain goals to ensure the vitality and livability of regions through its own actions and the activities of regional organizations and local governments. These goals could include the following:

- Promote orderly growth and development which preserves important resources of the region.
- Expand opportunity for all jurisdictions in the region.
- Promote orderly movement within and through the region and reasonable accessibility.
- Enhance and help to equalize the governmental capacity of all jurisdictions in the region.
- Identify significant natural resources and develop strategies to protect them.
- Share benefits and costs among jurisdictions in the region.
- Overcome the jurisdictional barriers that make it difficult to carry out coordinated activities in a region.
- Share facilities among jurisdictions to increase efficiency.
- Coordinate action among jurisdictions to address common problems.
- Resolve conflicts between jurisdictions.
- Balance interests of the region with those of individual jurisdictions by promoting a regional perspective.

A state regionalism policy would articulate such goals and affirm the State's intention to act in ways that promote the realization of these goals for regions.

Recommendations for Local Government Action

Regional councils serve important state purposes of assisting local governments and fostering cooperative regional action. Consistent with their purposes, regional councils will be what local governments determine. Local governments should clarify their objectives for regional councils and ensure that strong linkages are maintained between the local government and the regional council. The commitment of the city council or county commission member who serves on the regional council governing board is critical to ensure that local concerns are actively represented and that regional approaches are actively communicated to the member government. Support for the regional council should be realistically matched to the expectations for regional council performance.

Recommendations for Regional Council Action

Regional councils should critically assess themselves in terms of general purposes of all regional councils and the special needs of their regions. Regional councils should include the following in their review:

- Review regional council mission, goals, and scope of activities in light of the record and accomplishments of other regional councils in the state.
- Examine board membership, meeting agenda, and procedures to increase focus on critical regional issues.
- Strengthen the communications between the regional council and the member governments.
- Establish new linking mechanisms across regional boundaries to better match natural service areas and areas with shared needs.
- Examine feasibility of joint operation of activities. For example, give one council the lead responsibility for conducting joint activities, and establish "branch" offices in "sub-regions" of an area that encompass more than one regional council.
- Examine new ways to share accomplishments and disseminate information about innovations among regional councils.
- Develop means for collective monitoring of performance, recognizing that each regional council is part of a statewide network and should provide mutual support to maintain generally high levels of performance.

It is appropriate to affirm/reaffirm the purpose of regional councils as sources of technical assistance, regional planning, cooperative ventures, and grant administration. Their distinct value comes in their integration of these purposes with each other and with other locally determined activities. Their distinct advantage is their moderate size and fiscal accountability. Instead of "lead regional organizations" a more apt title for regional councils might be linchpin regional organizations. Regional councils are not in charge, but they are unique in their capacity to tie together the activities of a variety of groups within the region and across regional boundaries.

Conclusion

Regional councils continue to be important vehicles for regional action. Their importance is derived from three factors. First, unlike other regional organizations, they are continuous with a long record of accomplishment. Second, they are comprehensive in scope with a broad range of concerns and a commitment to finding linkages among their functions. Third, they have a unique storehouse of knowledge with extensive data and experience regarding the region and its conditions, problems, resources, and governments.

It is time to rediscover regional councils and recognize their accomplishments and their potential. Regional councils provide service and assistance, promote a wide variety of cooperative ventures within the region and across regional lines, and administer federal and state programs. They have the potential to coordinate or undertake a wide range of other activities that would:

- Promote orderly growth and development while preserving important resources of the region.
- Share benefits and costs among jurisdictions in the region.
- Overcome jurisdictional barriers and coordinate action to address common problems.
- Identify and accomplish regional goals.

Having an organization which pursues such ends is clearly an asset for the citizens and governments of a region. **CP**

Endnotes

¹ *SouthEast Directions*, January, 1995.

² The Virginia Joint Legislative Audit and Review Commission came to a similar conclusion. Although the Planning District Commissions (PDCs) were created to identify and address cross-jurisdictional problems through planning, they often do not place much emphasis on regional planning and a comprehensive view of regional needs. No PDCs have up-to-date regional comprehensive plans, and many do not typically engage in strategic planning.

The Private Consultant in Public Planning

Interviews with Glenn Harbeck and George Chapman

C*arolina Planning* invited Glenn Harbeck, a private consultant, and George Chapman, a public planner, to give their views on the role of the private consultant in the practice of public sector planning. Harbeck is currently a consulting planner with a practice focused on community involvement based planning. He holds a Master's of Regional Planning from the University of North Carolina at Chapel Hill. Chapman is Director of Planning for the City of Raleigh. He also holds a Master's of Regional Planning from the University of North Carolina at Chapel Hill. These interviews appear below in facing columns.

Interview with Glenn Harbeck, Private Consultant:

How much of your work is done for public agencies?

Almost all, if you include non-profits and universities together with city, county, and state governments. Most of my work is with cities and counties. It's probably 90% cities and counties and 10% in non-profits, public universities, state government, and private companies.

Do you think private consultants are more common in public planning now than they used to be? Why or why not?

It varies tremendously from agency to agency. Some communities regularly employ consulting planners, while other communities employ them much less often. If you look at the number of calling cards in the back of *Planning* magazine, you would have to say more on average. Many of my client communities hire me because they're so busy putting out fires that they really don't have time to give proper attention to long range issues or strategic planning issues—kind of a “where are we headed as an agency and as a community.” Also, some public agencies are feeling pressure to do more with a smaller staff, and rather

Interview with George Chapman, Public Planner:

How often does your agency deal with private consultants?

We handle relatively few private consultants in the planning department. We may do as many as three to five in a year. That varies greatly depending on the work program. We typically retain private consultants for very specialized kinds of work. There might be a consultant to do the design work on the layout and format of publications we're doing, and we currently have a consultant studying a series of signage proposals for the downtown area, but we rarely use consultants to do land use planning work. It's almost all done by the staff. I would think you would find a smaller agency more likely to hire a consultant to assist them with a comprehensive plan or area plan or something of that nature.

Do you use private consulting planners more or less now than you did in the past? What have been the trends over time?

It's pretty much stayed the same, but I think we probably use them for different purposes now than we have in the past. We probably use private consultants more for technical assistance now rather than

Interview with Glenn Harbeck, Private Consultant:

than add on another permanent staff position, they are inclined to hire outward to a consultant. My first full-time job out of graduate school was in the area of long range planning and policy analysis. Speaking from that experience fifteen or twenty years ago, even then you were often pulled off your responsibilities as a long range planner to help fight the current planning fires. And I don't think the situation has changed all that much.

How would you describe the role of the private consultant in public planning?

If you look at the role of the private consultant from the public planning agency's perspective, I'm oftentimes viewed as an extension of the staff for a particular project for a particular period of time. On the other hand, I'm also viewed as an independent advisor or outside expert by the public at large. Whether that's the reality of it or not, that is the perception that oftentimes the public has. I view my job as probably about 9/10 the former and 1/10 the latter. I really prefer to work as an extension of the staff and be part of the team.

What are the advantages of being a private consulting planner?

Having worked in both public agencies as well as in private practice, I would say that the primary advantage is not being hampered by the constant demands and interruptions that a public agency office can experience. You're not working quite as much in the fishbowl. You still have the same obligations to the work that you do in the fishbowl, but I don't think you're viewed as being quite as accessible all day long with phone calls and people just dropping in. That was clearly some of my experience working in public agencies. It's just a question really of daily productivity versus the number of interruptions.

I would like to talk about one other advantage. Many times the clients that I'm working with are carrying "baggage" with them when they go into a public meeting, whether they want to or not. I use the word baggage in quotes, meaning that many public planners are put in the position of having to say no, and when you say no you're going to make somebody unhappy. You're either going to make a devel-

Interview with George Chapman, Public Planner:

assisting in policy planning. In the past they may have been more active in the policy planning area, but our staff is now more geared to handling the policy planning and related activities. There are fewer long range planning studies now underway than there were in the past, and so our need to supplement the staff capacity is less. On the other hand, we would still rely on a consultant for a highly technical or highly specialized kind of analysis that we wouldn't have the staff capacity to do.

How would you describe the role of the private consultant in public planning?

Today, we look at private consultants as supplements to our staff for technical capabilities that we do not have in-house. For instance, we would use a consultant for the development of a computer program or some software to perform an analysis with. The consultants are more likely to be specialists of some type as opposed to general planners. They might be economists, they might be GIS specialists, they might be urban designers, but they're not likely to be general planners.

For instance, we've hired consultants to do economic base studies. We've hired consultants to help us in the layout and format of the design of the comprehensive plan—they're almost like publishing specialists, if you will. We've used consultants to design our GIS system. The Planning Department has used consultants to develop historic district nomination documentation. Right now we have a consultant under contract to design a system of signage for the downtown area, a graphics system basically.

What are some of the advantages of working with outside consultants?

For the advantages, again, I'd break the consultants roles into two basic types of roles. One would offer technical assistance and the other would supplement our professional capacity, and by that I mean just to handle workload. The biggest advantage of professional planning assistance is to stretch your staff capacity when you have a workload peak kind of situation. We occasionally do that, and as we are downsizing and as other agencies are downsizing I think that's likely to happen more. Where you have

Interview with Glenn Harbeck, Private Consultant:

oper unhappy who has grand plans for a particular project, or you may make the neighborhoods around a particular development unhappy. You're oftentimes caught in the middle of a difficult situation, and through no fault of your own as a public sector planner you end up carrying that "baggage" with you. And I don't mean that in a negative way at all—I'm just saying that that is a circumstance that a public sector planner has to deal with. I often see the public treat the public sector planner unfairly because the agency itself may have a perception in the community as having a particular agenda or having been too kind to developers or whatever the case might be. It's no fault of the individual and it's really no fault of the agency, it's just the public's perception. When you're making tough decisions every day you have to say no occasionally, and maybe that's a disadvantage of working in the public sector.

What are the disadvantages of being a private consultant?

They are primarily related to time. In the advantages section I said that you're constantly being interrupted as a public sector planner. Well, as a private sector consulting planner you also have time problems, but they're problems of a different kind and they're mostly related to time away from your family or your personal life and friends. You're waiting in airports or spending consecutive nights in hotels or motels, or you're driving at night between communities, or you may just be keeping up with the books or preparing for conferences or presentations. Those kinds of continuous demands on time can stretch an ordinary 40 hour workweek into an average 55 to 65 hours per week. This is time doing the extra work to keep a practice up to snuff. That's not to discount the fact that when I was in the public sector agency we certainly did have a lot of night meetings with the subdivision review board or the historic commission or planning board or city council or county commission, but at least when the meeting is over you go home.

Interview with George Chapman, Public Planner:

some kind of peak demand for doing a series of studies you would need to supplement your staff, and the advantage of doing that is that you don't need to bring on staff either permanently or temporarily and manage that staff. You're able to manage your workload or handle peaks in your workload more efficiently.

I used to feel that you would never hire a consultant to do a long range area plan, but in some instances it may be the best thing to do.

What are some of the disadvantages of working with outside consultants?

I guess the down side of using consultants to supplement your regular staff is that there's often a great deal of time and money involved in bringing the consultants up to speed on whatever the issue is because they are not familiar with the nuances of it. I guess pretty much those are the same advantages and disadvantages of using a technical specialist. Obviously, you don't have to hire somebody, and those kinds of specialists are usually not around, are usually not available, and probably are not likely to want to work in a planning agency. It's not their goal. Another disadvantage of a consultant in that role is that when the consultant is not available you've lost your capacity. In other words, it's only a temporary assist for you. For instance, I'm thinking about the field of demography and economic analysis. If you bring on consultants to do a series of population analyses and forecasts for you, that's great as long as they're around, but once they're gone you only have the written documentation.

Interview with Glenn Harbeck, Private Consultant:

How do you negotiate your role with the public agency that you are working for?

I would say that "negotiating your role," is done very, very early in the process, perhaps even in the consultant selection process. You pretty much know whether there's a compatible chemistry between the client community and the consulting planner. I've been very fortunate in the communities that I've worked with, because I think we've had good chemistry and we've both viewed my role as an extension of the staff. I'm usually treated as a member of the planning team rather than as an outside "expert." I've found that the old style consulting expert is really a counterproductive role.

Are there some tasks you feel a private consultant should or should not do?

Nothing really comes to mind on one side or the other. I think probably the best reasons for hiring a private consultant are to 1) alleviate some of the workload burden, and 2) perhaps bring in an independent perspective, somebody who doesn't have any perceived vested interest in a particular issue in a community. Most public sector planners do their very best not to take sides in their work, but they're frequently perceived as taking sides by the public. I don't have as much of a problem that way.

Getting back to the team approach and the planning department team, my feeling is that the consultant should only take recommendations forward as part of the planning management team. In other words, if I'm operating as part of the planning staff, then I wouldn't take my recommendations forward to the Board or the Council as an independent consulting planner any more than if I was a staff planner trying to take recommendations forward without having first discussed those recommendations with the planning director. The analogy is very similar. Occasionally you will find a community or a particular board that wants the consultant to bring his or her recommendations forward independent of the staff, and I find that generally to be counterproductive. I find that it's much more effective if you're operating as part of the planning department team. I mean, after all, who's going to be asked to implement those recommendations? It comes right back to the planning department,

Interview with George Chapman, Public Planner:

How do you determine the role of the private consultant as a supplement to your staff? Are there some tasks you would never want a consultant to do?

I doubt that there are many things that are quite that black and white because it often just depends on the environment you find yourself in. For instance, you might on some occasions choose to hire a consultant to handle a particularly delicate political issue, something that is volatile in the community because the consultant can remove the staff from that political volatility. Otherwise the staff may become seen as an advocate for one or the other sides of the issue and run some danger of losing its effectiveness and objectivity. I think you can paint that picture the other way and say that there are some issues that are so sensitive that you probably should not use consultants for them because they might not be able to handle the shifting public opinion in the community if they're not aware of it or don't know how to read it—it could get you in more trouble than you're getting out of. So you have to make a decision about that given the particular issue that you're dealing with. I used to feel that you would never hire a consultant to do a long range area plan for you because once they're gone there's no capacity to continue to apply that plan or to evolve that plan as conditions change. But in some instances it may be the best thing to do. I think you just have to make a judgment based on the complexity of the situation, what your staff resources are, what their capabilities are, and what the political environment is.

What do you do when you do not like the product a consultant produces?

Well, you really should never get into that situation. What I mean by that is that in working with a consultant I don't think you can ever give a consultant a task and tell him to come back and show you the finished product. I view the consultant's role in working with the planning staff as an extension of that staff and there has to be continuing relationship with them during the course of the project just as you would oversee a project done by your own staff. You need to take that role with consultants as well and so there have to be constant check points during the

Interview with Glenn Harbeck, Private Consultant:

so the planning department has got to feel very comfortable with those recommendations.

What do you do if the public agency you are working for is not happy with your product?

The way to avoid that is by involving the decision makers on the front end of the process. I call it "front-end loading." I believe that in order for people to agree upon the course of action at the end of a process, they've got to agree on the process itself in the beginning. So if you want to avoid having a plan shot down at the end, you'd better be sure about what people's priorities and concerns are on the front end. To answer your question more directly, as a consulting planner you're in a service business. And if you got into a situation where a public agency was unhappy with your product you'd have to do your best to determine what the specific concerns were and how to fix them. If you don't do that you're probably in the wrong line of work.

What are some of the most common problems you have encountered in working with public agencies?

I can't say that I could identify anything that could be called a common problem. Each project is different and thankfully all of us are different in the way we do things, which keeps things interesting. In each project you're going to encounter problems along the way that you need to work through. Again, I think the important thing is to establish the chemistry and the common objectives at the beginning of the process and get people involved on the front end. If you do that, the chances of having problems are really minimized. Planners have to be communicators. We communicate in our public presentations, we communicate in the reports and ordinances we prepare, and we communicate in smaller group meetings. Like anything else, things can be miscommunicated. The better a communicator you are, the more effective you'll be as a planner.

Interview with George Chapman, Public Planner:

course of the effort to make sure that you're still on target with your goals, objectives, time frame, costs, and everything else. Certainly you're going to occasionally get a consultant who comes to a conclusion that you don't agree with, but working closely with the consultant during the whole course of your effort is going to reduce the likelihood of that happening. You are their client, and they need to be responsive to you and your needs. That's kind of a basic relationship. Certainly there's room for professional disagreement, different conclusions that are properly justified, but you may not be too unhappy with it if they're professionally done and properly documented, even if you disagree with the conclusions. It would be foolish to say it's not going to happen—sometimes you're going to get into a situation with a consultant where they're not doing the work on time or their work is not satisfactory, but I think the closer you are to your project the sooner you're going to identify that. And if you can't take steps to remedy that situation, then you terminate your relationship with the consultant. But that shouldn't happen at the end of the project.

What are some of the most common problems you have encountered in working with private consultants?

I don't know that there are recurring or common problems. The thing you have to be most careful with is making sure that they do not become clients to a public group or a private interest group or some other entity. You are their client. You have to make sure that as the planning agency you know you are playing the central role in the decision-making process—developing alternatives, assessing the consequences of them, trying to advise your governing body—and that the consultant doesn't take that role from you. You have to have a very clear understanding at the beginning of a project by making it clear as to what kind of check points during the course of the project they are responsible for coming to you, and you have to follow through on that.

I think managing a consultant is probably the thing that most planning agencies underestimate the time and need to do. You often think, well these folks are well known or well regarded competent professionals, you shouldn't have to worry about that, but they are like any other resource, staff or otherwise.

Interview with Glenn Harbeck, Private Consultant:

What can public agencies do to improve their relationships with private consultants?

The most effective working relationships that I've had are with those clients who really involve me as a full member of the planning staff team for the duration of the project. So the answer to your question is: anything that can be done to improve the ability of the staff to involve the consultant as a member of the team is going to help the project. It could even be something as basic as involving the consultant in the preliminary discussions or thinking about what the project entails as far as both the process of preparing the product and the final product. For example, if a public agency is hiring a consultant to prepare a comprehensive plan that will require a public planning process, it's really good if the public agency can allow the consulting planner to have a free exchange of ideas on what that public planning process might be, rather than putting it all down to the n^{th} degree as part of the request for proposals. What I'm most interested in is what are the client's objectives. What does the client want to achieve at the end of the process? If we can agree upon the objectives first, just like in a good planning process, then the process to achieve those objectives can be tailored to fit.

Most planning agencies have regular staff meetings, troubleshooting meetings, or advanced planning meetings. If those meetings happen to be being held on a day when the consultant is in the community or can be coordinated in such a way that the planning consultant would be in the community on those days, it really helps the consulting planner to understand the full range of problems that the planning agency is facing. It also helps the consulting planner understand where his or her particular project fits into the bigger picture of the agency's responsibilities. Another way would be for a consulting planner to sit in on a planning board or city council meeting, not with a particular objective in mind but to gain some insights into the particular dynamics and political structure of the community.

Interview with George Chapman, Public Planner:

They need to be viewed in a management context and you have to know what your resources and time limits are and operate within those things. In the short run, consultants may not be less time-consuming than hiring staff, but in the long run it may be advantageous to you because once you bring on a staff person, for instance, you have a long-term responsibility to that person which requires a lot more investment in the long run.

What can private consultants do to improve their relationships with public agencies?

I think basically they need to listen to their clients' needs and make sure those are carefully defined at the beginning of the project. The agreement—whatever that is, contract or whatever form the agreement is—is very specific as to what the time frame of the effort will be, what the end products will be, and what checkpoints along the way there will be to measure the progress of the project. Make sure there is attention given at the beginning to the details of the work program—don't just rush into the relationship because you're impressed with how they've done something somewhere else. That's good reason to consider them, but once you understand they're somebody you want to consider it's important to be detailed about the time frame, the resources, the checkpoints along the way.

I guess one big caution for public agencies working with a private consultant is to make sure you know the staff resources that are going to be available to the project. You often get a proposal with a list of twenty highly competent resumes, but you need to know who they will specifically have on the project and who will be responsible for the consultant's work. There needs to be one person—the project manager—playing that role. You always have one person you deal with for that project. They may have a half dozen working on that project, but you're not the supervisor of those people, and you can only be effective if you're working through their supervisor, whoever that is. On the consultant's side, they can make sure they are speaking through one person, one contact, and that that project manager is always available to the client.

Interview with Glenn Harbeck, Private Consultant:

What do you see as the biggest differences between working as a private consultant and working as a public sector planner?

Speaking only from my own experience, I would say that the "business" side of consulting is a real eye-opener in terms of the particular set of skills required. They are quite a bit different than the planning skills that you learn in undergraduate or graduate school or on the job after that. And to bring it home, you have to have the confidence to know that next year's salary is going to come from somewhere. You just don't know where. There's clearly not security, so to speak, whereas when I was working for a city agency or when I was working for a larger corporation there is some security in knowing that there's a salary somewhere with your name on it.

I think if I were to go back into a public agency today I would still employ the same fundamental processes, techniques, research skills, communication skills, public speaking skills, and writing skills. I don't think that would differ.

You have to be able to act with a great deal of self-motivation and discipline and a love for what you are doing.

Do you think there are any skills that are especially important for private consultants to have?

You're using the word "especially" in the question and I guess I'd have to say you have to be especially focused. You have to be able to focus on the task at hand. There's not a structure around you that's going to ask you to do something at a certain time. You have to be able to act with a great deal of self-motivation and discipline—time management—and a love for what you are doing. Again, though, a lot of those things would apply equally well to a public sector planner. But for especially important skills, I

Interview with George Chapman, Public Planner:

What do you see as the biggest differences between working for a public agency and working as a consultant?

I think it's your perspective on the task in front of you. I think as a public agency employee you have a broader and longer term commitment to your community and can put the project in that context. The consultant has the, I would call it luxury at times, but really it's a valuable asset, which is to bring perhaps a fresh and more detached perspective to the task. And probably bring knowledge from other experiences that the local planner would not have. I have worked as a consultant, and while ultimately I find it more satisfying to be a local planning agency person, I think that's kind of an individual judgment people are going to come to based on their personalities. There's value to both sides and both roles, but from my personal perspective the local agency planner has a longer term commitment to his client, which is his community. I think you shouldn't try to decide between which side of the market you want to be on until you've worked on both sides because even if you find you're far more satisfied with one than the other, having worked on the other side gives you a better understanding of what the issues are on that side of the fence. If you're a public agency person and you've been a consultant I think you're going to be more effective in working with consultants and vice versa.

Do you think there are any skills that are more important for public agency planners than for private consultants?

I would be tempted to say the public planner has to have more patience and a more long-term perspective. I think the necessity to compromise is greater for public planners because of their longer term relationships with their clients. They have to be able to see both sides of the issue and be able to accommodate conflict, whereas I think a consultant can be more of a purist and probably should be less prone to accept compromise solutions to problems. And a consultant can perform a very valuable function to make a recommendation that's not accepted by the community. In the course of doing that, public planners might really compromise their abilities to be effective in other arenas. Again, I think that's a place where

Interview with Glenn Harbeck, Private Consultant:

would say focus, concentration, discipline, time management, and motivation.

I would encourage anyone to work for several years in a public sector agency to learn the work first-hand and to come to know the intricacies of working in the public agency and the relationships between staff and board or council. Those kinds of fundamentals serve you well. **GP**

Interview with George Chapman, Public Planner:

a public planner will choose to use a consultant and might find a consultant very effective.

I think that the hard technical skills of economic and demographic analysis are probably more valuable in a consulting agency than in a public agency. That's not to say you don't need them in a public agency, but if you're a real quantitative analyst you'll find more application for that in a consulting role. You know, if you think about doing an environmental impact statement, that can be an enormously complex scientific investigation, and that kind of a detailed analysis is probably much better done by a consultant than by most public agencies. Public planners would be more capable of synthesizing a variety of ideas and are more comfortable with being generalists. That's not a completely black and white situation, you know—you get into some public agencies, for instance at the federal and state levels, and you can be a highly specialized technician in a public agency. There are water quality specialists within state environmental agencies that are highly specialized. A transportation planner who is really into modeling and has the capability of developing the models as well as applying them would probably be more satisfied in the long run in a consulting agency. You probably don't find that in many local public agencies—those people are more likely to be found in a consulting role, a private consulting role. But you know, we've got transportation planners who are whizzes at modelling too. **GP**

The Undergraduate Survey Course as an Introduction to Planning

Michael Hibbard and Wes Hankins

There has been a rising interest in undergraduate planning education in recent years. A basic indicator of this trend is the growing number of undergraduate programs. Successive editions of the *Guide to Undergraduate Education in Urban and Regional Planning* document this. The second edition of the *Guide* (Hankins et al. 1988) lists thirty-four programs that award undergraduate degrees in planning and an additional eighteen non-degree programs. Three years later, the third edition (Hankins et al. 1991) lists thirty-seven undergraduate degree-granting planning programs, fourteen "planning-related" undergraduate degree-granting programs, and twenty-two non-degree programs.

Probably a more engaging indicator for most academics is the recent flowering of dialogue on the nature, purpose, and feasibility of undergraduate planning education. The Report of the Commission on Undergraduate Education of the Association of Collegiate Schools of Planning (ACSP) (Niebanck et al., 1990), also called the Niebanck Report, has stimulated much discussion at ACSP's annual meetings, and there have been several recent pieces in the *Journal of Planning Education and Research* (Goldsmith 1991, Hotchkiss 1992, Goldsmith 1992, Niebanck 1992, Dalton and Hankins 1993).

One part of the dialogue revolves around how undergraduate planning education is to be con-

ceptualized. The issue can be roughly stated in the following two questions:

1. Is professional planning education possible and appropriate at the undergraduate level?
2. Are there goals for undergraduate planning education other than preparation for professional practice?

The Niebanck Report supports the model of professional practice, but also urges that schools develop additional models of undergraduate planning education—for example, teaching planning as an academic discipline or as preparation for citizenship (Niebanck et al. 1990, ch. 4). In his comments on the Niebanck Report, Goldsmith (1991) raises important questions about professional training as an appropriate goal for undergraduate education in planning or other fields. Hotchkiss's (1992) spirited defense of professional undergraduate planning programs, along with Goldsmith's (1992) response, further illuminate the two questions above. And Niebanck (1992: p. 229) offers his thoughts on the possibilities of planning as "an academic field of its own."

Aside from the twelve Planning Accreditation Board and four Canadian Institute of Planners accredited programs, which are by definition professionally oriented, we know very little about how planning is being presented to undergraduate students. So, on the assumption that it would give us some idea of how planning is being conceptualized, we have used the limited view available through the window of the undergraduate survey course to broadly examine undergraduate planning education.

Survey courses are planning courses offered for the general undergraduate student population. To try

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to understand the various ways the undergraduate survey course is taught, we surveyed all North American graduate planning programs and degree-granting undergraduate planning and planning-related programs.

The Survey

A total of 119 schools were sent questionnaires. In addition to answering a few questions about their courses, we asked respondents to send us a copy of their most recent syllabus. Eighty-four usable questionnaires were returned, for a response rate of 71%.

Findings

Planning survey courses seem to be very popular. Seventy schools (59% of those queried) reported offering a survey course. Survey courses are generally well-subscribed, with a wide range of enrollments among the responding schools. Twenty-one report annual enrollments of one hundred or more, and only fifteen report enrollments of twenty or less.

Undergraduate survey courses are targeted at different audiences by different types of programs. Most master's programs are fairly explicitly trying to recruit students into the field, with courses generally directed at juniors and seniors. None of the stand-alone undergraduate programs mentioned recruitment as a purpose of its survey.

There seem to be interesting differences in character between the courses offered by stand-alone undergraduate programs and those in departments with PhD programs. Roughly, the undergraduate survey courses being taught in stand-alone undergraduate programs emphasize doing planning, while those being taught in doctoral-granting programs are more oriented toward understanding planning—studying about cities and regions and the logic of the planning process. Courses offered in programs which offer only master's degrees and master's/undergraduate programs are arrayed between these poles.

Instructors in seventeen of the twenty responding stand-alone undergraduate programs characterized the purpose of their undergraduate survey course as introducing the practice and/or profession of planning. A review of syllabi shows that the most frequently mentioned themes of these courses are to provide an overview

of the field and to introduce students to land use planning.

At first blush, these seem similar to the undergraduate survey courses being taught in doctoral-granting programs. Although seventeen of the nineteen instructors from doctoral programs also characterized the purpose of their courses as providing an overview of the field, the themes identified in their syllabi are quite different. In syllabi from the doctoral-granting programs, the most frequently mentioned themes are urban policy-making, the history of planning, and planning as a tool for social change.

The topics covered and course assignments found in survey course syllabi tell us even more. Taking the syllabi collectively reveals planning as incredibly diverse. Some syllabi define the field as urban design, some as policy analysis, and some as community organizing. It is variously applied to environmental management, economic development, social policy, and land use. It is employed at every level from the local neighborhood to the nation-state. There is no dominant way of understanding what planning is. Instead there is a wide diversity of foci—or perhaps a lack of focus—in the field.

In spite of this diversity, an important unifying thread is reading lists. Of the sixty-six syllabi submitted, twenty use John Levy's *Contemporary Urban Planning*. A handful of other books in wide use are Gallion and Eisner, *The Urban Pattern*; Catanese and Snyder, *Introduction to Urban Planning*; and Hodge, *Planning Canadian Communities*. These and most of the other commonly used texts take planning to be a form of professional practice.

The dominant conceptualization of planning, then, is professional. There are a few exceptions, however, one of which should be specially noted. Ball State is conducting an important curricular experiment by running two undergraduate programs side by side. One is a five year program designed to prepare students for professional planning practice, while the other is a four year degree program designed to educate students broadly and to prepare them for graduate work.

Conclusions

To the extent that a brief survey and course syllabi provide insight, we can say that, with a few exceptions, planning survey courses for undergraduates present planning as a field of professional practice.

Figure 1. North American colleges and universities offering degrees in planning.

(Key: U=undergraduate program; M=masters program; D=doctoral program)

| | | | | | |
|--|-------|------------------------------|-------|----------------------------|-------|
| Alabama A&M | U M | Plymouth State Coll. | U | U. of North Carolina, | |
| Appalachian State | U | Pratt Institute | M | Chapel Hill | M D |
| Arizona State | U M | Princeton | M D | U. of North Carolina, | |
| Ball State | U M | Portland State | M D | Greensboro | U |
| Brigham Young | U | Rhode Island | M | U. of Oklahoma | M |
| California Polytechnic, Pomona | U M | Rutgers | M D | U. of Oregon | U M |
| California Polytechnic, San Luis Obispo | U M | Rutgers (Dept Env Res) | U | U. of Pennsylvania | M D |
| California State, Fresno | M | Ryerson Polytechnical | U | U. of Puerto Rico | M |
| Cincinnati | U M D | San Francisco State | U | U. of Saskatchewan | U |
| Clemson | M | San Jose State | M | U. of Southern California | U M D |
| Cleveland State | M D | Shaw | U | U. of Tennessee | U M |
| Columbia | M D | Southern Mississippi | U | U. of Texas, Arlington | M |
| Cornell | U M D | Southwest Missouri | U M | U. of Texas, Austin | M |
| East Carolina | U | Southwestern Louisiana | U | U. of District of Columbia | U M |
| Eastern Oregon State Coll. | U | St. Cloud State | U | U. of Toledo | M |
| Eastern Washington | U M | SUNY Albany | M | U. of Toronto | M |
| Florida State | M D | SUNY Buffalo | U M | U. of Utah | U |
| Frostburg State | U | Technical U. of Nova Scotia | M | U. of Virginia | U M |
| George Washington | M | Temple | U | U. of Washington | U M D |
| Georgia State | U | Texas A&M | M D | U. of Windsor | U |
| Georgia Tech | M | U. of Akron | M D | U. of Wisconsin, Madison | M D |
| Harvard, Kennedy Sch of Government | M D | U. of Alabama | U | U. of Wisconsin, Milwaukee | M |
| Hunter Coll. | U M | U. of Arizona | M | Universite de Montreal | U M |
| Indiana U. of Pennsylvania | U M | U. of British Columbia | M D | Virginia Commonwealth | U M |
| Iowa State | U M | U. of Calgary | M | Virginia Polytechnic | M D |
| Kansas State | M | UC Berkeley | M D | Washington State | M |
| Louisville | M D | UC Los Angeles | M D | Waterloo | U M D |
| Mankato State | U M | UC Santa Cruz | U | Wayne State | M |
| Mass. Inst. of Technology | U M D | U. of Colorado, Boulder | U | West Chester | U |
| McGill | M | U. of Colorado, Denver | M | Western Carolina | U |
| Memphis State | M | U. of Florida | M | Western Washington | U |
| Miami U. (Ohio) | U | U. of Guelph | M | York | M |
| Michigan State | U M D | U. of Hawaii | M | | |
| Morgan State | M | U. of Illinois, Chicago | M D | | |
| New Mexico State | U | U. of Illinois, Urbana | U M D | | |
| New Sch. for Social Research | M | U. of Iowa | M | | |
| New York | M | U. of Kansas | M | | |
| Northern Arizona | U | U. of Maryland | M | | |
| Northern Michigan | U | U. of Massachusetts, Amherst | M | | |
| Nova Scotia Coll. of Art and Design | U | U. of Massachusetts, Boston | U | | |
| Ohio State | M D | U. of Miami (Fla) | U | | |
| Pittsburgh | M | U. of Michigan | M D | | |
| | | U. of Minnesota | M | | |
| | | U. of Nebraska | M | | |
| | | U. of New Mexico | M | | |
| | | U. of New Orleans | M | | |

In some cases, students are introduced to doing planning, and in other cases, students are taught to understand planning. Beyond this difference, a wide range of approaches, issues, and contexts are found.

Professional planning education is clearly possible at the undergraduate level and is the dominant conceptualization. Whether this is appropriate is a normative question worthy of debate. Specifically, we should question the nature of the relationship between professional undergraduate programs and master's programs in planning. There can be, and there are, goals for undergraduate planning education other than preparation for professional practice. The most common is preparation for graduate work in planning. However, we can be even more innovative in our thinking. Other programs should follow the lead of Ball State University and try out a wide variety of conceptualizations of undergraduate planning education. **CP**

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Planning and the Environment: The Need for a Common Ground

Randy Schenck

Carolina Planning occasionally includes Viewpoint articles which offer commentary on planning issues and provide a forum for personal opinion and debate on current topics of interest to planners.

The intent of this article is to examine the nexus between planning and the environment—specifically, to examine how concern for the environment has influenced planning, and how planning has played an increasingly important role in assuring protection of the environment. In this Twentieth Anniversary Issue of *Carolina Planning*, I will address how the role of the environment in planning has evolved over the last twenty years and suggest how planning and protection of our natural resources may conjoin in the future.

The Past Twenty Years

National Trends

Twenty years ago was a triumphant time for environmentalists and planners, but the ensuing twenty years were marked by innumerable jolts, bumps, and grinding halts. At the federal level, two major successes for the environment were the passage of the National Environmental Policy Act (NEPA) and the Endangered Species Act. In addition, other important pieces of legislation were passed that impacted land use, ranging from the Alaskan Lands Act to the setting aside of many thousands of acres of land in North Carolina as protected wilderness. These legislative achievements made significant progress in reforming many of the worst land use practices that were threatening our public health and damaging our

natural resources. The Clean Water Act and the Clean Air Act followed, and they too have met many of their public policy goals. All of these hard won victories are threatened today as legislative attempts at both the federal and state levels seek to roll back or weaken environmental regulations and policies designed to protect our public health and our natural resources.

In North Carolina

In 1974, North Carolina placed itself in the forefront nationally with regards to land use planning with the passage of the Coastal Area Management Act (CAMA). CAMA was considered by many to be one of the best pieces of coastal management legislation in the nation. If we view the past twenty years as a roller coaster ride, CAMA represents the high point of our ride. That is not to say that environmentalists and planners have no other “thrills” to savor—we can rightly point to the passage of the Mountain Ridge Protection Act in 1983 and the Watershed Protection Act in 1989 as other high points. The low point of our ride was the 1995 passage of Representative Nichols’ Private Property Protection Act in the lower House of the North Carolina General Assembly, which would have made effective land use planning impossible. The North Carolina Senate prevented passage of this bill, which was one of the most anti-planning, anti-environment pieces of legislation in the country.

Those who believe in protecting the environment and planning have been more involved in fighting defensive actions and preventing defeats than in winning victories. All is not doom and gloom, however. Environmentalists have shaped the politics of planning, and planners have shaped the politics of envi-

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ronmental protection. Much of the rest of this article will examine the interaction between planning and environmentalism.

The Shaping of an Environmentalist and Planning Advocate

When I first journeyed to England in the 1980s and 1990s, I began to understand the connection between planning and protection of our resources. I spent three days walking from village to village along the Cotswald Way, a 100-mile path from Bath to Chip-ping Camden. This public walking path passes entirely through privately held lands. What most astonished me about this walk was the sense one had of being able to literally step from the countryside into a village, walk through it, and then step back into the countryside. Richard Bate, formerly a senior planner with the Council for the Protection of Rural England, at a Conference in 1989, stated that "England has managed to say 'this is town; this is country' and you can tell when you move from one to another." The English have established the objective of protecting the countryside for its own sake as national policy.

In North Carolina where the distinction between town and country has become increasingly blurred, I began to see sprawl with very different eyes. I knew that we had an alternative. I understood that we must move beyond, as Richard Bate put it, "the idea of conservation as an issue of protecting oases in a sea of mediocrity." Over the past hundred years, most of the environmental movement's initiatives related to land protection in the U.S. have been designed around the need to preserve lands with special beauty or unique natural features. Unfortunately, our national parks and forests are increasingly becoming oases surrounded by Bate's sea of mediocrity. As our cities and towns consume our land resources at ever increasing rates, we are losing scenic countryside as well. This is where planning meets protection of our natural resources. We know that we cannot protect our countryside without planning. We are also starting to realize that we will ultimately fail to protect our wilderness areas without comprehensive planning at the local, regional, and state level.

The Impacts of Unplanned Growth on the Environment

Sprawl. We know it when we see it—strip shopping malls, traffic congestion, low-density residential development. While our cities have grown tremendously in size, the number of people per acre has fallen. With each new census report we learn that fewer people occupy an acre of land than ever before. This decline in population density has not been limited to our major metropolitan areas but can also be observed in smaller towns like Fayetteville and Hickory, North Carolina. If the current population density in Charlotte equaled the level of density that existed in 1940, the city would occupy about 40% of the land it does now. Similarly, if the current population density of Raleigh equaled that of 1900, that city would occupy 30% of its current area.

The rural Piedmont is rapidly disappearing in response to the intensely land consumptive patterns of development that we have today. Walking in the Piedmont three hundred years ago we probably would have encountered "chestnuts, white oaks, mokernut hickories and tulip trees immense and widely spaced . . . many more than four feet in diameter . . . [Now] the Piedmont is either plowed, paved or in succession" (Godfrey, 1980, 25). The amount of land that is paved or otherwise covered by impermeable surfaces has reached the point where the Piedmont was recently identified as the fifth most threatened agricultural zone in the country (Busby and Schenck, 1994, 27). The most dramatic feature of the Piedmont today is the sprawling urbanization of the region.

This has had many ugly consequences, one of the foremost being the loss of trees—grand oaks and tulip poplars, hickories and beeches. Bulldozers push the grand trees over and they are hauled off in pieces. In their place are erected one story buildings surrounded by vast tracts of asphalt. Landscaping crews then descend and plant Bradford Pears and other ornamental trees that will never replace the sweep and grandeur of mature, full bodied hardwoods. And so the landscape is reduced and diminished, and we in return are diminished as well.

John Muir, founder of the Sierra Club, recognized how easily we can lose that which adds so much value to our communities when he wrote nearly 100 years

We know that we
cannot protect our
countryside without
planning.

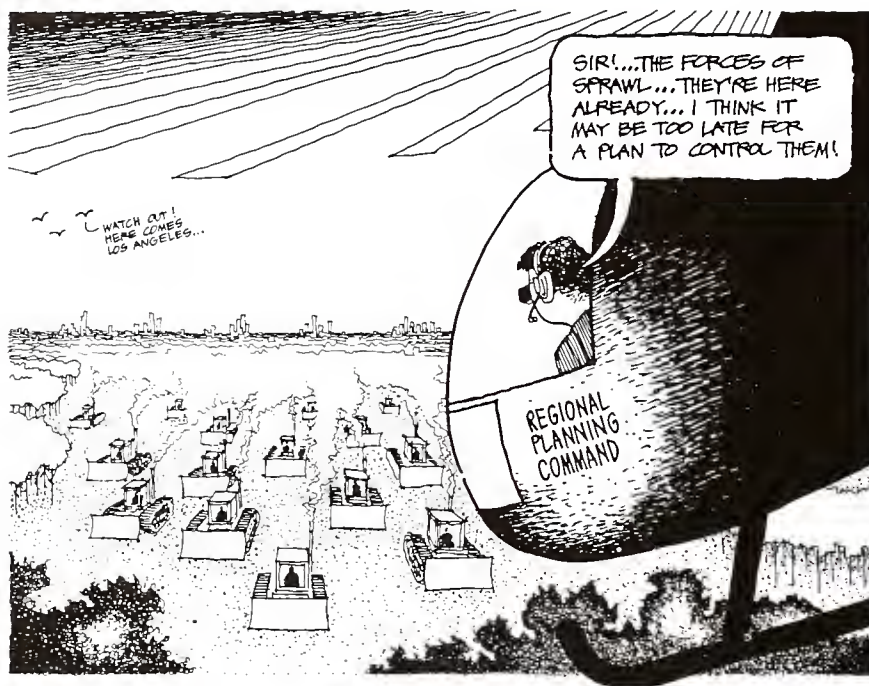


Illustration by Roger Lewis, courtesy of MSM Regional Council. Reprinted with permission from *Developments* newsletter.

ago, "Any fool can destroy trees . . . God has cared for these trees, saved them from drought, disease, avalanches, and a thousand straining, leveling tempests and floods; but he cannot save them from fools." (Muir, quoted in Teale, 1954, 231) Today, one hundred years later, we have fools who still recklessly destroy trees and, in the process, reduce the quality of our communities.

The Costs of Sprawl

Unfortunately, sprawl is not recognized as a problem by many citizens, since they think that we still have plenty of undeveloped land. While we do have undeveloped land and room for more sprawl, the costs to the environment and to our quality of life are severe, and it is here that we find the nexus between environmentalism and planning. Planners must address the environmentally adverse consequences of sprawl.

Sprawl leads to increased dependence and reliance on the automobile. The number of vehicle miles traveled, along with the percentage of single occupancy vehicles, increases significantly with dispersed developments as people become ever more car dependent, resulting in significantly higher use of fossil fuels. Between 1980 and 1990 in Raleigh-Durham,

the Triad, and in Charlotte, traffic congestion and travel time to work increased over 16%. Furthermore, automobile exhaust has long been recognized as a major source of air pollution in our metropolitan areas. Nine counties—all in the Piedmont and all heavily urban—were cited for non-attainment for ozone under the 1990 Clean Air Act.

Low density developments use our land resources inefficiently, forcing more miles of roads, storm drainage, pipes, fiber optic cables, electrical wires, and other networks to be extended across the landscape, at increasing cost to the taxpayers. One study documented that a typical house located on a large lot and far from central facilities costs \$24,000 more for services than one centrally located in a

denser housing development (Frank, 1989). Also, in terms of housing costs, land and site preparation is typically more expensive for large lots. A South Carolina study estimated that higher density development would reduce the costs of a house by \$10,000 in land and site preparation costs (Busby and Schenck, 1994, 17).

Sprawl impacts water quality as well. Increasingly, many North Carolina communities are needing to expand their wastewater treatment plants in response to increased demand for services from new residents, but often the costs are prohibitive. During heavy rains, stormwater infiltrates sewer lines, often overloading the capacity of the plant and forcing the release of raw sewage into the water supply. In addition, many of North Carolina's rivers have experienced degradation as a result of urban runoff and construction. Between 1986 and 1991, for example, urban development degraded an additional 500 plus miles of the Catawba, the French Broad, and the Yadkin-Pee Dee Rivers (Busby and Schenck, 1994, 25).

Another example concerns estuaries and shellfish. A 1988 study by the state's Shellfish Sanitation Program concluded that population growth and its associated land use problems—urban runoff, inadequate wastewater treatment, and beachfront ero-

sion—posed the single greatest threat to shellfish resources in years to come. In the 1980s, population growth and development was the major cause of increased shellfish bed closures in counties which experienced increased closures (Busby and Schenck, 1994, 33).

Sprawl also impacts wildlife by contributing to forest loss. According to the U.S. Forest Service, over 1.2 million acres of forest land were urbanized in North Carolina between 1964 and 1990. Most of that was in the Piedmont. At the same time 59 of 153 species of birds declined in North Carolina, some by as much as 27% per year. The loss of forests and old fields to urbanization, particularly in eastern and northern North Carolina, was cited as a major cause of the decline (Busby and Schenck, 1994, 28).

Finally, sprawl entails a loss of our communities' distinctiveness. In place of natural areas and neighborhoods with diverse architecture and inviting landscapes we increasingly see cookie-cutter neighborhoods and strip shopping malls with chain stores that resemble those in any other American city.

The Dominant Paradigms of the Past Fifty Years: Environmentally Unfriendly

To the extent that they support sprawl, the planning paradigms of the past fifty years have not been environmentally friendly. Most current zoning regulations are recipes for increased sprawl. Some planners and environmentalists with long-range vision are beginning to identify the connections between the human community and the land community and to advocate for changes in our dominant land development patterns. Others in the planning community, however, have not yet recognized this undeniable connection between human and land communities. Failure to adequately value the natural environment and the need for biological diversity risks harming the human community in the long run. Chief Joseph Seattle recognized this connection in his 1854 speech when he said, "The earth does not belong to man; man belongs to the earth. This we know. All things are connected like the blood which unites one family... Whatever befalls the earth befalls the sons of the earth. Man did not weave the web of life, he is merely a strand in it. Whatever he does to the web, he does to himself."

This insight identifies another dilemma faced by today's planners—that of artificial boundaries drawn around cities, counties, and states that generally have little or no connection to the natural features within.

These artificial boundaries, along with planning's focus on local as opposed to regional areas, act as significant constraints to effective land use planning.

The Need for a Biocentric Perspective

One of the major insights developed by the environmental community over the past ten years is the need to view the world around us as a network of bioregions. Bioregions are defined by the nature of the landscape, the land's natural features, and the plants and animals that live together in particular habitats. Watersheds are the most readily observable example. In the Research Triangle region, battles have been raging for many years over protection of the Falls Lake Watershed. Simple truths emerge. Water and the waste it carries flow downhill. Why should upstream residents care about downstream residents? They are governed by different governmental units and have no mutual obligations. Towns located downstream have little recourse to assure protection of their water resources if much of the watershed lies outside of their jurisdiction. Although many now recognize the need for a bioregional approach to environmental protection, the planners are severely constrained by boundaries that are nonsensical from a biocentric perspective.

Planners also need to consider the land ethic laid out by Aldo Leopold in *A Sand County Almanac*. "A thing is right," he wrote, "when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends to do otherwise" (Leopold, 1966, 262). Leopold recognized that the dominant anthropocentric view was leading us away from preservation of the biotic community. We may imagine that we are separate from the biotic community, but we separate ourselves from it at our peril. Certainly, we cannot sustain quality life in the long term if we plan for the human community while ignoring the biotic community.

This tension between the needs of the biotic and human communities is difficult to resolve. While many reasons exist for our inability or, truthfully, our unwillingness to try to effectively address this issue, the primary reason is the dominance of the assumption that growth is good. Growth is given as the answer to our myriad problems. But we cannot grow forever. We can grow until our open spaces are gone and we are dependent on bottled water because our water supply watersheds have been densely developed and the waters within irrevocably polluted. We can grow until air pollution induced respiratory prob-

lems are as frequent as the common cold and traffic congestion has reduced the average car speed to below ten miles an hour. But we cannot grow forever. We risk consuming our host, this remarkable planet Earth.

We have finally begun to consider issues of sustainability and carrying capacity. How much growth can our air, water, and land resources sustain and still provide us with a high quality of life? This seems to me the most important question that we must answer, or we risk irrevocably losing the quality of life in North Carolina that has attracted so many to this state and which has retained so many of the state's natives as residents. Without planning, we will not be able to protect our air, water, and land resources and ensure an acceptable quality of life.

The Need to Manage Growth

In my opinion, planners have a nearly Sisyphean task—to educate the public on the severe costs of sprawl and of the absolute necessity to manage growth. In the present political climate, embracing growth management is about as tempting as embracing a porcupine. Planners, however, must recognize that many citizens live in a black and white world and fail to understand how valuing both community and freedom may conflict.

Some citizens carry images in their minds that inadequately represent complex and often conflicting realities. For example, while many people feel that restrictions such as land use controls and zoning are to be feared, they do not realize that they will face increasing traffic congestion, polluted rivers, and the possibility of landfills, hazardous waste dumps, and hog farms near their properties without these restrictions. What is the way out of this dilemma? Unfortunately, no simple answer exists. All who care about their communities and the natural environment must work together to find ingenious solutions. It is said that 99% of genius is persistence, and unrelenting persistence will be required on the part of planners, environmentalists, and most importantly, an aware, reflective citizenry. We will need persistence in communicating with and involving our citizenry; persistence in acknowledging the results of a land use paradigm that results in more strip malls, sprawling developments, traffic congestion, pollution, and damage to the natural beauty of our mountains and coast. We will also need persistence in increasing the acceptance of a very different vision of the future that includes mixed-use developments, transit oriented

developments, high-density new communities, "open space" developments, and greater reliance on mass transit and bicycling.

Planning and the Environment: The Next Twenty Years

Change is not easy. Just as one cannot stop an ocean liner instantly, neither can the dominant land development pattern of the past fifty years be brought to an abrupt halt. Setting a new course takes energy and, as with an ocean liner, course corrections are often required to avoid obstacles, even those that are well over the horizon and thus unseen.

If we want our communities to grow in a sustainable way and if we want to maintain the quality of our air, water, and land resources, we must change our land development priorities. We cannot afford to treat land as we treated air and water a hundred years ago, so that we only acknowledge the need to protect our common resources when they became so polluted that they threaten our health and that of our children. We need to begin comprehensive and systematic planning now so that we can protect our open spaces and countryside, and ensure the specialness of where we live. Only then will we have viable towns and efficient, livable cities which enhance the quality of our lives and which restore our sense of community and sense of place.

The most difficult challenge planners and environmentalists face in the future is that of forging a consensus among public officials and citizens that excessive and unplanned growth degrades our quality of life and is not sustainable. Planners and environmentalists will need to take the lead in shaping a new vision for the future which rests on a few simple principles:

1. Comprehensive planning needs to occur in each city and county. Plans should describe each community's vision of its desired future together with implementation strategies for achieving that desired state. Local plans are not enough, however. Regional plans ensure cooperation and coordination across multi-jurisdictional boundaries and ensure conservation and development of regional land, air, and water resources. State planning assures coordination among all state agencies while also addressing elements that cross regional boundaries like transportation and mountain and coastal resources.

2. Assessments of the carrying capacity of the air, water, and land resources must be conducted in each planning area. Plans for land conservation and development should be consistent with protection of public health and the resource base.

3. Rural character needs to be protected by ensuring a significant percentage of land is kept in production or as a working landscape for agriculture, forestry, or sustainable tourism. In order to do this, new development should be concentrated in existing towns. The creation of compact, efficient transit and pedestrian-oriented communities will create truly livable cities surrounded by productive farms, forest lands, and open space. Urban growth boundaries are needed to set limits to the extension of water and sewer services. Development of transit, homes, and business at urban densities should then occur inside the growth boundaries while strong development restrictions would exist on lands outside of the boundaries. Additionally, public assets such as scenic roads, waterways, and viewsheds must be protected through well-conceived land use and design standards.

4. Most of all, there must be a highly involved, reflective citizenry.

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Twenty years from now, will we look back with pride and wonder at how we were able to protect our natural resources while building livable, sustainable communities? Or will we wonder why we never changed course and regret our failure to ensure a high quality of life for ourselves and our children? I hope we will have the wisdom, the courage, and the persistence to build a truly sustainable future. **CP**

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A Formula for Viability in the Face of Demilitarization

John Paul Floom

The South has always been supportive of the military since the founding of our country, and southern cities have benefited economically from this relationship ever since the end of World War II. This relationship has evolved so that many southern cities have become dependent on the military and defense industries for their livelihood. The cities of Jacksonville, NC, Fayetteville, NC, and the Hampton Roads area of southeastern Virginia are three places that are greatly affected by the military and defense industries. These areas have various levels of dependency on military and defense industries, ranging from an almost complete reliance as in Jacksonville, to almost total independence as in the Hampton Roads area. A hypothetical scenario in which the military and defense industries closed bases and defense production facilities, would show the real economic impact. Based on this scenario, one can see that those areas that have maintained a diverse economy (not totally dependent on the military and defense industries), such as Hampton Roads, would not be as heavily affected as those areas that chose to be dependent on the military and defense industries, such as Jacksonville, NC. This scenario will be used to define the expected success of each area in the face of demilitarization that may or may not occur. In determining the outcome of the scenario in each city mentioned, one may discover a successful formula for the continued viability of a southern city during and after demilitarization.

This essay won first place in the third annual Weiss Competition on Urban Livability, which was funded through the Professors Charles and Shirley Weiss Urban Livability Program.

Hampton Roads Area, VA

The Hampton Roads area in southeastern Virginia contains the cities of Portsmouth, Norfolk, Virginia Beach, Hampton, Newport News, and various counties surrounding the James River and the Southern Chesapeake Bay. The bases and defense industry plants in the area include Naval Station Norfolk, Naval Air Station Norfolk, Naval Air Station Oceana, Naval Hospital Portsmouth, Naval Shipyards Portsmouth, Naval Shipyards Newport News, Langley Air Force Base Hampton, Fort Story, Fort Monroe, Fort Eustis, Naval Amphibious Base Little Creek, and Fleet Combat Training Center Dam Neck. The military and defense industries play an important role in the entire area economy, not only because of people living on the bases but also because of people commuting from other areas in Hampton Roads. Due to the great role the military and defense industries play in this area, one would expect that the area might have a high dependency on the military and defense related industries. The opposite continues to be true, however. The Hampton Roads area exemplifies an economy that is necessary for success under the scenario discussed in the introduction, that of the military and defense industries leaving the area.

A recent five-day study in the area newspaper, *The Virginia-Pilot and Ledger-Star* (February 19-23, 1995), documented the expected effects if the BRAC (Base Realignment and Closure) Commission were to close the bases and defense industry plants. The paper found that the area would lose approximately 641 civilian jobs for every 1,000 uniformed military personnel losses. This translates into an estimated loss of \$66 million per year. The same study found that for every 1,000 civilian jobs lost in the shipyards, 991 jobs would be affected in the area. This would

create a loss of \$116 million per year in the local economy. These losses seem staggering and could stifle the local economy, but according to economist Russel Deemer, cited in the report.

These job-loss projections, however, are only isolated effects of a base-closing. They would occur in a vacuum, if all other factors or conditions in the economy or region were not taken into effect. These projections also do not take into consideration the continued growth and development of the local economy. As a base closes, other jobs would be added or other industries would expand. (Mangalindan A10)

Mr. Deemer states that the effects of a base closing, with roughly 100,554 military personnel leaving the area, would not have a tremendous effect on the local economy.

Mr. John Whaley of the Hampton Roads Planning District Commission, also cited in the report by *The Virginia-Pilot*, states that

The reason the multiplier (economic impact) is so low for the military is that many of them are outside the area much of the time or, if they're in the area, they're shopping on the bases. (Mangalindan A10)

Mr. Whaley attributes the success of the economy over the base closings to the semi-independence of the area from the military. He implies that the area has become diverse enough that the economy would survive if the military and defense industries were to leave.

Ms. Anne Baldwin, also of the Hampton Roads Planning District Commission, attributes the predicted success of the area economy in the face of the proposed scenario to the diversity of the economy. She states that the region is strong in industries other than the military and defense, such as agri-business, tourism/conventions, manufacturing, and international trade. The area is known for its ports, some of the deepest natural ports in the world, and is therefore able to attract investors due to this and many other factors, such as: an international airport, an interstate highway running through the area, and railroads. Ms. Baldwin further stated that the area, if subjected to the proposed scenario, would recover slowly and would find it difficult, but would survive due to the diversity of the economy. She continues in stat-

ing that the region, even with downsizing in the defense industries and the military, maintained a 5.1% unemployment rate last year.

The Hampton Roads region has shown a genuine concern for the prospect of the military and defense industries leaving the area. Local business leaders and government officials have formulated a plan for the next 12 years titled *Plan 2007*. This plan demonstrates the area's desire to continue to grow through industries such as tourism/recreation, manufacturing, transportation, agri-business, and health/biomedical. It also incorporates the military and defense industries into this plan. As one can see, the Hampton Roads area has incorporated the military into its economy but has not made the military and defense industries the sole driver of its economy.

Fayetteville, NC

Fayetteville, North Carolina, home to Fort Bragg and Pope Air Force Base, is another example of a region deeply influenced by the military. This area includes manufacturing firms employing over 12,000 people, including Kelly-Springfield Tire Company, Black and Decker, Purolator Products, Inc., DuPont, and Cutler-Hammer. There are also other sources of income for the area, such as tourism/conventions, transportation, finance, and education. Fayetteville and Cumberland County boast a \$257 million per year tourism/conventions industry. The area is also adjacent to Interstate 95, which makes it available to any business engaging in interstate highway commerce. Furthermore the area has railroads that link it to most places on the eastern seaboard and further west. Financial institutions abound in Fayetteville, but they appear to be no more than local banking and savings and loans, not national or international institutions. Universities and colleges, such as Fayetteville State University, Shaw University, and Methodist College, provide a source of revenue for Fayetteville and Cumberland County through the recruitment of new students each year. Finally, due to the rural nature of Cumberland County, agriculture contributes an estimated \$50 million per year to the local economy. These industries provide some support for the estimated 289,000 people living in Cumberland County, but they cannot provide totally for the economy in the face of the proposed scenario.

This dependency was evident during Desert Storm/Shield when the area was deeply affected by the troop deployments that occurred. A *Raleigh News*

and *Observer* article describing the economic impacts of troop deployments during Desert Shield/Storm stated that "In Fayetteville, near Fort Bragg, estimates are that the civilian work force has lost nearly 8,000 people..." (Barron, 1991, B1). This report shows the dependency of the town of Fayetteville on the military due to the many businesses devoted solely to service to the military and military personnel. Its data was inconclusive as to the full economic impact of the troop deployments during Desert Shield/Storm, but it does mention that Fayetteville was being considered by the committee for the aid package.

In a study conducted by the Fayetteville Chamber of Commerce, new car sales in Fayetteville during the peak of Desert Shield/Storm, dropped approximately 30% from sales in previous years and from present sales. In the same study,

single family construction permits dropped approximately 40%. As one can see, the area surrounding Fayetteville is deeply influenced by the military, and when it leaves there is a profound economic impact.

The area economy is also affected by increases in military personnel at Fort Bragg and Pope Air Force Base. There is a direct correlation between the personnel increase on the military bases and economic growth as demonstrated in the increased car sales and housing construction. *The News and Observer* in its January 28, 1991 article entitled "Army general predicts growth at Fort Bragg" stated that "...[Fort Bragg will see] a 10% population growth over this decade, in part because the Army's shrinking size elsewhere. . . ." (Associated Press, 1991, B4). The base continually finds it necessary to inform the city of increases or decreases that might occur, not because they wish to garner support for their bases, but because the town and county are so involved in military affairs that they rely on this news for their futures.

What are the conclusions learned about Fayetteville? It has some diversity, but because the military and defense related industry dominate, a devastating impact on the economy would occur if the hypothetical scenario occurred. Fayetteville's economy would not shut down completely, but it would take an extremely long time to recover.

Jacksonville and Onslow County, NC

Jacksonville and Onslow County, North Carolina are located in the Southeastern part of North Carolina. The ocean borders the eastern half of the county and the New River cuts through the middle. The area boasts a small amount of industry which employs approximately 2,000 civilians. According to Mr. Don Harris, owner of Stanadyne (a diesel fuel pump manufacturing plant), the town lacks infrastructure to recruit companies to build in the area. There are no major highways, no railways, and insufficient air traffic capacity to allow for commerce to come into the

area. Mr. Harris states that although the industries do have a significant impact on the local economy, they would be unable to support the economy in the proposed scenario. During Desert

A city or area wishing to survive
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Shield/Storm, according to *The Raleigh New and Observer* this area was called "one of the nation's most obvious economic casualties of the war in the gulf..." (Barron, 1991, B1). Mr. Harris similarly stated that an estimated 40-50 businesses in Jacksonville went under receivership during this period.

Over 80% of people living in Jacksonville are military personnel and their dependents. With a population consisting of numerous military personnel, the area cannot help but be influenced by the military. The base at Camp Lejeune produces \$1,915,116,373 per year which flows into the local economy, according to a study done by the Management Support Department of Camp Lejeune. The dependency of Jacksonville on the military can be attributed to its rural nature and lack of transportation infrastructure that inhibits most economic growth from outside investors. The area has come to rely on the military for its main source of income because of the difficulty it has in attracting outside investors to the area. Also, with the only Marine Amphibious Base on the East Coast, the area does not perceive a threat of closing by the BRAC Commission, so plans for the future are not the top priority for area leaders.

Jacksonville, unlike Hampton Roads and Fayetteville, would most likely crumble completely in the hypothetical scenario. As Mr. Harris stated, the industries that exist outside the military are not

sufficient enough to provide support for all personnel who would be unemployed by a base closing. Due to Jacksonville's lack of transportation infrastructure, a plan for future development, and diversity in the local economy, the area finds it difficult to attract investors and businesses that are not related to the military. Jacksonville must work towards attracting new investors to the area, as it has in constructing a speculation building of 50,000 sq. ft., so that the city has something to offer potential investors. This building is the beginning of a long journey that Jacksonville must take in order to become a viable town in the hypothetical scenario. Without this journey, the area will surely collapse and revert to its former rural nature with little development.

Conclusion

As this analysis demonstrates, there are three requirements for a successful city in the face of demilitarization. The first of these is a plan for future development. The second, transportation infrastructure, is very important for survival because it aids in attracting investment. The third requirement is a diverse economy and the ability to attract new businesses other than the military and defense related industries. A city or area wishing to survive this era of uncertainty with the BRAC Commission closing many bases and realigning others must strive to set itself apart from the military and defense industries by following these three requirements. The Hampton Roads area has fulfilled all the requirements set above and continues to work toward exceeding them. Due to its perseverance, Hampton Roads remains successful even with the cutbacks that are occurring in the military and defense industries and will continue to grow as the military struggles to find its place in the post-Cold War era. 

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Masters Projects and Doctoral Dissertations

The following is a list of Masters Projects and Doctoral Dissertations prepared by students who graduated from the Department of City and Regional Planning at the University of North Carolina, Chapel Hill, in 1994-1995. Copies of any of these projects can be obtained for \$ 0.10 per page, plus postage and handling. Please contact Patricia Coke at (919) 962-4784 or via email at: coke.dcrp@mhs.unc.edu.

Masters Projects

Timothy S. Aaron

Property Management for Low Income Housing:
Strategies for Sustainability

Nancy Mettauwer Crosby Agnew

Learning From Within a Conceptual Monitoring and
Evaluation Framework for the Microenterprise Peer-
Leading Program of the Self-Help Credit Union

William L. Allen III

Natural Areas Planning Using Geographical Infor-
mation Systems: The Albemarle-Pamlico Bioregional
Greenway Plan

Jeffrey Brian Blackwell

The Housing and Community Development "Home"
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Jeffrey Brian Bowyer

National and North Carolina State Solid Waste Man-
agement Funding: A Survey of States

Sonja Renee Caldwell

Back To The City!

Jennifer Louise Clinger

The Potential for Privately Financed Toll Roads in
the U.S.: A Case Study of the Dulles Greenway
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Eric James Fladager

North Carolina Coastal Nonpoint Pollution Control
Program GIS Feasibility Study and Pilot Project

Heather Winslow Harts'horn

Developing a Sense of Folkland: Building the Case
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Development Management Strategies for Increasing
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Seth Philip Krubiner

Tax Reform and Affordable Housing: Understanding the Low Income Housing Tax Credit

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Daniel Steele McCahan

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Susan M. McConville

An Ecosystem Management Approach to Conservation Planning and Protection: A Case Study of the Black River Floodplain

Julia D. McGovern

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Jean Paula Robbins

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Ron G. Sissem

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David A. Stebbins

Local Economic Development Planning and Practice Case Study: Buffalo, N.Y.

Asadullah Khan Sumbal

A Supplier Strategy for the Automobile Industry in North Carolina

Tracy Diana Swagler

The Integration of Waste Reduction Principles and Land Use Planning

Lauren Allison Tedder

Do Greenways Make Good Neighbors? Evidence From a Survey of Adjacent Residents in Cary, North Carolina

Matthew F. Thayer

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Edward L. Wilson

Application of GIS Techniques to Open Space Suitability Modelling in the Western Cary ETJ

Doctoral Dissertations**Kyeongae Choe**

Assessing the Accuracy of the Contingent Valuation Method for Valuing Improved Urban Infrastructure in the Context of a Developing Country

Thomas Payne Gaunt, S.J.

Social Networks in Citizen Participation: Determinants of Influence in Human Services Planning

Gerard McMahon

The Role of Information in Watershed Planning: Contributions of Critical Theory and Environmental Dispute Resolution **GP**

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Neal Peirce, Urban Affairs Journalist
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Former UNC President William Friday
North Carolina People TV Program
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Garden Party
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Saturday

Scheduled in conjunction with NCAPA Annual Conference
March 28-29, 1996

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