THE MONADNOCK

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GEOGRAPHICAL SOCIETY

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EDITOR'S NOTE

I wish to thank the Alumni, Faculty and Students who have made this issue of The Monadnock possible by answering questionnaires and writing articles. Thanks go also to Dr. Cohen and several Alumni for monetary support, to Ronnie Mason for typing this issue and to Ernie Wight for taking the photos.

In this issue we have kept much of the previous format but have extended photographic coverage which includes a "Do You Remember?" section. Comments on this and all aspects of The Monadnock are always greatly appreciated since our aim is an informative, interesting publication.

CUGS OFFICERS, 1970






Clockwise: John Jacobs, Jr., President; Chris Clayton, Vice-President; James Sanders, Jr., Secretary; Joan Dowd, Treasurer; Marilyn Soergal Hyland, Social Affairs; Sue Simonds, Monadnock Editor.

THE MONADNOCK STAFF

Editor: Sue C. Simonds
Proofreaders: Jim Fonseca, Jeff Herre, Hank Aay, Brad Baltensperger

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DIRECTOR'S MESSAGE

In past years, a director's message to Clark Geography Alumni was expected to focus on such issues as curriculum development, faculty posts, research trends and student support conditions. As the fifth year of my directorship comes to a close and we begin to see the end of the first stage of a major development process, I can say with some confidence to all of you that 1970-71 - the Fiftieth Anniversary of the founding of the School of Geography - will see us well prepared to meet the next quarter of a century as a unique geographical institution. Our new facilities will be completed this summer. Three new faculty will join us: Duane Knos (from Kansas); Leonard Berry (from University College, Dar es Salaam); and Laurence Lewis (from Temple). Professor Knos will take over responsibilities for our TTT program (preparing college teachers of geography), and share some of the urban geography load. Professors Berry and Lewis will organize a new program in geomorphology and hydrology, with the former also contributing to the Environmental Management Concentration and the latter to Statistical Geography. Our curriculum will focus on sub-fields or areas of concentration, with the doctoral degree as the objective of all entering students. Our commitment to geography at Clark will be within a multi- and inter-disciplinary context. And the lines of communication among students and faculty are open.

But many alumni are not thinking of disciplines or programs these days. They're thinking about the viability of the university as an institution. They're asking questions about the basic goals and objectives of Higher Education. They're probing the implications of student and faculty activism and of the role that the university is to play with respect to such issues as environment, prejudice and war.

Some alumni who were at the Ann Arbor A.A.G. Meetings last summer and were witness to the prominent role played by some Clark faculty and students in various sessions saw and heard individuals operating out of individual conscience.

In the School of Geography we encourage a broad spectrum of opinion and strongly support the right of the individual to speak out. That free expression can bring with it extremism that places the university in institutional jeopardy cannot be denied. The alternative, however, that of limiting free debate, would be to deprive the university of its raison d'être - its role as an academy for uninhibited intellectual expression. There is only one legitimate demand that we can make of our faculty and students these days.

This is a commitment to the unique role that the university plays in American society. Those who would turn their backs on the university because they view it as an agent of established society, and would therefore tear the university down together with society, have forfeited their claims upon the university.

What we ask for, above all, from our Geography faculty and students, is a Commitment, not to the School because it is an institution, but to the "Scholarship touched by life" which the School embodies. I believe that we have an overwhelming commitment from the geography community. It would be foolhardy to guarantee that Clark can remain a unique oasis of reason in this university world of 1970, but be assured that the School of Geography will continue to pursue this goal.

ALUMNI NEWS

SHERMAN ABRAHAMSON (M.A. 1947; Ph.D. 1949) is Intelligence Research Specialist in the Supervisory Soviet Transportation Office of the Defense Intelligence Agency.

BURTON W. ADKINSON (Ph.D. 1942) is Head of the Science Information Service of the National Science Foundation in Washington, D.C. He "gave a paper in August to the International Federation of Library Association (IFLA) in Copenhagen, Denmark; it was titled 'New Challenge to University and Research Libraries' and will be published in Libvi in the Spring. I am a member of a UNESCO-ICSU committee on Scientific and Technical Information which is studying the feasibility of a world information system. For a meeting of this committee I traveled to Paris."

LEWIS M. ALEXANDER (M.A. 1948; Ph.D. 1949) is Professor of Geography and Director of the Master of Marine Affairs Program at the University of Rhode Island and is Executive Director of the Law of the Sea Institute. "I have established a new Marine Geography program at the University of Rhode Island, have been working on a revision of my Political Geography text and have been appointed Program Chairman for the 1971 AAG meeting in Boston."

ESTHER S. ANDERSON (Ph.D. 1932) writes: "After serving as National Treasurer of the National League of American Penwomen (NLAPW), am now auditor for the D.C. branch of the NLAPW. Traveled and did research in Florida during the winter and in the Middlewest in the summer of 1969 for materials to be published as articles on urban and economic geography."

WILLIAM R. ANDERSON (M.A. 1963), District Sales Manager of Western Land Roller Company, "recently switched from teaching to business. Involved in the manufacturing and selling of farm machinery and deep-well turbine irrigation pumps."

ROBERT H. ARNOLD (M.A. 1964; Ph.D. pending) is Visiting Professor of Geography at the University of Puerto Rico, San Juan. "After four years of teaching and dissertation field work in Illinois (Illinois State University), I have accepted a one-year appointment at the University of Puerto Rico. I shall return to the New England area next year. I am now working with my fourth first reader but am eternally optimistic about completing the Ph.D. this spring."

JOHN P. AUGELLI (B.A. 1943) reports that "Effective February 1, 1970, I have accepted the position of Professor of Geography and Director, Center for Latin American Studies at the University of Illinois (Urbana). I was President of the Latin American Studies Association for 1969."

SIMON BAKER (Ph.D. 1965) is Associate Professor in the Geography Department of Florida Atlantic University, Boca Raton. He writes: "Arranged and conducted a panel-workshop on 'The Location, Evaluation and Development of Natural Resources' at the American Society of Photogrammetry Meeting in Washington, D.C. in March, 1969. Presented a paper entitled 'The Potential Contribution of Remote Sensing to World Food Production' at the American Astronautical Society Meetings at New Mexico State University in October. In the Spring and Summer of 1969 I prepared a series of T.V. tapes for our beginning geography course. These are shown at Florida Atlantic University on closed circuit and are combined with live discussions."

NICHOLAS BARISS (Ph.D. 1967) is "still working on gully formation in Central Nebraska. In the Summer of 1969 I enjoyed a trip in Europe including six countries." He is Associate Professor at the University of Nebraska, Omaha.

GEORGE BEISHLAG (M.A. 1937), "the first person at Clark to earn a masters in geography exclusively in the summer sessions," is Professor of Geography at Towson State College, Baltimore, Maryland. "Last summer my wife and I traveled the north shore of the St. Lawrence River to Sept Iles and flew from there to Schefferville to see the seven open pit ore mines there. Previously, I had the pleasure of showing 11 grad students from the John F. Kennedy School of North American Studies of the Free University of Berlin around the harbor of Baltimore. They came through in July."

GWEN BELL (Ph.D. 1967) is Assistant Professor, Departments of Geography and Urban Affairs at the University of Pittsburgh and co-editor of EKISTICS which is published by the Athens Center of Ekistics, Athens, Greece.

MILDRED BERMAN (M.A. 1950; Ph.D. 1963), Associate Professor of Geography at Boston University, attended the C.A.G. meetings at St. John's, Newfoundland, August 1969. She is researching the history and development of diamond-cutting.

J. WILLIAM BIRCH (Professor, 1960-63) is now at the University of Leeds, U.K. He wrote a review article for the L.D. Stamp Memorial Volume of the Institute of British Geographers and wrote "Rural Land Use---a Central Theme in Geography" (Geography, 1968).

ROBERT E. BLACK (M.A. 1967; Ph.D. pending) is employed by the Worcester Model Cities program as its Information System Specialist and is researching his dissertation topic. "Spent last summer in Thailand doing economic research for a management consultant firm. Financial support for dissertation in Thailand did not materialize and will redirect the research to an area closer to home. Work is to be done in the field of urban systems and economic development using computer simulation technique. Baby boy, Kevin, born to Barbara and me in February to join Chris and Katy for a 'Full house.'"

CHRISTOPHER BOARD is Professor at LSE in London where "Our Graduate Students and I enjoy reading Monadnock."

HANS BOESCH (1934-5; Dr. Sc.h.c. 1967) is ordinary Professor of Geography and Director of the Institute of Geography at the University of Zurich. In 1968 he had published an atlas on global economic geography; and, in 1969, he published on the geomorphology of the Swiss Alps. Lately, he has travelled in Japan to study trends in industrialization.

CLYDE J. BOLLINGER (1929-30) is Associate Professor of Geography, Emeritus, University of Oklahoma at Norman. He published an article entitled "Sun Tides: An Unexplored Astronomical Approach to Climate Cycles and Trends" in Tellus, 1968, pages 412-416. This gives basic astronomic data for the computation of sun tides now available to researchers on magnetic tape reel. It also gives heliocentric positions and radius vectors of the 7 inner planets from 1900 to 1980 at eight-day intervals.

ADELBERT K. BOTTS (M.A. 1931; Ph.D. 1934) is Professor of Geography at Bowling Green State University, Bowling Green, Ohio.

BERTRAND P. BOUCHER (1951-2) is Chairman, Department of Geography, Montclair State College, Upper Montclair, New Jersey. During the past year he inaugurated a computer mapping course (SYMAP) for undergraduates, authored 54 Teachers' Guides for World Regional Transparencies published by McGraw-Hill and an article on road maps in the Fall, 1968 issue of Vista USA. He was engaged as a consultant on industrial development by several New Jersey communities and also found time to travel to Spain and Portugal in the summer.

PHYLLIS R. BOUCHER (M.A. 1955) is the Social Studies Department Chairman at the Plymouth-Carver High School in Plymouth, Massachusetts. She is working with Bridgewater State College in an institute on the High School Geography Project.

LEONARD W. BOWDEN (Ph.D. 1965), Associate Professor of Geography at the University of California, Riverside, is the Principal Investigator of the NASA/USGS supported Southern California Test Site of the Earth Resources Program. His most recent publications are "Remote Sensing of the World's Arid Lands," University of Arizona Press, and co-author of "Making Color Infrared a More Effective High Altitude Sensor" in Journal of Remote Sensing.

FRED K. BRANOM (Ph.D. 1923) is Professor Emeritus of Chicago State College, Editor of the Bethany Unifier and writing a book on the history of the Bethany Union Church.

DIETER BRUNNSCHWEILER (Visiting Assistant Professor 1953-5) is Professor of Geography at Michigan State University. "Although stationed at East Lansing (where I am busy as usual with problems and students in physical geography) a newly found interest in the Andean Mountains has led me to that part of the world several times over the last few years, most recently as Fulbright Consultant in Geography to Colombia. Have been or am still writing on the trans-Andean colonization frontier and on the Pleistocene of the tropical Andes."

TERENCE BURKE (1954-5) is Associate Professor at the University of Massachusetts, Amherst.

GUY H. BURNHAM (A.B. 1916; A.M. 1922) retired from professorship at Clark in June of 1966 to "my gardening in Tatnuck (Massachusetts). I served 44 years as Cartographer and Instructor in Geography. One of my duties, along with other workroom incidentals, was to serve for many years as financial advisor to the Monadnock."

HARRY H. CALDWELL (A.B. 1941; Ph.D. 1951) Professor and Chairman of Geography at the University of Idaho in Moscow, has been appointed coordinator of the Urban Studies Program, and interdisciplinary effort. He is also involved in interdisciplinary programs in Black Studies and Man in the Nuclear Age.

ROBERT DALE CAMPBELL (Ph.D. 1949) is Vice President and Chief Scientist of the Matrix Research Company, an affiliate of URS Systems in Alexandria, Virginia. He read a paper entitled "United States

Military Training For Cross-Cultural Interaction" at the NATO Conference on Special Training for Multilateral Forces in Brussels last July. Recent publications include the following: "Personality as an Element of Regional Geography," Annals of the AAG, December, 1968; A Marine Counterinsurgency Support System, Phase I, Output Structure, with H.F. Sykes, October, 1968 and Phase II, Preliminary Design, September, 1969, Matrix; "What's to become of the poor old city?", The Elementary School Principal's Journal, NEA, May, 1969.

RUSSELL B. CAPELLE, JR. (1967-9) is a Ph.D. candidate in Geography at the University of Pittsburgh. Russ writes: "Taught introductory physical and economic geography courses during the summer sessions (1969) at Norwich University, Northfield, Vermont; Pam is expecting our first addition to the family in April; Working feverishly on my Clark M.A. thesis: 'The Impact of Snow-Making on New England Ski Areas.'"

NORMAN CARLS (A.M. 1934; Ph.D. 1935) is Professor and Chairman of the Geography Department at Shippensburg State College, Shippensburg, Pennsylvania.

HANS CAROL (Visiting Professor, 1958-60) is Professor and Director of the Graduate Program in Geography at York University, Toronto, Ontario, Canada.

MARY L. CARUSO (M.A. 1951) is Intermediate School Principal for the Roslyn Public Schools in Roslyn, Long Island, New York. This past year she traveled to the Caribbean Islands and the Bahamas and is Past President of the Long Island Association for Supervision and Curriculum Development. She was Workshop and Conference Chairman for the N.Y. Association of Elementary School Principals and has been experimenting with several new approaches to Intermediate School Level Education.

PHILIP M. CAUGHEY (1945-6) is a retired junior high school geography teacher and lives in Northeast Harbor, Maine.

MARGARET S. CHEW (Ph.D. 1960) has been well-traveled this past year. In December, 1968 and January, 1969 she went on a study tour to the Ahaggar Mountains, Tamanrasset and Ghardaia in the Sahara Desert, and in the Summer of 1969 she studied in central and eastern Australia, northern and southern New Zealand and the Fijis. She is Professor of Geography at Wisconsin State University--LaCrosse.

PHIL E. CHURCH (M.A. 1932; Ph.D. 1937) is Professor of Atmospheric Sciences at the University of Washington, Seattle. He writes: "Was retired from Chairman, Department of Atmospheric Sciences two years ago after serving in that capacity for 20 years. Now just teaching and doing research especially on Climate and Wine quality."

CATHERINE E. COX (A.M. 1942) is Assistant Professor of Geography at the Massachusetts State College in Fitchburg. She "attended the National AAG meetings at Ann Arbor, Michigan last August and participated in the Urban Field Trip to Detroit-Winsor. Plan another 'Around the World' summer in 1970 spending considerable time in Yugoslavia and Hokkaido."

CLARK N. CRAIN (Ph.D. 1951), Professor of Geography and Regional Development at the University of Denver, reports that he recently traveled to West Pakistan and Turkey as a consultant for Larke Regional Development Projects: Upper India Basin Project and Lower Firat Project.

HAROLD F. CREVELING (Ph.D. 1951) is Professor of Geography at East Central State College, Ada, Oklahoma. "I am teaching courses in Human and Political Geography and a year-long course on the Geography of Europe.

Last June my wife and I traveled throughout the Southwest including New Mexico, Arizona, Nevada, California and Texas."

JAMES I. CULBERT (A.M. 1938; Ph.D. 1939) lives in Las Cruces, New Mexico.

FLOYD F. CUNNINGHAM (A.M. 1928; Ph.D. 1930) is Distinguished Visiting Professor at Western Kentucky University. He writes: "I am terminating my teaching here at the end of this semester and will return to my home in Carbondale, Illinois, to write and manage my farm of over 300 acres. I am Professor Emeritus, Southern Illinois University (since 1966). Before I leave here I will complete my manuscript on Water Management Problems in the Karst Regions of Kentucky."

NADINE A. H. DEACON (1944-5, 1962) is Chairman of the Department of Geography, Bishop Strachan School, Toronto. She is "using seminar and individual programmed research techniques in the last two years of high school geography. Problems in the Proper Use of Air and Water and Urban Geography are the most popular subjects."

VEVA K. DEAN (M.A. 1940; Ph.D. 1949) retired from teaching in June of 1968 and is now "living at 'Beetlecroft' the old Captain Beetle Homestead in Edgartown, Island of Martha's Vineyard."

AUBREY DIEM (M.A. 1956), Professor at the University of Waterloo, Ontario, Canada, was on sabbatical leave in Zinal, Switzerland, during the 1968-69 academic year. He traveled in Scandinavia, Iberia and Greece and published three articles: "Planning in the Zurich Region," Canadian Geographer, 2, 1969; "The East Europeans," The Globe Magazine, July 27, 1968; "Italy's Road to Chaos," The Globe Magazine, November 22, 1969.

SIGISMOND DE R. DIETTRICH (Ph.D. 1931) is Associate Dean of Faculty in charge of special programs, federal grants and research at the Inter-American University, San Juan, Puerto Rico.

ROBERT P. DONNELL (M.A. Candidate) is Research Co-ordinator in the urban planning division of Universal Engineering Corporation and Thomas Associates, Boston. "I'm still working on Clark's notorious three year M.A. program, but the thesis is nearing completion. Forget the Alamo and Remember the Salem FIRE! I'm now living in Boston again and started being 'gainfully employed' in August. The job has been very interesting so far. Applied geography in planning a CRP (Community Renewal Program) for Fall River, etc. I hope to publish an abridged version of my thesis 'The Great Fire of Salem, Massachusetts,' in the Essex Institute Historical Collections sometime next year. In June, 1970, I will be married to Suzanne Griffith of Bedford, New York. We will live in Boston."

BART J. EPSTEIN (Ph.D. 1956) has become disassociated with B. F. Goodrich Company and is now Professor of Geography and Research Associate at the Center for Urban Regionalism at Kent State University, Kent, Ohio.

WILMA BELDEN FAIRCHILD (M.A. 1937), Editor of American Geographical Society's Geographical Review, writes: "Wearing two hats---as Acting Director of AGS for the past year and Editor of GR---leaves me no time to make news!"

BRAD FISK (M.A. 1950; 1953) is Professor of Geography at Cape Cod Community College in Hyannis, Massachusetts. He and his wife have a 13 month old boy, Ian, and are expecting a child in February, 1970. "Still teaching a geography/history/economics mix and helping operate Arey's Pond Boat Yard. Little time else for research."

ROY J. FLETCHER (Ph.D. 1968) is Associate Professor at the University of Lethbridge in Alberta, Canada. He had a short article on climatology in the September issue of The Journal of Geography, traveled to Europe, especially Yugoslavia and Turkey during May, 1969 and joined the field trip to Labrador following the St. John's meeting of the C.A.G. His second son was born in February, 1969.

EDWIN J. FOSCUE (Ph.D. 1931) is Professor Emeritus of Geography at Southern Methodist University, Dallas, Texas. "Mrs. Foscue and I have just returned from a two-months' trip around South America, which included the Galapagos Islands and the Strait of Magellan."

J. KEITH FRASER (Ph.D. 1964) is Executive Secretary, National Advisory Committee on Geographical Research, Policy and Planning Branch, Canada Department of Energy, Mines and Resources; Secretary, Canadian National Committee, International Geographical Union; and Executive Secretary, 22nd International Congress, 1972. "I attended AAG at Ann Arbor, CAG at St. John's, Newfoundland in August, 1969 and the IGU Executive meeting in London, England in November to report on organization of the Congress to be held in Canada in 1972. Chapter on Place Names of the Hudson Bay region published in Science, History and Hudson Bay, Ottawa, 1968."

ROBERT FRENCH (1966-8) reports "No outstanding achievements---too busy working for that stuff---but generally enjoying the atmosphere (both physical and cultural)." He is Assistant Professor of Geography at Gorham State College, Gorham, Maine.

ROLAND FUCHS (M.A. 1957; Ph.D. 1959), Professor and Chairman of the Department of Geography at the University of Hawaii, "attended Delhi IGU meetings and traveled in East, Southeast and South Asia in November and December of 1968. My third son, Andrew, was born in March, 1969 and in August George Demko of Ohio State University and I completed the manuscript of Readings in Soviet Economic Geography. I am presently Chairman of the Faculty Senate at the University of Hawaii."

LYNN HAYDEN FURLONG (M.A. 1960) spent two months on the West Coast last summer and had her first child last January. She is Assistant Professor of Geography at Massachusetts State College, Bridgewater.

M. H. GANJI (Ph.D. 1954) is Professor and Chairman of the Department of Geography, Tehran University and writes: "My most recent publication is Climatic Atlas of Iran, 1967."

WOODFORD M. GARRIGUS (M.A. 1955; Ph.D. 1958) is Professor of Geography at Ashland College, Ashland, Ohio. He writes: "I traveled last summer and fall (2 trips) to get photos to illustrate a paper based on my M.A. thesis on agricultural productivity and roughness of terrain from coastal plain to central lowland. I am moving to establish a major in geography at Ashland College and, eventually, a separate department."

JOHN L. GEORGE (M.A. 1956) was promoted to Professor at Salem State College in Massachusetts. He presented a paper at the AAG section of the AAAS Annual Meeting held in Boston last December and also was Program Organizer for the section. He and his wife have 3 children, two girls, 10 and 9, and one boy, 2½.

KENNETH GILLMAN (Ph.D. candidate) is Instructor in the Department of Geology and Geography at Hunter College, New York City. "I am working on my dissertation on the location of suburban offices in the New York Metropolitan Region."

MONIR SA'AD GIRGIS (Ph.D. 1957), Professor of Geography at Edinboro State College, Edinboro, Pennsylvania, returned to the United States in

July, 1968 after touring Italy, France and England during May and June. He is starting to work on a geography book about Mediterranean Africa.

JON GLASGOW (M.A. 1959) is teaching at the State University College in New Paltz, New York.

LOREN GOULD (A.B. 1953; M.A. 1959) is Assistant Dean of Students at the Massachusetts State College in Worcester. "As of January 1, 1969 I relinquished my faculty status as Assistant Professor of Geography and became purely administrative. As a result I had only two weeks that I was able to get away from the college. One week was spent enjoying Cape Cod in early June before the summer invasion and the other week in late August was spent pouring a new cement front walk and other necessary repairs at home. I still maintain my interest in geomorphology and constantly add to my library in that particular area of geography. I sometimes wonder why I left teaching for administration but then I think of those classes of 130 students and years when I taught four sections of the same course and I know why."

DONALD W. GRIFFIN (Ph.D. 1963) is Associate Professor of Geography at Western Illinois University in Macomb. He writes: "Moved to Western Illinois University from UCLA in 1968. Family stabilized at three offspring: Mitchell--12, Vanessa--10 and Yale--5. Publications (co-authored with Richard E Preston) are as follows: 'Land Use in the Central Commercial Area,' Journal of Geography (September, 1968); 'The Pattern of Major Retail Centers in the Los Angeles Area,' The California Geographer (1968); 'A Reply to "Comments on the Transition Zone Concept",' The Professional Geographer (July, 1969). Current research involves a three-year program investigating land use change in the central area of American cities."

ANDREAS GROTEWOLD (M.A. 1951), Professor of Geography at the University of Missouri, "attended 21st International Geographical Congress in New Delhi and read a paper on 'Geographical Shifts of India's Foreign Trade from 1952 to 1965.' I spent the spring semester this year (1969) as guest professor at the John F. Kennedy Institute for American Studies, Free University of Berlin."

EDNA M. GUEFFROY (M.A. 1926) is a retired Professor of Geography from Illinois State University. She is "taking care of my 90-year old parents and working in my one-acre garden---mostly flowers."

NEIL W. HALKYARD (M.A. 1951) is Chairman of the Science Department at Spartanburg Day School in Spartanburg, South Carolina. He retired as Headmaster of the Shepherd Knapp School in Boylston, Massachusetts in June of 1968 and spent ten weeks in Sicily and Italy last summer. Mary studied the Graeco-Roman areas and Neil the land use. They took 700 slides to be used in lectures.

CHARLES HARDY (1963-4) is a Geography teacher at the Millis Junior-Senior High School, Millis, Massachusetts.

ALAN HARRIS (1951-2), Reader in Geography at The University, Hull, Yorkshire, England, is continuing research on the historical geography of northern England.

ANDREW D. HASTINGS, JR. (Ph.D. Fellow 1952-4 and 1966-8) is Physical Geographer with the Earth Sciences Laboratory, U.S. Army Natick Laboratories, Natick, Massachusetts. "Last year I went West with the intention of conducting a field study on the micro-nature of canyon winds for the Desert Research Institute at the University of Nevada. Financial support for the project was withdrawn before it got under way; I remained there through last January and together with my wife, Nancy,

managed to visit most of the high Sierra from Sequoia to Crater Lake. During this period my biography appeared for the first time in American Men of Science. There have been no bona fide publications since 1966, but my book review of Professor J.B. Bird's "Physiography of Arctic Canada" appeared in the Professional Geographer in September of 1968 and my 1960 study, "Environment of Southeast Greenland," was cited by J.G. de Molenaar in Acta Botanica (Utrecht) in October. I am to be contributing author of two Army studies now in editorial stage, one on Southeast Asian Thematic Mapping and the other on the Environment of the Central Asial Highlands. My slowly-emerging dissertation topic points more and more persistently toward one or more problems in subarctic North America."

SISTER MARY URSULA HAUK, R.S.M. (Ph.D. 1958) is President of Mount Aloysius Junior College, Cresson, Pennsylvania. This past year she has attended professional meetings in Denver, Atlanta, Portland (Maine), York and Harrisburg, Pennsylvania (Educational Meetings) and Irwin, Pennsylvania (State Geographical Association).

RICHARD D. HECOCK (Ph.D. 1966) "Recently accepted a position at Oklahoma State University at Stillwater after four profitable years at Eastern Michigan University. I am currently involved in department curriculum work and interdisciplinary curriculum work. I have been exploring the West South Central Census District this fall after spending three weeks in England and Wales last spring."

CLARKE F. HESS (M.A. 1948) is Chairman of the Department of Counseling and Rehabilitation at Marshall University, Huntington, West Virginia.

WILLARD C. HESSEN (M.A. 1950) is Social Studies Instructor of seniors at Satellite High School, Satellite Beach, Florida. "Job Corps Center closed so I lost my job as Director of Education in Minnesota. Mrs. Hessen (Pat) wanted to try a warmer environment for a while so here we are in the 'Sunshine State'---and it has been raining for two months. Our daughter, Mary Lynn, is enrolled as a Freshman in Brevard Junior College and our son, Gary Mitchell, is in the third grade."

JOSEPH E. HICKEY, JR. (B.A. 1954; M.A. 1958; Ph.D. in progress) works for the State of Connecticut as a State Open Space and Recreation Planner. He is a Conservation Commissioner for Wethersfield, Director of the North Wethersfield Civic Association and with the Great Meadows Conservation Trust. Professionally, he is State Editor of the Connecticut River Watershed Newsletter and is continuing work on the State Outdoor Recreation Plan, State Water Resources Study, an Appalachian National Scenic Trail Study and the Connecticut River Watershed Recreation Area Study.

FRANKLIN D. HODGES (M.A. 1966), Assistant Professor of Geography at Gorham State College, Maine, is "happy to report that I now have a son--14 months old. We are living on a 14-acre hillside farm, raising vegetables and beef for fun and the deep freeze---and enjoying life."

GERRY H. HONES (M.A. 1953), Lecturer in Education at Bath University of Technology, writes: "Summer visit from Joe Hoyt and Mrs. Hoyt a great friend since '48, with whom we had a grand year (1964-5) in New Haven, Connecticut."

JOSEPH B. HOYT (Ph.D. 1954) has been on sabbatical leave this spring (for writing) from his position as Professor of Geography and Chairman of the Social Science Division of Southern Connecticut State College, New Haven. During June and July of 1969 he traveled to England, Italy and the Mediterranean including Greece, Yugoslavia and Turkey. A grandchild, Dylan Kinsella, was born in Feb. of '69.

BERT HUDGINS (Ph.D. 1930) is Professor Emeritus, Wayne State University, Detroit, Michigan. "Both my son, D. Harland Hudgins, and his son, David H., are attending the University of Michigan this year. My son is working toward a Ph.D. in Administration."

ESTHER KINCH HUNTER (M.A. 1940) writes: "After a sabbatical year in California, we have returned to our home in New York where my husband, Lloyd, is Professor of Electrical Engineering at the University of Rochester. I am doing literacy training at an Inner-City High School."

GILBERT J. HUNTER (M.A. 1959; A.B.D. 1964) is deliveryman for Sanatoga Corporation near Pottstown, Penn. He writes: "In August 1969 my wife and I camped three nights at Seawall Campground on Mt. Desert Island visiting Tom Madigan enroute to Maine. I read a paper to the Pennsylvania Academy of Science in April entitled 'Syllabi, Significance and Theory in Geography.' By the time this news is published a book review of Environment and Land Use in Africa may have appeared in P.G. As Chairman of the Rural-Urban Relations Committee of Kutztown Rotary Club I have been recently organizing a colloquium on the urban ecosystem. Two of the participants, Paul Kendall and Allen Schutt, are geographers from Kutztown State College. Allen is also an alumnus of the year-long N.D.E.A. Institute at Clark which he recalls with mixed memories."

ALBERT H. JACKMAN (Ph.D. 1953), Head of the Department of Geography at Western Michigan University, Kalamazoo, has "traveled to Alaska Methodist U., University of Alaska, Cold Bay, Aleutians, Dutch Harbor and Pribilof Islands; given paper on Military Geography to the Equipment Research and Development Center at Fort Belvoir, Va.; and served on NAS-NRC Committee on Military Geography."

PRESTON E. JAMES (Ph.D. 1923; LLD 1968) is Maxwell Professor of Geography at Syracuse University, New York. "I retired as Chairman of the department in 1968. I was on leave for the year 1968-9, was a delegate of the 21st I.G.C. at New Delhi, then visited nine countries on a trip around the world. Later I visited 12 Latin American countries including a voyage through the Strait of Magellan. The 4th edition of my Latin America was published, and I am now working on a history of geographic ideas."

LANE J. JOHNSON (M.A. 1954; Ph.D. 1960) moved from Wayne State University to Temple University, Philadelphia, where he is Associate Professor of Geography. He is continuing his research on research techniques and on central places.

ELLA O. KEENE (B.Ed. 1937) is Professor Emeritus of Geography and lives in Keene, New Hampshire.

DONALD KELLER (M.A. 1926) has retired and moved from Elmhurst, Illinois to Terre Haute, Indiana. His daughter, Barbara, is on the Library Staff at Indiana State University in Terre Haute.

LOIS R. KELLER (A.M. 1929), a retired geography teacher, has done "nothing of interest this year."

LILLIAN W. KENT (M.A. 1964) is Assistant Professor with the Division of Continuing Studies at the Massachusetts State College at Fitchburg. She writes: "I have several specializations in the Social Sciences and, in addition to Geography, I teach a survey course in Sociology, one in General Psychology and one in Growth and Development. Have been so busy teaching that there has been little time for research. However, I am helping on the geographical aspects of a comprehensive history of Fitchburg now in preparation. I spent part of the summer in Europe traveling under a cultural program sponsored by the Institute of European Studies in Vienna."

EDWARD KERSCH (M.A. 1958) lives in Detroit, Michigan, and is their Principal City Planner.

HARRY B. KIRCHER (Ph.D. 1961) is Associate Professor at Southern Illinois University in Edwardsville. He is "now doing research on the central Mississippi Valley while on 6-months' Sabbatical leave."

ESTHER L. KISTLER (M.A. 1938) is a retired teacher who spends February and March in a trailer in Aloha Trailer City, Sarasota, Florida.

RICHARD J. KOPEC (Ph.D. 1965) is Associate Professor in the Geography Department at the University of North Carolina, Chapel Hill. He has received two Faculty Research Grants for studying temperature and humidity patterns in a small urban center and is engaged in expanding the departmental climatology offerings.

KLAUS E. KRONER (1963-4), Associate Professor of Industrial Engineering at the University of Massachusetts in Amherst, "spent last summer traveling through much of Europe for the first time in 31 years."

PIERCE C. LALOR (M.A.) teaches Earth Science at Wahconah Regional High School in Dalton, Massachusetts.

J. ALAN LEACH (M.A. 1969) is a Second Lieutenant in the U.S. Air Force. He is "Training to be an Aircraft Maintenance Officer at Chanute AFB; next assignment (in March) not known yet."

MINNIE E. LEMAIRE (M.A. 1932; Ph.D. 1935) is Chairman of the Department of Geology and Geography and Professor of Geography at Mount Holyoke College, South Hadley, Massachusetts. "Last year while on sabbatical leave I spent the first semester at Clark University as a visiting faculty member. The second semester was spent as follows: three weeks at Barranquitas, Puerto Rico with the Clark geographers in field camp, one week in Jamaica, one month in Venezuela, two weeks in Colombia."

LAWRENCE T. LEWIS (M.A. 1962; 1965-6) is Assistant Professor at Western Illinois University, Macomb. He spent last summer at the NSF Institute for Quantitative Methods in Geography at Ohio State University and is presently in the latter stages of his dessertation which deals with Negro migration models.

THEODORE J. LAIRD (M.A. 1948) is Chief of the Geographic and Toponymic Branch of the Geographic Names Division, U.S. Army Engineering Topographic Command, Washington, D.C.

ROBERT E. LINGNER (A.B. 1954; 1956-61), Assistant Professor of Geography at Worcester State College and Assistant Professor of Geology (Affiliate) here at Clark. The Lingners moved here from Pennsylvania in the summer of 1968. Their fifth child, first girl, was born in October of 1968 and named Susan Joy.

TREVOR LLOYD (Ph.D., 1940) is Professor of Human Geography at McGill University. He is in his third year as Chairman of the Board of Governors, Arctic Institute of North America and was Director of the Arctic Programme of the McGill Geography Summer School held in Stanstead, Quebec. Last August and September was spent in Togo, West Africa doing field work on economic development for the World Bank Project.

HARRIET RUTH LONG (M.A. 1941; Ph.D. 1955) spent the second semester of the 1968-9 academic year traveling in the Mediterranean countries and the South and Southwest of the United States. She is Professor of Geography at Edinboro State College, Edinboro, Pennsylvania.

ROBERT and ALETA LOOKER (M.A. 1960; M.A. 1960). Robert is still Deputy Director of Planning for the city of Hartford.

ARTHUR C. LORD, JR. (M.A. 1959) is Associate Professor of Geography at Millersville State College, Millersville, Pennsylvania.

JOHN C. LOWE (Ph.D. 1969) is Assistant Professor of Geography and Regional Science at George Washington University, Washington, D.C. "With the dissertation barely out of the way, who's had time to do anything else. Found time, however, to do some consulting on the St. Louis and Rochester housing market analyses and Study Designs for Metropolitan Miami Area. Camped through New England during all of August and had our second daughter, Denise Karin, born November 3rd."

GEORGE and GLORIA MACGILLIVRAY (M.A. 1951; M.A. 1951). George works for the U.S. Government in Washington, D.C. They write: "Nothing new except the kids are growing up and we are getting older."

WILHELM MATZAT (1951-2) has left the University of Frankfurt/Main and is now Professor at the Institute of Geography, University of Bonn.

BERNARD J. MAY, JR. (1967-69) is Control Research Analyst with the American Mutual Liability Insurance Company in Boston. He writes: "I've left research, publications and travel temporarily behind; apparently economic necessity is the mother of gainful employment. I'd also like to report that at least a small part of the Establishment isn't as bad as some would have us believe."

RONALD M. McCALL (M.A. 1963) is Assistant Professor of Geography and Earth Science at Shippensburg State College, Shippensburg, Pennsylvania. He traveled the Atlantic Provinces of Canada during the Summer of 1968, southern Florida in December, 1968 and worked for the National Park Service as a seasonal park naturalist at Greenholt Park, Maryland during the summer of 1969. His "Ecuador: A Demographic Analysis," written with John E. Benhart, was published in the Shippensburg State College Review and he has been researching the climatology of Shippensburg (1932-69) and the rainfall in the Shippensburg vacinity from April 1 through September 30, 1968.

SHANNON McCUNE (Ph.D. 1939) is Chairman and Professor, Department of Geography, University of Florida, Gainesville. "After 15 years in an administrative position it is a joy being back on a campus teaching geography and working on some interesting research projects in the geography of the Far East."

SUSAN SPRAGUE McCUTCHEON (1964-5) whose husband, Henry, is at Clark this year, reports the birth of their first child, Rebecca Jean, on September 29, 1969.

WALLACE E. McINTYRE (M.A. 1947; Ph.D. 1951) works for the U.S. Government in McLean, Virginia.

MICHAEL G. MENSOIAN (A.B. 1949) has spent this Spring Term at the University of Pittsburgh while on sabbatical from Boston State College where he is Professor of Geography. During the Summer and Fall of last year he conducted a demographic survey of Lynn, Massachusetts with the Massachusetts State Department of Public Health. November was spent in Guadalajara, Mexico conducting field work.

FREDERICK S. MERRIAM (A.B. 1939; M.A. 1946) is Registered Representative of Waddell and Reed, Inc., New York City.

ANDREW S. MORELAND (M.A. 1951) is President of Ocean County College, a two-year community college located in Toms River, New Jersey.

BENJAMIN MOULTON (A.B. 1939) is Chairman and Professor of Geography

at Indiana State University in Terre Haute. "Serving as Chairman of a rapidly growing department keeps me busy. Fortunately, I have been able to spend the last two summers in Alaska and hope to spend next summer there, also."

JOHN M. MOULTON (1958-9) is Professor of Geography and Geology at Hastings College, Hastings, Nebraska. He traveled in the eastern and southern U.S. during the summer of 1968 and in the eastern U.S. last summer. The Spring semester of 1970 was spent on sabbatical traveling in the western U.S. and Western Europe.

RUSSELL W. MUNCASTER (M.A. 1968) is Assistant Professor at Waterloo Lutheran University, Waterloo, Ontario, Canada.

RICHARD E. MURPHY (Ph.D. 1957) is Professor and Chairman of the Geography Department of the University of New Mexico. "In August I returned to Alburquerque after spending the 1968-69 academic year as a Fulbright lecturer at the Institute of Geography of Tohoku University in Sendai, Japan. My family and I returned the long way via Siberia, European Russia and western Europe."

W. G. MYATT (Ph.D. 1958) is Professor Emeritus at Oregon State University. He writes: "Retired from Oregon State University August 15, 1969 after 22 years of teaching in the Geography Department there. Professor and Mrs. Myatt have a travel trailer and have started on a 'See America' tour--which will include Canada, a teaching interest."

SALVATORE J. NATOLI (M.A. 1957; Ph.D. 1967) is Educational Affairs Director of the AAG in Washington. He writes: "Joined the National Office Staff of AAG on August 1, 1969. Spent three weeks traveling and vacationing in Chile. Dictionary of Basic College Geography written with R.' Chatham, P. Griffin and A. Schmieder will be published this year."

HERMAN L. NELSON (Ph.D. 1954) is Professor of Geography at Wisconsin State University, La Crosse.

NORTON NICHOLS, JR. (M.A. 1950) is Assistant Superintendent of Educational Services for the Antelope Velley Union High School District, Lancaster (Los Angeles County), California.

J. WARREN NYSTROM (A.B. 1936; M.A. 1937; Ph.D. 1942) is Executive Secretary of the Association of American Geographers. He has been "meeting geographers from all parts of the country at AAG regional and committee sessions and am active in the work of the American Geographical Society, National Research Council, etc."

HOWARD L. OHMAN (A.B. 1947; M.A. 1949) works as a Physical Geographer for the U.S. Army Natick Laboratories in Natick, Massachusetts.

RALPH E. OLSON (Ph.D. 1946) is Professor of Geography at the University of Oklahoma. He "completed the manuscript for A Geography of Water to be published in the W.C. Brown Co. Geography Series in 1970. The first two Ph.D.'s in Geography at the University of Oklahoma were granted at the 1969 summer commencement. Department offices were moved to spacious quarters in the new Dale Hall Tower in January 1969."

FRED OXTOBY (M.A. 1968) is Research Student, Department of Geography, Monash University, Australia. He returned last December from Indonesia where he has been doing field work for his dissertation.

ROBERT A. PAUL (M.A. 1966) is "busy establishing laboratories for earth science students. Had third child (Richard) on November 3rd. (Now have 2 boys and 1 girl plus one wife!)" He is Associate Professor of Earth Science at Northern Essex Community College in Haverhill, Massachusetts.

G. ETZEL PEARCY (M.A. 1932; Ph.D. 1940) has two books forthcoming: a revision of Handbook of New Nations with E.A. Stoneman and World Regions, a textbook, written with G.P. Stevens. In 1968 he traveled to the Canary Islands and Madeira; in 1969 to the East Coast of South America and to France. Dr. Pearcy is Chairman of the Department of Geography at California State College in Los Angeles.

ROBERT F. PERRY, JR. (Ph.D. 1957) is Professor and Chairman of the Geography Department at the Massachusetts State College, Worcester. During the Summer of 1969 he studied land use changes along the Florida coasts---East, West and Keys.

RAFAEL PICÓ (M.A. 1934; Ph.D. 1938; LLD (Hon.) 1962) is Vice Chairman of the Board, Banco Popular de Puerto Rico. As of January, 1969 he completed a term as Senator-at-Large, declining renomination. His latest publication is Neuva Geografia de Puerto Rico, a reference work on the physical, economic, social and regional geography of Puerto Rico. It was published last fall by the University of Puerto Rico.

RICHARD J. PIKE (M.A. 1963) is Geologist with the Branch of Astrogeologic Studies, U.S. Geological Survey, Flagstaff, Arizona. "A son, Benjamin, was born in August to my wife, the former Jane Nielson, and I. Current research is in micro- and macro-terrain analysis of lunar surfaces for topographic classification and mission planning; surface geometry of large lunar craters; geometry of terrestrial surfaces. I received my Ph.D. in 1968 from the University of Michigan; dissertation, "Origin and Modification of Large Lunar Craters," was published as an open-file USGS report. A paper arising from the dissertation research, "Schroeter's Rule and the Modification of Lunar Crater Impact Morphology," appeared in the Journal of Geophysical Research in April, 1967."

RICHARD E. PRESTON (Ph.D. 1964) has spent this past year as Visiting Research Professor in the Department of Geography at the University of Alberta, Edmonton, Alberta, Canada. His permanent position is Professor of Geography at San Fernando Valley State College, Northridge, California. He writes, "A daughter, Joanna Maile, born April 28th, 1969 in Hawaii, increased our number of children to three. An article with D. W. Griffin, "A Reply to Comments on the Transition Zone Concept" was published in the July, 1969 issue of the Professional Geographer. My article "Two Centrality Models" is scheduled for publication in the 1970 issue of the Yearbook of the Association of Pacific Coast Geographers."

GEORGE PRIDDLE (M.A. 1964; Ph.D. pending) is Assistant Professor of Geography in the Division of Environmental Studies, University of Waterloo. "I am chairing a committee on Water Policy for the Grand River and still active in the Geographical Interuniversity Resources Management Seminar. Look for future publication of proceedings. Am enjoying my new position in what is a very interdisciplinary and, hopefully rigorous, applied school."

ETHA M. PRUSER (M.A. 1954) "Spent a few weeks in the Central Sahara in December and January 1968-9." She is Professor and Head of the Geography Department at East Stroudsburg State College, Pennsylvania.

AZRA HUSAIN RAHMAN-KHAN (Ph.D. 1953) is "resting and looking after a family containing two sons and two daughters aged 13 years--four years after having worked for ten years." She lives in Pakistan.

RICHARD R. RANDALL (Ph.D. 1955) is Manager of the Washington Office of Rand McNally & Company. "As Washington Representative, I effect liaison with federal agencies, foreign embassies and other organizations to procure data, material and information of interest to various components of Rand McNally. In September my family was expanded with the arrival of a son, Richard, Jr., making a total of two girls and a boy."

GERTRUDE M. REITH (Ph.D. 1963) is Chairman of the Geography Department of the California State College at Fullerton.

AGNES RENNER (M.A. 1940), Associate Professor of History and Geography at St. Ambrose College (Iowa), devoted August, 1969 to an East African Biological Seminar.

PAULINE RIORDAN (M.A. 1959) is a Geographer with the U.S. Army Natick Laboratories in Natick, Massachusetts and lives in Roslindale, Massachusetts.

EDWARD RISLEY (A.B. 1946; 1946-8), Foreign Affairs Officer for U.S. Arms Control and Disarmament Agency, was "a member of the U.S. delegation to disarmament conference in Geneva during the Summer of 1969 which produced a draft treaty submitted to the U.N. General Assembly forbidding nuclear weapons on the ocean bottom."

WALTER W. RISTOW (Ph.D. 1937) is Chief of the Geography and Map Division of the Library of Congress in Washington, D.C. "Traveled in August, 1969 with my wife to London, Amsterdam, Paris, Badgodesberg and Copenhagen. In Copenhagen I attended the annual conference of the International Federation of Library Directors."

INA CULLOM ROBERTSON (A.M. 1925) retired several years ago and writes: "I live with my sister and am unable to carry on usual activities of travel and those things most geographers enjoy."

J. LEWIS ROBINSON (Ph.D. 1946) is Professor of Geography, University of British Columbia, Vancouver. His latest book, Resources of the Canadian Shield, was published in September by Methuen. "This is quite a different approach to writing regional geography, and I await the reaction of geographers. It is an attempt to show that regional geography does not have to be a stereotyped collection of information. It deals with areal patterns of resource development over time."

LEWIS D. ROSENTHAL (Ph.D. pending) is Assistant Professor at the University of Maryland, College Park. "Moving away from the small, closely-knit, inter-disciplinary life at Clark to the vast numbers and sprawl of a state university campus is another form of culture shock."

EDWARD D. RUSSELL (A.B. 1921; M.A. 1922) has retired and lives in Auburn, Massachusetts.

CAROLYN J. RYAN (M.A. 1963; Ph.D. 1964) is Assistant Professor of Geography at the University of Connecticut, Storrs. She is "working on a study of micro-changes in Consumer Travel Behavior in Mansfield, Connecticut; organizing and editing a special Festschrift issue of Economic Geography in honor of Raymond Murphy; will serve on the program committee for the 1971 AAG meetings; and working with a local (Mansfield, Connecticut) CDAP Housing Committee."

RICHARD D. SANDS (Ph.D. 1960) is Geographer with the Geographic Sciences Division of the U.S. Army Engineer Topographic Laboratory in Fort Belvoir, Virginia.

FREDERICK S. SANFORD (1948-50) is Systems Analyst for Sikorsky Aircraft in Stratford, Connecticut. "Expect to receive M.S. in Management at Hartford Graduate Center of Rensselaer Polytechnic Institute, January, 1970."

ANTHONY SAS (Ph.D. 1957), Associate Professor at the University of South Carolina, has had publications in the Professional Geographer, Military Review, Military Affairs, and U.S. Naval Academy Proceedings. He is researching the geographic aspects of warfare and gave a paper at the NCGE meeting in Houston.

BARBARA TUBMAN SAYLOR (M.A. 1958) has no time for travel since she is Chief of the Division of Research, Department of Planning and Urban Development, City of Providence, Rhode Island and the mother of three boys.

G. W. SCHLESSELMAN (M.A. 1928) is the retired Head of Geography at Texas A. and M. Traveling in most of the U.S. and in Northern Mexico has been his major pastime this year.

CHRISTINE M. (KRAUSE) SCHULTZ (1925-26) "taught in Illinois four and one-half years and in the Junior High School in North Tonawanda, New York, twenty-six years, retiring in 1954." She now lives in Lockport, New York.

EARL B. SHAW (Ph.D. 1933) has a light teaching schedule at Assumption College, Worcester, and endeavors to continue some research and considerable travel.

ADA M. SHAWKEY (1947-8) is Associate Professor and Chairman of the Geography Department at Massachusetts State College at Framingham. She "attended the IGC at New Delhi in December of 1968 and later spent 15 days traveling in India. During July and early August, 1969, I was the instructor and coordinator for Continental Classroom Part I. After a week of class on campus, the group flew to Europe and made a study tour of England, Netherlands, Belgium, Germany, Switzerland and France."

SUK-HAN SHIN (M.A. 1967) is Assistant Professor of Geography at Eastern Washington State College at Cheney and is in the dissertation stage of his Ph.D. at the University of Pittsburgh. Because of lack of funds as a student he has been separated from his family since 1964. They are now coming from Korea.

JULIA M. SHIPMAN (M.A. 1923; Ph.D. 1928) is retired after being associated as student or professor in eighteen different colleges and universities. She has traveled in 49 states and all continents except Australia including the East and West Indies. Since her retirement she has been active in local life---library board, school board, local speaking engagements---in East Arlington, Vermont.

VICTOR W. SIM (M.A. 1957) is Chairman of the Department of Geography at the University of Western Ontario, London, Ontario, Canada. With a number of colleagues, he is involved in completing a data bank of social, economic, cultural and physical items on the four country area around London. A brief time was spent doing field work and supervising graduate students in Central Baffin Island, N.W.T., during the summer of 1969.

R. B. SIMPSON (M.A. 1933; Ph.D. 1941) is Associate Professor of Geography at Dartmouth College, Hanover, New Hampshire. He reports: "Published Geographic Evaluation of Radar Imagery of New England (Dartmouth College Project in Remote Sensing) in June of last year and read 'APO-97 Imagery of New England' at the GR International Symposium of Remote Sensing of the Environment at Ann Arbor, Michigan in October, 1969."

ALBERT W. SMITH (A.B. 1943) was Visiting Professor at San Fernando State College for the Summer 1969 term. His permanent position is Chairman and Professor of Geography at the University of Colorado, Boulder.

JOHN A. SOBOL (M.A. 1949) teaches Geography at Memphis State University, Memphis, Tennessee.

FRANK J. SPARICIO (M.A. 1963) is Assistant Secretary of the Hartford Insurance Group, Hartford, Connecticut. "The work I'm doing takes me all over the country fairly frequently and many times I have a chance to see some of the old 'workroom gang.' Enjoying living in the Connecticut hills and was a neighbor of George Howe (Clark Professor last year) until he moved to Michigan to teach at Eastern Michigan."

RAY SPECHT (M.A. 1947) is Assistant to the Vice-President of Business Affairs (Campus Planner) at Wisconsin State University--Stevens Point. "My wife and I toured Western Europe during July and I had a book, Milwaukee Lake Shore and Western and the Milwaukee and Northern, published by the Railway and Locomotive Historical Society of America in October of 1969."

KARL STACY (Ph.D. 1955), Professor of Geography at Kansas State University, spent nine months (1967-8) as a Research Scholar at the Australian National University, Canberra. During the summer of 1969, he toured the British Isles and Ireland.

ROBERT G. STONE (1931-2) continues as Scientific and Technical Information Officer for Air Weather Service at Scott Air Force Base, Illinois.

BRYAN THOMPSON (M.A. 1965), Assistant Professor at Wayne State University, Detroit, has had most of his research directed towards his dissertation. "Some articles have been published since my leaving Clark in '67. Spent three enjoyable weeks in Scandinavia last summer. However, the important news has been the addition of Sheila Cathleen (born 10/22/68) to the Thompson family."

WILL THOMPSON (Ph.D. 1960) works in the Earth Science Lab at the Natick Army Laboratories, Massachusetts. Recently, he has had two articles published and two more are pending: "New Observations on Alpine Accordances," Annals of the AAG, December, 1968; NLABS Technical Report 69-T3-ES, (ES 46), "Physical Geography and Military Environment in a Transect of the Utah and Colorado Rockies;" Some Implications of Airmobile Warfare in Mountains," Military Review; "Evaluation of Mountain Terrain," in a book edited by Dr. Fredrick Betz, Plenum Press.

RAY W. TOBEY (M.A. 1953) is retired and presently doing some local historical research in Fairfield, Maine.

LESTER W. TRUEBLOOD (M.A. 1936; Ph.D. 1954 in International Affairs) is the Director of the Earth Sciences Laboratory of the U.S. Army Natick Laboratories in Natick, Massachusetts. He lives in Dover, Massachusetts.

GRADY O. TUCKER (Ph.D. 1957) is Vice President-Division Manager of Larry Smith and Co., Inc., Washington, D.C.

EUGENE VAN CLEEF (Ph.D. 1926), Professor Emeritus, Ohio State University, gave an address before the Gamma Theta Upsilon national geography fraternity at Ann Arbor, Michigan in August entitled "Reminiscences of American Geography." Cities in Action will be published as a paperback by Pergamon Press and his following articles were published this year: "Business Neglects To Use the Science of Geography" The Commercial and Financial Chronicle (February 20), "Planning and Management in Hamlet, Village or Small City" Property Management (Volume 34, Number 2) and "Things Are Not Always What They Seem for the Economic Geographer" Economic Geography (Volume 41, Number 1).

WILLIAM VAN ROYEN (Ph.D. 1928) is Director of the Division of Environmental Sciences, Army Research Office, Durham, North Carolina. "In my present position I still travel a good deal. After my visit to the Lower Amazon last year, this year's most interesting experience was a trip to the northern St. Elias Mountains in the Yukon and the adjacent Wrangell Mountains in Alaska. A 'field trip' by small plane over the Ice Field Ranges portion of the St. Elias Mountains was an unforgetable experience, as was another up the Chisana gorge into the Nutzotin Range and beyond into the Wrangell Mountains as far as the other side of the Chitistone pass. The traveler on the Alcan Highway never sees any of this magnificent high mountain scenery, as most of it is shielded by the 'foothills,' the Kluane Ranges which rise to 7000 to 9000 feet."

H. E. VAN TUYL, JR. (1954-5) lives in Arlington, Virginia and reports nothing new.

CHARLES B. VARNEY (M.A. 1953; Ph.D. 1963), Senior Lecturer in the Department of Geography at the Chinese University of Hong Kong for 1968-70, has been on leave from his permanent position at Wisconsin State University in Whitewater. "I'll be returning with my family to Wisconsin in Summer, 1970, via Japan, U.S.S.R. and Europe."

PAUL P. VOURAS (M.A. 1951) is Professor of Geography at Paterson State College, Wayne, New Jersey. "His article on 'The Impact of Population on Developing Countries' appeared in the monthly publication of the Thessalonika Chamber of Commerce, June 1969. Last year he served as the Interim Chairman of the Department of Social Science."

LILLIAN H. WALLACE (M.A. 1941) has retired from teaching at Westfield State College. She and her husband live in Westfield, Massachusetts.

MILES W. WEAVER (B.A. 1950; M.A. 1951) is part owner and Operating Manager of a new marina called Marineast in Portland Harbor, Maine. "My son, David, born while I was in Grad. School is now a Freshman at Clark. Time Flies!"

J. HENRY WEBER (B.A. 1926; M.A. 1927) recently completed a political-physical 12-foot globe in the lobby of the News Building, East 42nd Street, New York City where he is employed as Chief Meteorologist.

NIELS WEST (M.A. 1968) is with the Department of Geography at Rutgers, New Brunswick, New Jersey.

SI WEST (M.A. 1941) is Contact Specialist for the U.S. Government in Philadelphia. His son, Alan, is in the Class of 1973 at Clark.

HARLAND W. WESTERMANN (Ph.D. 1958) is Director of the Urban Affairs Program at Virginia Commonwealth University, Richmond. "After four years as Director of the Center for Urban and Regional Studies at Virginia Polytechnic Institute, I have joined the staff of Virginia's new four-year university---V.C.U. (12,000 students). I am now developing an urban program here and am currently a consultant for the redevelopment of the CBD, Danville, Va. (50,000 pop.) and consultant to the American Technical Assistance Corporation on the development of a new town (Negro community) in Georgia."

FLORENCE E. WHEELER (1938, 1940 summers) is retired from teaching elementary and junior high school. She resides in Rutland, Massachusetts.

GARY WHITEFORD (M.A. 1968) is a graduate student at the University of Oklahoma.

RUDOLPH WIEZEL of Oswego, New York, reports nothing new this year.

DAVID C. WINSLOW (Ph.D. 1948) is Professor at Indiana University of Pennsylvania, Indiana, Pennsylvania.

"Dr. and Mrs. Winslow carried out research in Ecuador, Colombia, Panama, Costa Rica and Nicaragua. Professor Winslow continues his study on containerization. He edited the Gamma Theta Upsilon Handbook and the Pennsylvania Geographer and is Acting International Historian of GTU. Mrs. Winslow presented a paper, later published, on team teaching at the Annual Meeting of the NCGE."

BERNT L. WILLS (1942-3) is Professor at the University of North Dakota, Grand Forks and reports "Nothing special."

DENIS WOOD (1967-9) writes: "I began this year as an underpaid but delighted teacher of English at Barranquitas Regional College in Puerto Rico, but was fired when I slugged the director in the jaw for calling me 'boh' which is Virginian, I gather, for boy. But investigations led by workroom alum, Sig Diettrich, Assistant Dean of Faculty at I.A.U. may see me back at work before the year is over. Last summer Ingrid and I spent in Oaxaca and San Cristobal, Mexico, relaxing, as well as working on various research projects. To list them would take all day and a full Monadnock page. We'll spend next summer in Mexico and Cleveland, Ohio, before returning to Clark for another storm and rainbow filled year."

INGRID HANSEN WOOD (1967-9) is a teacher of English and assistant librarian at the Regional College, Barranquitas, Puerto Rico. "Denis and I were in Mexico this summer where, while visiting Mexican friends in Oaxaca and Indian friends in Chiapas, I became intrigued with the geography of housekeeping. Since I like housekeeping myself it was really fun doing things like helping make the daily batch of tortillas or spinning yarn while laughing with the women as they gossiped and joked. Now in Puerto Rico I add a new region to my study and learn, among other things, that there is a Puerto Rican way to mop a floor. I kid you not!"

MARY VOGT WOODLAND (M.A. 1943) is "still research geologist (WAE) for U.S. Geological Survey, Geochemistry Branch. In the Summer of 1969 I assisted my geologist husband in his field work in the Laramie and Uinta Mountains and in the Snowy Range for the Field Museum of Natural History. I have worked all year through the League of Women Voters in behalf of water pollution abatement and pesticide control, particularly as it concerns Lake Michigan and am now preparing a summary."

A JOSEPH WRAIGHT (Ph.D. 1951) writes: "In addition to my regular geographic work, I am engaged in providing expert testimony to the U.S. Supreme Court on matters relating to Tidelands Oil, Seaward Boundaries and Coastal Geography in general." He is Chief Geographer, U.S. Coast and Geodetic Survey, Environmental Science Services Administration in Washington, D.C.

MARION J. WRIGHT (M.A. 1946) teaches at Rhode Island College in Providence. She "enjoyed meeting many Clark people at the N.C.G.E. meetings in Houston and look forward to sabbatical leave in Spring, 1970."

LEO J. ZUBER (1948-9) is Assistant Director in the Planning Division of the U.S. Department of Housing and Urban Development, Region III, Atlanta, Georgia. "I cover the eight-state Southeast assisting state and local governments on urban area planning problems. I have, in the past two years, participated in the establishment of 17 councils of government and in the initial establishment or enlargement of more than 20 metropolitan or regional planning commissions."

HARLEY E. SCOTT (M.A. 1963) is Instructor of Geography at Chicago State College. His popular historical geography of the Murhoka District (Toronto), "Tales of the Murhoka Steamboats," was privately published last summer. He is still working on a Landform Map of European USSR.

DO YOU REMEMBER?

THE GROUP - 1958-59

Left to right, first row: Dr. Henry J. Warman, Dr. Richard J. Lougee, Dr. Samuel Van Valkenburg, Dr. Raymond E. Murphy, Dr. Hans Carol, Mr. Guy H. Burnham.
Second row: Kaniz Yusef, Aleta Grillot, Agnes Zetterman, Sister Marion Lyons, Lillian Kent, Sumitra Benoit, Richard Reseska, Robert Lingner.
Third row: Tait Davis, Robert Dean, Philip Korn, Harry Stickler, Robert Black, Richard Sands, Robert Huhtanen, Aylwood Walnut, Fiske Rawden, David Brodeur.
Fourth row: Robert Condon, Harry Neal, Robert Looker, John Rickert, Albert Mitchell, Lane Johnson, Reed Stewart, John Moulton.
Last row: Arthur Lord, Joseph Hickey, Lester Unterberg, William Koelsch.
Seated in front, I. Made Sandy.

MEMBERS OF THE THREE MONTH'S FIELD CAMP - 1934

Back Row, left to right:
Robert B. Simpson
Fred H. Allen
J. Norman Carls
Margaret E. Stevens
James A. Minogue
Carol Y. Mason
Walter E. Kirkendall
Lloyd D. Black
Hans J. Boesch
L. LeMar Stephan
Elizabeth P. Love

Front Row, left to right:
Walter W. Ristow
Milton J. Prescott
James S. Nelson
John F. Pyle
Johnson E. Fairchild
Ruben L. Parson
Franklin C. Erickson
Dr. Wallace W. Atwood, Jr.
Dr. Clarence F. Jones

STUDENTS AND FACULTY 1969-1970

FOURTH ROW: Robert Adams, Richard Pond, William Emerson, Reed Stewart, Henry McCutcheon, James Fonseca, D.S. Rajah, Joseph Thornton, David Dronsick, John Jacobs, Jr., Sally Lemaire.
THIRD ROW: Bobbie Wilson, Alfred Hecht, Stephen Hobart, John Radford, Joan Dowd, Fiske Rawden, James Sanders, Jr., Margaret Stephenson, Dr. Roger Kasperson, Marilyn Soergel Hyland.
SECOND ROW: Peggy Lentz, Carolyn Weiss, Dr. Samuel Van Valkenburg, Dr. Henry Warman, Dr. Saul Cohen Dr. Gerald Karaska, Dr. Robert Beck, Nubia Morales, Arthur Krim.
FIRST ROW: Robert Wright, Roger Hart, Dr. David Stea, Sue Simonds, Gerard Hyland, David McCauley.

Standing: Dr. George McCleary, Avshalom Schmueli, Robert Morrill, Iris Wheatley, Dr. Martyn Bowden, Henry Aay, E.V. Negron.
Seated: Brad Baltensperger, Perry Massey, William LeZama, Norman Carpenter, D. David Miller, Carlos Alsina, William Carolan.

THE GRADUATE SCHOOL TODAY

HENRY AAY - "Fuelled by the first two semesters at Clark, I plan to be back in the workroom next September. With a summer job and summer wedding hanging over my head, one might justifiably ask why I am leaving the security and comforts of the workroom at all.

Highlights of the past year might include (although not necessarily in the following order of importance): the rubbing of shoulders and minds with other graduate students; field trip to the Virgin Islands; and the clearing up of much fuzzy geographical thinking."

ROBERT ADAMS - Bob is in residence at Clark this year, being on leave of absence from the University of New Hampshire where he has taught for the past two years. He was awarded an N.S.F. Doctoral Dissertation Fellowship to pursue his topic: "The Influence of Weather and Weather Forecast Upon the Recreational Use of the Coastal Beaches of New England."

CARLOS ALSINA - Carlos is a second-year Ph.D. candidate from Cayey, Puerto Rico.

JEREMY ANDERSON - "Summer 1969 was devoted to contemplation of selected microcosms and was climaxed by the macro-trauma of visits to Detroit, Ann Arbor, Portland, San Juan Islands, Seattle and Houston. Fall found me teaching agricultural systems,'feeled' methods, and remote sensing, giving guest lectures in everyone else's course, and commencing work on N.A.S.A.-U.S.G.S.-G.A.P. contract for remote sensing of tropical agriculture (Puerto Rico). The January independent study period was spent in Puerto Rico collecting pulverized veracity for said contract and as sometime director of the graduate field camp (for the fourth year in a row everyone returned alive!). I'm now engaged in teaching introductory economic geography and a seminar on remote sensing of agricultural systems and doing contract research. Publications too diverse to list, excepting the following deathless quote from the Worcester Gazette (which might well be a slogan for the '70s): 'Planning should preceed dumping...'"

BRAD BALTENSPERGER - "I received a B.A. in History from 'the intellectual center of the Midwest,' University of Nebraska in 1969 and am now an NDEA Title IV Scholar. My interests lie in historical geography, especially settlement of the Great Plains, and in historical geosophy or historical environmental perception, depending on whether I listen to Martyn Bowden or Bill Koelsch. Being idealistic I would say I'll have a Ph.D. in three years according to the new Program. Being more practical I would venture a guess of five or six years."

WALKER BANNING

DUANE D. BAUMANN - Dr. Baumann is Post Doctoral Fellow and Research Associate in resource management.

PAUL BLACKFORD - "This year I studied geomorphology and hydrology under Drs. Schick and Kates preparing for Ph.D. orals and dissertation proposal; tentative topic: 'Sedimentation and Water Quality Changes in the Wesport River Basin and Estuary.' Also working with Dr. Baumann on a research project to assess and improve the relationship of institutions of higher education with local governments in respect to environmental problems. Next year I

will be Assistant Professor, Department of Earth Science and Geography, State College, Bridgewater, Massachusetts."

JAMES M. BLAUT - After a non-teaching semester last fall in which several articles were completed, Dr. Blaut is again teaching agricultural development courses and ethnogeography.

MARTYN J. BOWDEN - Dr. Bowden continues teaching introductory, historical and settlement geography. He will be teaching a summer course at the University of California, Berkeley and will spend next year on Sabbatical leave doing research in England.

WILLIAM B. CAROLAN, JR. - "During the past year I continued development of the non-contiguous cartograms (the 'Apt Map') including adding a base map with the states of the United States made proportional to their 1900 populations. This compliments the 1960 and previous base maps. As an example of the usefulness of the 'Apt Map' concept, I printed a series of data maps on the subject of the Negro Population of the U.S. as of 1900 and 1960. I distributed sample maps to various organizations and individuals. A notice of the 'Apt Map' mapping technique appeared in the Fall, 1969 issue of 'P.S.' the newsletter of the American Political Science Association. I also constructed two 'Apt Maps' of the world (by continent) which were published in the 1968 Annual Report of the Population Reference Bureau, Washington, D.C. My tentative dissertation topic is: 'The Efficiency of the Non-Contiguous Cartogram (the 'Apt Map') as an Information System.'"

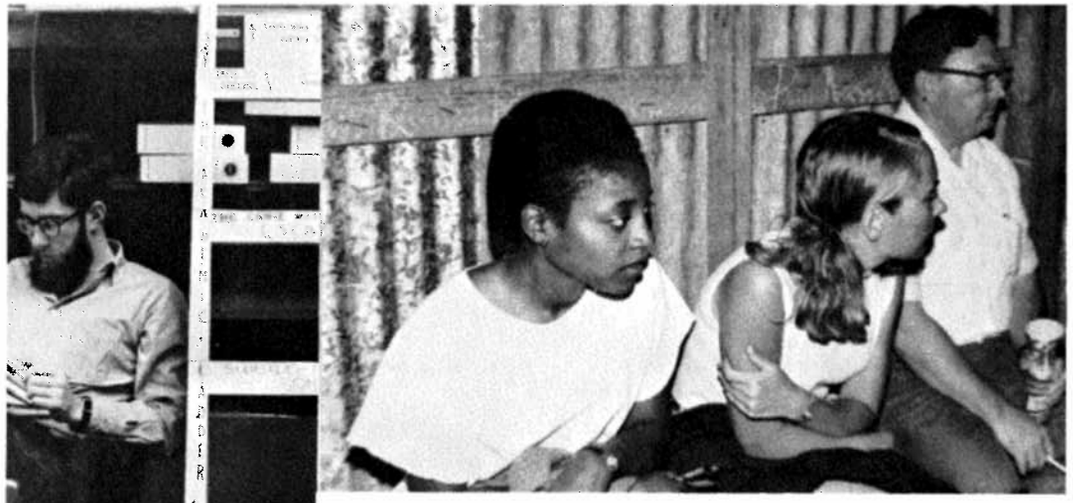
NORMAN CARPENTER - Norm is completing his second year of residence for the M.A. degree. His interests include cartography, music, computers, skiing and nuances.

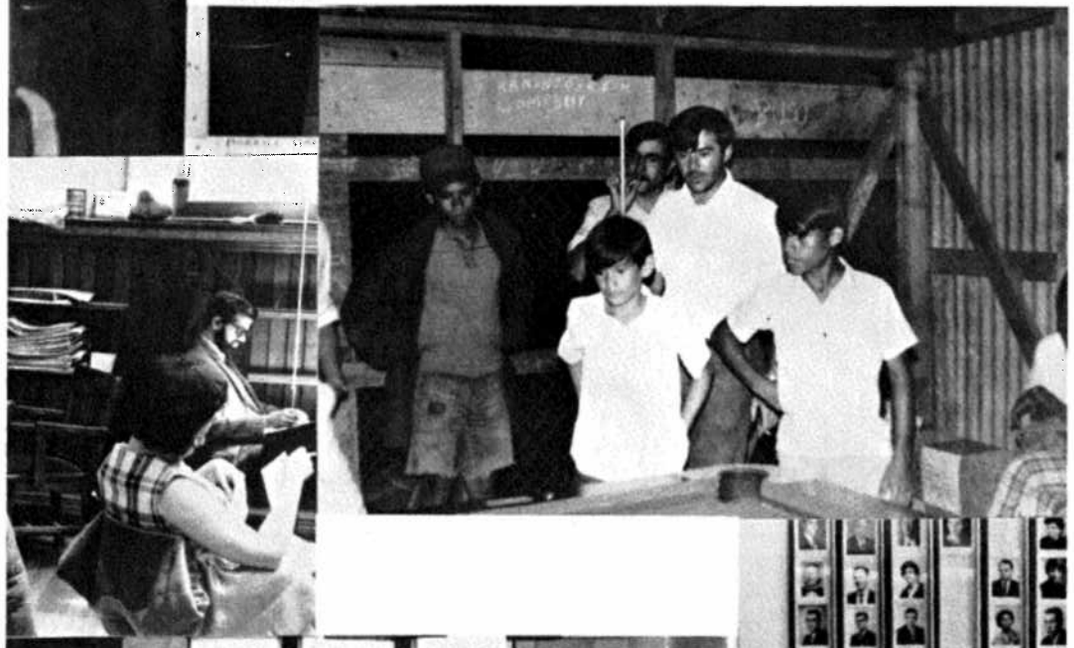
KANG-TSUNG CHANG - "I spent nearly a year in finding a dissertation topic. Now I have it and have to figure out how I can get this subject across to the readers. The topic is: Probability Theory in Map Analysis of Geographical Point Distributions.

CHRISTOPHER CLAYTON - "Still in the Ph.D. program and loving every gruelling minute of it. I retain the old B.A. and M.A. hope to finish in 1971 and have dissertation on network analysis completed. Married since last Monadnock issue and cooling down."

SAUL B. COHEN - "Much of the summer of 1969 was spent in travel. First came a conference at Grove Park in Ashville, North Carolina for Special Studies in Education and devoted to the Role of the Disciplines in the Continuum of Education. As chairman of the Consortium, I was engaged in pre and post-conference planning. Then came a trip to Israel for the U.S.-Israel Geographical Research Symposium, which I helped organize together with D.K. Amiran Chairman of the Geography Department of the Hebrew University. The return was via Italy and England, the latter in connection with work with the Oxford University Press. My wife accompanied me on this trip and enjoyed the hospitality of our Israeli geographical colleagues.

The pressure of university events brought on by the resignation of President Jackson caused me to withdraw my resignation as Graduate School Dean and to retain the post for the 1969-70 academic year. This, plus a more widened set of university academic affairs responsibilities, when added to the on-going tasks involved in directing the School of Geography, teaching and carrying on





outside activities (in the U.S. Office of Education, the National Science Foundation and the A.A.G.) made for an unusually burdensome year. I did manage to complete an article, co-authored by Lewis Rosenthal which is currently in press for the Geographical Review, and presents a model for analyzing political action space. Also, at the request of the U.S. Office of Education, I have organized a national study team to investigate the potential for developing a system of training complexes for the preparation and retraining of American teachers. Given the press of university duties, domestic travel was somewhat curtailed, although the log of trips to Washington, New York, Chicago, New Orleans, Durham, Cincinnati, Atlanta, etc. casts some suspicion on the meaning of curtailment."

JOAN DOWD - In her second year, Joan's interests combine political geography and resource management. Her M.A. thesis deals with the perception of government officials and industrial managers of the air pollution situation in Worcester.

DAVID DRONSICK - "This year I have continued my training in the 'tools' of geography and have discovered the true import of Zuckerkandl's statement, 'Scientific knowledge is the only knowledge that is knowledge of fact. It is not based on thought but on experiment and empirical observation. Scientists do not think, they observe. Therefore, they do not make errors of thought. The only errors they can make are errors of observation, and these are immediately corrected by further observation. Therefore, we may have confidence in science.' What ho for the life of an English major!" A Clark undergrad, this has been Dave's first year of graduate work.

WILLIAM EMERSON

DARRELL R. FERGUSON - Darrell's major work has been in political geography and in resource management. He is working on the following papers: 1) effect of distance from polling place on non voting; 2) spatial distribution of U.S. involvement and influence on a world scale; 3) geographic and political factors affecting Worcester City Council's selection of a new sanitary land-fill dump; 4) children's perception of alternative environments as seen in post cards.

JAMES FONSECA - Last year Jim received his bachelor's degree from Bridgewater State College, Massachusetts. His interests include political and economic geography and he is "starting a fund drive to have Clark relocated in Barranquitas, Puerto Rico."

CAROLINE GARSIDE

KIRSTEN HARING - A first year Ph.D. candidate, Kirsten is "commuting to Worcester from Boston---given today's highway statistics, no mean task." Her dissertation will be concerned with peasants.

ROGER HART - In the summer of 1969 Roger worked in Worcester summer schools for the Place Perception Project developing methods of presentation of aerial photographs in the elementary grades and sounded out ideas for an M.A. thesis. During the fall semester he evaluated aerial photographs and flying as a means of improving spatial understanding and of teaching important social studies concepts. Continuing with his thesis research, he worked with 160 third grade children from the Model Cities area schools. Christmas vacation and January study period saw Roger piloting the university plane in the Caribbean (Puerto Rico, St. Thomas and St. Vincent) for Drs. Bowden, Anderson, Blaut and

teach a new course on "Historical Geography: Methods, Techniques and Sources" as part of the revised graduate program in geography. Hopefully, he will complete some partially finished research papers on Buchanan's land policy, Arnold Guyot, antebellum student travel, the American translator of Carl Ritter, and student exploratory mountaineering in the 19th century.

ARTHUR KRIM - "I will complete my dissertation and receive my doctoral degree this year (1970) and have accepted a position at Temple University, Philadelphia. In April I presented a paper at the Sturbridge Historical Geographers meeting."

SALLY LEMAIRE - "Preparing an M.A. proposal to study the incidence and geographical distribution of hepatitis, venereal disease, tetanus and bacterial endocarditis as they relate to the growing drug problem in our society. After receiving my degree, I plan to do work relating to the field of population geography since I believe in the necessity for further research in this vital field of information. My spare time--and more--is spent in pursuing interests including skiing and playing tennis."

PEGGY A. LENTZ - Peggy has had a "typical first year" here at Clark. She gives us the following motto: "Since no graduate student truly believes (s)he will get a degree, (s)he should never be afraid to fight with the academic hierarchy, i.e. Don't be a pe-on."

WILLIAM LEZAMA - Bill hails from Valencia, Venezuela and received his degree from the Instituto Pedagogico in geography and history in 1966. Before coming to Clark he taught high school for 2½ years. He is mainly interested in peasant agriculture, urban and economic geography.

PERRY MASSEY - is a first-year Ph.D. Candidate from North Carolina.

DAVID McCAULEY - "I have again passed the year without doing anything particularly noteworthy. I have engaged in no activities that were specifically geographic and have even fewer publications. After many peregrinations, I am now committed to 'environmental management,' but it will take a couple of years to set the field afire. There is little else to say. In fact nothing."

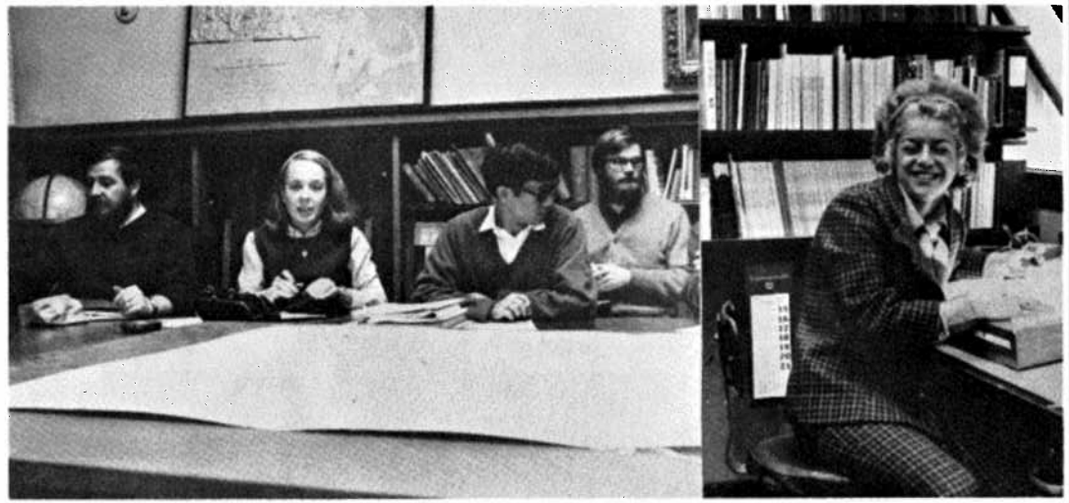
GEORGE McCLEARY, JR. - is Clark's Cartographic Professor.

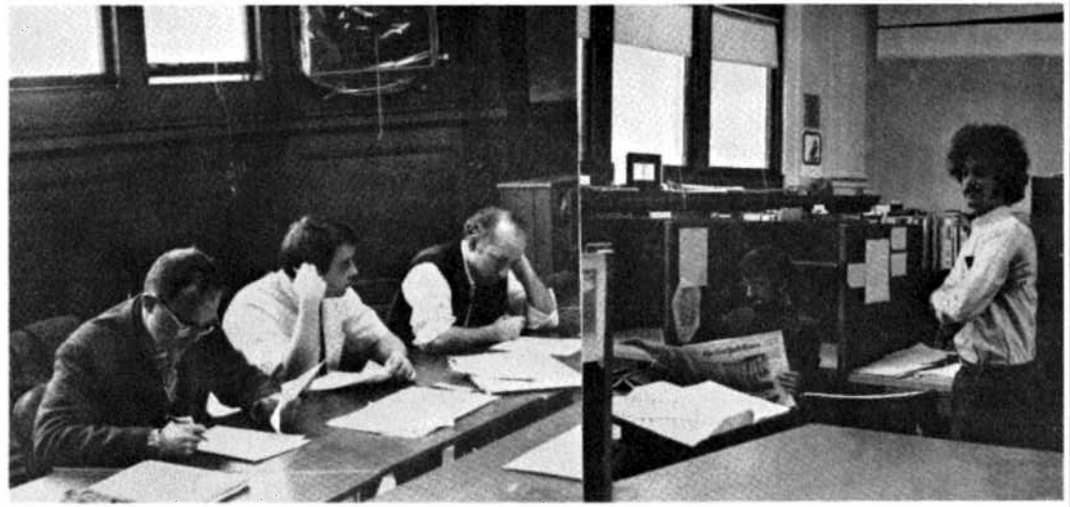
HENRY McCUTCHEON

NATE MELEEN - "I returned to Clark after two years of teaching to get going on my doctoral dissertation. While here I changed my topic and emphasized retraining in quantitative geomorphology. My approved topic is, 'Geomorphic Effects of Strip Mining for Coal in a Region of Subhumid Climate and Low to Moderate Relief' (conditions found in Northeastern Oklahoma). During field camp I participated in the measurement of the first two tropical slopes using the new IGU hillslope system.

I have signed a contract for next year to return to Oral Roberts University in Tulsa, Oklahoma where I will be teaching Principles of Earth Science and Cultural Geography."

D. DAVID MILLER, ESQ, B.A. (DURHAM) - "After a short visit to the ould sod and a long stay in the cesspool last summer, I struggled with geomorphology and edited the first reports of the Place Perception Project. This semester I hope to complete, inter alia, my master's thesis on the growth pole theory and practice."





JOSEPH MINER

NUBIA MORALES - comes to Clark from Colombia, South America, where she will return to teach after obtaining her Ph.D.

ROBERT MORRILL - is in his second year of the TTT doctoral program.

RAYMOND MURPHY - Professor Emeritus of Economic Geography, is seen quite regularly in the Geography Building.

J. RICHARD PEET - "Richard Peet has spent most of the year preparing a new course, GEOGRAPHY OF AMERICAN POVERTY, which he is teaching this Spring to 150 undergraduates. As far as he knows this is the first time this course has been taught in a geography department; geographers are not sufficiently interested in such fields, despite what would appear to be a great potential for interesting and worthwhile research and teaching. Dr. Peet is writing a course outline and bibliography for distribution probably as a special issue of ANTIPODE, the radical journal of geography published by a Clark group, and plans a number of other papers in this new field.

He has also been book review editor of Economic Geography since October. His paper, 'The Spatial Dynamics of Agricultural Expansion' will appear shortly in Explorations in Economic History."

RICHARD B. POND - Dick is in his first year of Ph.D. studies here at Clark. He received his B.A. in 1967 and M.A. in 1969 from San Fernando Valley State College. He presented a summary of his thesis - "The Perception of Earthquake Hazard at Tehachapi, California" - at the June 1969 meeting of the Association of Pacific Coast Geographers. His geographical interests revolve around the themes of Cartography, Environmental Behavior, Environmental Management, Remote Sensing, and Agricultural Development. Next year's academic plans: More of the same, orals and a dissertation proposal.

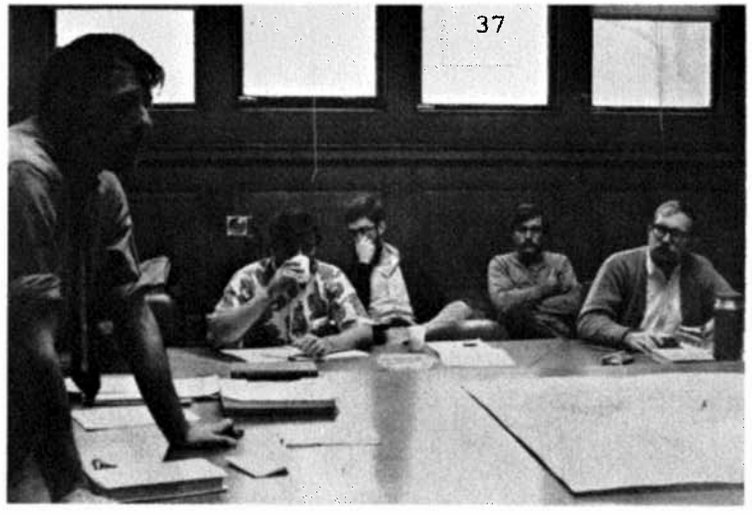
JOHN RADFORD - John is working on a Ph.D. dissertation in urban-historical geography and will be moving to York University, Toronto, in September.

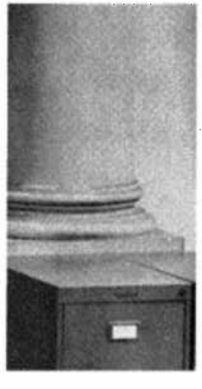
DHEVARAJH S. RAJAH - Raj comes to Clark on a Fulbright Scholarship and is in his second year of residence. His home is in South Africa. Interested in political and urban geography, he will write his dissertation on: "Urban Ecological Theory and Residential Location: A Micro-Analytic Case Study of Worcester, Massachusetts."

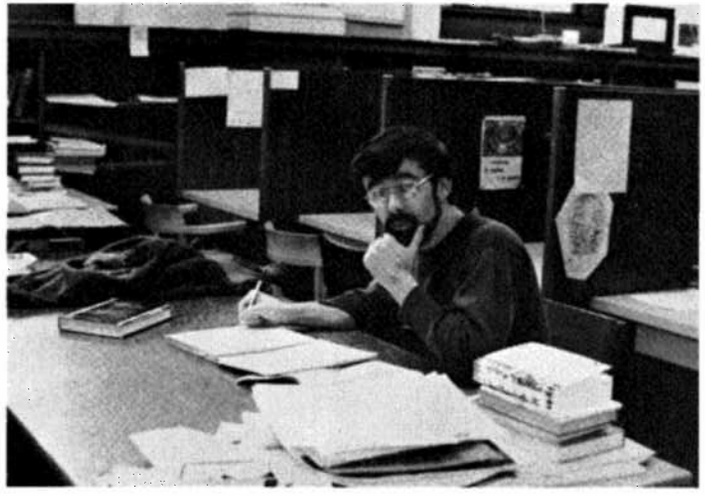
FISKE E. RAWDEN, M.A. (CLARK 1960) - "Back again after teaching at the University of Missouri and the Potsdam annex of New York State University to (hopefully) finish up a Ph.D. Working on the Remote Sensing Project and will probably draw my dissertation out of it. The topic, tentatively, will concern relating remote sensing to problems of tropical agriculture as applied to Puerto Rico. Next year I have leave of absence for the first semester to continue working for the degree full time here at Clark. In January I will return to Potsdam and pick up teaching duties."

ANN VOLLMER REIZER - "I am working on my master's thesis and expect to finish up this year. This June my husband and I will be returning to California (and 'we ain't even comin' back!')."

ROBERT ROBERGE







BRUCE RYDER

JOSEPH SAGE

JAMES SANDERS

ASHER P. SCHICK - Dr. Schick is Visiting Professor of Geomorphology coming to Clark from The Hebrew University of Jerusalem. Last summer he took part in the U.S.-Israel binational Research Seminar in Geography. He chaired the geomorphology section and presented a paper on desert floods and their geomorphic effects. He also conducted a set of experiments on a model of desert floods at the Laboratory of Geomorphology, Department of Physical Geography, University of Uppsala, Sweden.

The 1969-70 college year has seen Dr. Schick conducting several courses at Clark and attending several conferences including those of the Geological Society of America at Atlantic City, American Geophysical Union at San Francisco and American Association for the Advancement of Science in Boston.

During the January study period, he conducted field work in Puerto Rico.

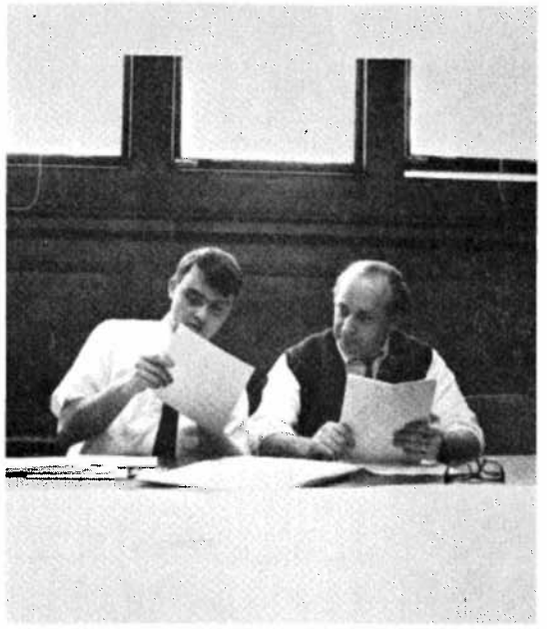
AVSHALOM SCHMUELI

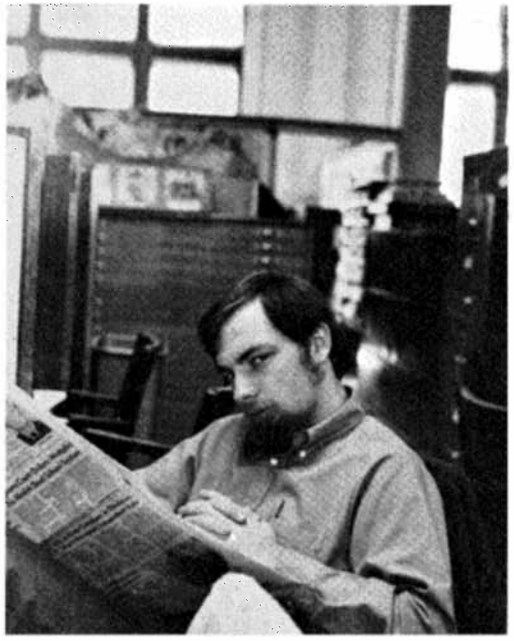
SUE C. SIMONDS - this year's Monadnock editor, is a second-year M.A. candidate. "My interests are mainly in agricultural and historical geography. This summer I will complete my thesis, 'The Microgeography of the Cranberry Farm: A Systems Analytic Approach,' and in the Fall I will either be teaching college or doing research in agricultural geography. Last summer I attended the A.A.G. National Meetings in Ann Arbor and plan on attending the San Francisco meetings this August."

DAVID STEA - "Dr. Stea has spent the present academic year working. Some of the most productive work has been performed under palm trees and in airplanes, the best places for many endeavors. His book on Mexican cities entitled "A Cognitive Atlas" (with thanks to Jim Blaut for the title) was largely written in a rowboat, and is now in translation. He delivered papers at conferences in Israel and Aruba, lectured at Cornell, M.I.T. and the City University of New York, and is currently giving a twice-monthly seminar at L'Université de Montréal. David is continuing work in place perception in children along with Jim and Meca Blaut and numerous students, and he is jointly editing a special issue of the Journal of Social Issues with Roger Downs of Johns Hopkins on cognitive maps."

MARGARET E. STEPHENSON - in 1969 Margaret received her B.A. from North Carolina Central University, Durham. Her interests are in urban and economic geography, and her career objective is college teaching.

REED F. STEWART - "This past year was spent in dissertation research and in job hunting, with occasional lectures to teachers in several school systems as they prepared to teach about Africa. Antipode carried a report of mine, "Troubling Textbooks," an examination of textbooks about Africa by a group of Clark geographers. This Spring and Summer plans call for field work in Liberia and Sierra Leone on the dissertation topic, 'The Spread of the Vai Script in West Africa.' Next year I will be an assistant professor of geography and anthropology at Bridgewater State College, Massachusetts."





JOSEPH THORNTON - Coming from Washington, D.C., Joe earned his M.A. in geography from George Washington University and is on sabbatical leave from D.C. Teachers College where he was an instructor in geography. Joe has travelled extensively in Western Europe and maintains close ties with friends in Portugal, Switzerland and Germany. His travels have taken him to Asia and Africa as well as Canada and Mexico. Graduate work also has been done at the East-West Center, University of Hawaii, University of Florida, and the Catholic University of America in Washington, D.C.

MARGARET ANNE TINDAL - "This has been quite a busy year for me. Much of my time was spent in writing and doing research in an attempt to fulfill course requirements and complete my thesis proposal. At this point it is good feeling to know that I have been able to accomplish some of the tasks which I have set for myself this year. I am working on my thesis, and I hope to have it completed by the end of the summer. I am looking forward to September when I will return to my alma mater, Coppin State College in Baltimore, Maryland, as an Instructor in Geography. In the future, I hope to do some writing and research, as well as pursue further studies in areas of interest in the field of geography and most particularly, historical-cultural geography."

SAMUEL VAN VALKENBURG - Dr. Van and his wife took a "sentimental journey" through Europe this past May. This fall Dr. Van will teach Political Geography at Worcester State and Europe at Clark where his granddaughter will also be teaching--as a teaching assistant.

EBENEZER NEGRON VAZQUEZ - Originally from Santa Isabel, Puerto Rico, Ebenezer is a second-year Ph.D. candidate. He is specializing in economic geography and resource management and researching for a dissertation on "The Petrochemical Industry in Puerto Rico: Cost and Benefit Study." After receiving his degree, Ebenezer will teach at the University of Puerto Rico. His papers include "The Colonial Problem of Puerto Rico and its Consequences Toward Planning Resource Management" and "The Economic Base of Santa Isabel, Puerto Rico, Present and Potential Development."

HENRY J. WARMAN - During last Fall Dr. Warman offered a Seminar in Population, Geography in Education and Regional Geography of South America. This past semester he has been on Sabbatical accomplishing the following: 1) completed a book in the Rand McNally Series on Resources, Human Resources of the United States; 2) working on a revision of Geography--Backgrounds, Techniques and Prospects (For Teachers); 3) initiating with Denoyer-Geppert Co. a project on "Geographic Approaches to Human Ecology," the first part of which will be on the development of study prints of the United States designed primarily for use in grades 4 to 6. These prints will be coordinated with other audio-visual aids; 4) completing plans for a South American jaunt, especially to Brazil to traverse the Belém to Brasilia Highway; 5) gave a series of invited lectures at the University of Southern Connecticut, Bowling Green State University and the National College of Education, Experimental School, Evanston, Illinois. "It seems that going on leave has meant much greater activity and work than that required in the cloisters of Clark!! But the challenges are great."

CAROLYN WEISS

JOIN A.S.P./A.C.S.M.

IT'S THE NOW GEOGRAPHY!

TED WEISS - Ted is working on his M.A. thesis, "Orthogenetic and Heterogenetic Cities: Conceptual Implications," and will continue here for his Ph.D. next year.

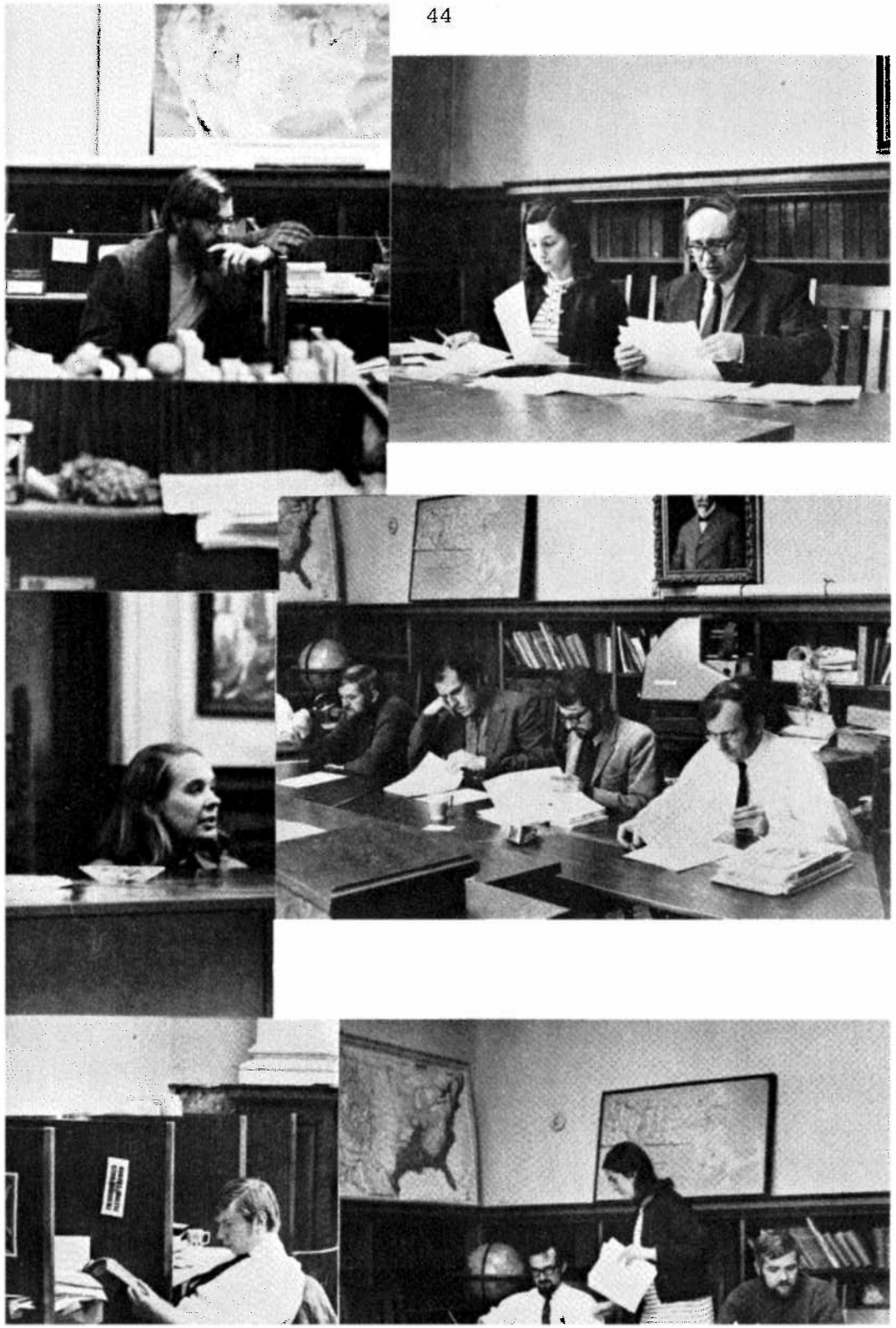
IRIS WHEATLEY - Iris received her M.A. in 1961 from the University of Florida in Gainesville under Dr. R. E. Crist with a thesis on "The Effects of Irrigation on the Land Use Patterns of the Laps Valley." From 1961 to 1969 she was Professor of Geography at the Inter-American University in San Germán and Hato Rey, Puerto Rico. This year she began working toward her Ph.D. Her interests include the morphology of colonial towns in Spanish America and the nature of Worcester's immigrants. In her "spare" time she keeps house for her husband and two children.

ERNEST WIGHT - is in his second year at Clark pursuing a Ph.D. in the TTT program. He has taken all the photos in this year's Monadnock.

BOBBY WILSON

BEN WISNER - Ben is a second-year Ph.D. student interested in environmental management and behavior. Other interests include peasant agriculture, migration, diffusion, nutrition and protogeography.

ROBERT WRIGHT



THE THREE DECKER AS URBAN ARCHITECTURE IN NEW ENGLAND

Arthur J. Krim

Urban Architecture as Urban Environment

The aesthetic experience of an urban environment--the glass facades of New York's Midtown, the red brick town houses of Boston's Beacon Hill, the wooden three deckers of Worcester's hills--is a function of the density of the landscape structures and their architectural style. Reduce the structural density and the sensation of the urban environment diffuses into a series of architectural landmarks creating the rural landscape.

Urban residential environments have undergone a transformation of structural density and architectural style as their function of residential structures has been altered from multi-purpose residential-work units, in the central city, to residential units of the single home, in the suburbs. This transformation in the United States has followed with the rise in per capita income levels of the mass culture resulting in increased mobility and an increased demand for living space. Formerly only the urban upper class possessed income sufficient to afford those amenities. With greater personal income of the middle and working class, the country estate of the eighteenth century elite is now possible as the common living mode translated into the suburban home.

Structures built upon the landscape as a product of a contemporary set of economic, aesthetic, and cultural conditions continue to be regulated by subsequent economic forces, both external and internal to the urban system. These structures undergo modification or replacement in periods of economic expansion, or decay and abandonment in times of economic stagnation.

Mass Culture and Urban Architectural History

Urban architectural historians have long focused on analysis and description of structures of the elite since the historians themselves are generally from the same social strata which have produced these structures.[1] Thus, most urban architectural historiography has been devoted to analysis o structures of the commercial core and residential and commercial structures

of the upper class. Structures of the mass culture existing in a rural context also receive attention as a manifestation of a broader interest of the urban elite with the rural landscape.[2] For the most part, middle class structures have been lightly treated due to the distain by the upper class of the mass American culture.[3] Urban lower class structures have been given little notice except where they were once, or are now occupied by the upper class.[4] Thus, little attention had been given to architecture of the middle and lower class up to the present time.

The Three Decker as Urban Architecture

The central focus of that study is to document the evolution and distribution of the three decker in New England. The three decker is a multi-family residential structure of the urban middle and working class constructed in the period 1880-1930, primarily in the cities and larger towns of New England. They were constructed in proximity to mass transit facilities (street-railway) and urban work locations of the middle and working class (factory-mill), reflecting the mobility and income patterns of the period.[5]

The evolution and development of the three decker as a unique structure is obscure, although its antecedent and architectural elements have been deduced by visual approximation.[6] The three decker emerged out of the tradition of the brick row house sometime after the Civil War. Application of the French mansard roof which followed in the 1870's and early 1880's to two storied houses meant that the attic space became utilized as a full third story by the mid-1880's. In addition, the preference for free standing, rather than row housing in the growing middle and working class residential markets of the late nineteenth century, and the New England preference for wood rather than stone or brick, resulted in the development of a free standing, three-storied, wood, multiple-residential structure by the late 1880's.[7] The term 'three decker' or triple decker' was applied to these structures at this time as the porches were said to resemble the decks of a sailing ship.[8]

Three deckers were built continuously from the late 1880's until the late 1920's when rising personal income and the paralleled increase in automobile ownership allowed the middle and working class wider urban mobility and greater residential space in the suburban residential market. The Great Depression of the early 1930's arrested what little remained of three decker construction. Thus, when the housing market was revitalized after World War II, all the effort was devoted to single family residential construction in the suburbs.[9]

The three story height for multiple-family housing appears to have been a tradition of the Northeast, although it exists on the Pacific coast in San Francisco and Seattle in selected situations. In New England this three story preference was transferred from brick and stone into wood, whereas in the Mid-Western cities like Chicago three story multiple-family structures were built in brick during the period 1880-1930.[10] Thus, these regional traits: wood, free standing structures for the working and middle class, and a three story height preference, have tended to localize the three decker to New England.

Present available research indicates that middle and working class residential structures of the late nineteenth and early twentieth centuries were constructed by many small, independent, speculative builders who

reinforced each other's decisions of style and locational selection within each city and town.[11] Few, if any, of these builders had any architectural training. They operated at the mercy of greater economic forces, most building from one to a dozen units at a time.[12] This practice was typical of the turn of the century, for mass construction of middle income homes developed only after World War II.[13] Thus, three decker construction was a product of hundreds of imperfect decisions made by men who had but a vague knowledge of the urban process.

General Pattern of Three Decker Distribution

Since most of the major urban centers of New England are located in the southern and eastern portions of the region, it is not surprising that the general distribution of the three decker conforms to this pattern (see figure 1). The distribution conforms even more closely to those urban centers which underwent expansion during the period 1880-1930. The disbribution of three deckers in stagnating seaport cities such as Newburyport is quite minimal, while the distribution in expanding industrial cities such as Brockton is substantial. Thus, three decker construction and distribution for each particular urban center does tend to reflect local patterns of growth and economic function.

Although the distribution approximates the local demands of each urban center for multiple-family middle and working class housing, it is modified by the center's proximity to the core area of three decker development and diffusion: eastern Massachusetts and central Connecticut.

Within New England the distribution of the three decker displays a pattern of localism in occurance and architectural style that is not fully explained by the general model presented above (see figures 1 and 2). Warner and Roberge's position that the three decker in Boston and Worcester was a product of the residential-work relationships during the late nineteenth and early twentieth centuries, "the street car suburbs," appears to be valid within the context of the two cities examined; the three decker developed as a highly efficient solution to the demands of providing multi-family housing for the working and middle class by giving access to urban work locations via mass transit while maintaining "suburban" densities not available in the older urban situation, "the walking city."[14] Yet the high percentage of three decker construction in Boston and Worcester does not occur in other New England cities which underwent industrial expansion during the same period, such as Providence or Springfield which have only moderate numbers of three deckers.[15]

The three decker appears to have been a local solution to a national urban demand of providing housing for the working and middle class in the urban-industrial expansion of the late nineteenth and early twentieth centuries. Moreover, within New England the three decker was a housing solution for only some of the cities.

Variations in Architectural Style

As stated above, the origin of the three decker is vague at best. However, from the field research conducted by the author several innovation centers can be deduced. Sometime during the 1880's the first true three deckers (wooden, full three story, three family houses on individual lots) were constructed in the central portions of Boston, Worcester, Fall River, and possibly Hartford, Waterbury, and Fitchburg. In the central core of

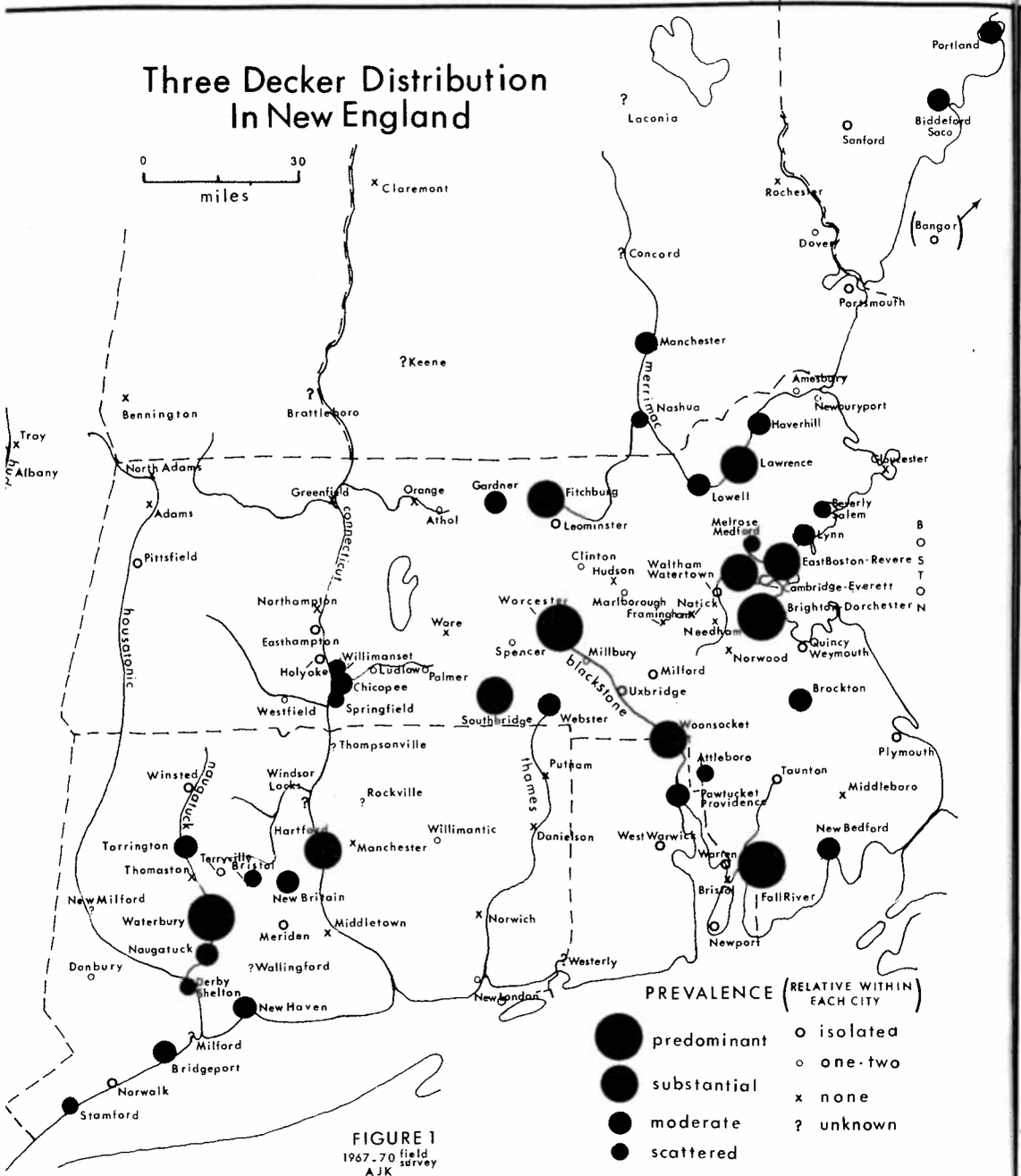


FIGURE 1
1967-70 field survey
AJK

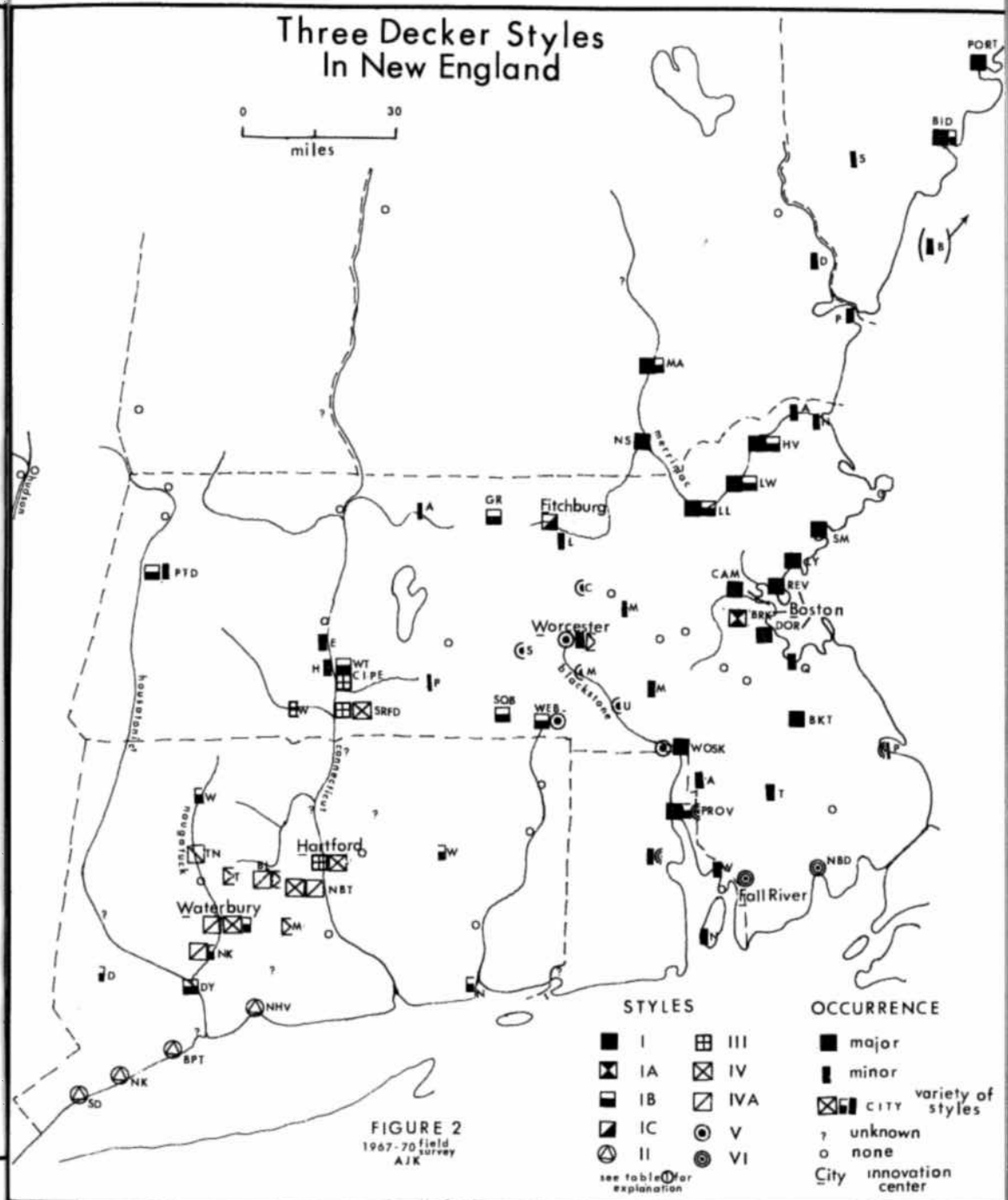


FIGURE 2
1967-70 field survey
AJK

these suspected innovation centers three deckers with architectural detailing from the 1870's and 1880's are found in high density, row housing sequences. In other cities, such as Springfield or New Haven no such relic structures exist. In these secondary cities most three deckers were built on the moderate-low density urban fringe developed after the turn of the century and were interspersed with duplex and single family housing. Apparently the three decker in such cities as New Haven was adopted from developed models of the innovation centers by speculative builders. During this later period (post-1900) discontinuous speculative construction of three deckers also occurred on the developing fringes of the innovation centers.

Boston appears to have had the earliest three deckers, and there is some evidence that early types were also built in Fall River and adopted shortly thereafter in Worcester.[16] Stylistic evidence supports this latter case since both Fall River and Worcester have the hip roof as a common element, although built to different proportions. (see Table I). The Boston style was diffused north to the cities of the Merrimac Valley and southern Maine, as well as south into Rhode Island. The Worcester-Fall River style was adopted in New Bedford as well as by the smaller mill cities around Worcester especially along the Blackstone Valley into Rhode Island. The two Hartford styles diffused north in the Springfield area as well as southwest into the industrial cities of the Farmington and Naugatuck Valleys. The cities of Long Island Sound, such as New Haven, adopted a modified Boston style with some elements of the Hartford style, as did many of the smaller cities of central and western Massachusetts such as Southbridge and Pittsfield. Fitchburg seems to have adopted the Boston style and transformed it into a unique local variant. The Parker Hill-Brookline section of Boston also developed a unique style which remained localized to this section of Boston. Very few, if any, three deckers were constructed in the Thames Valley (New London et al.), the upper Connecticut Valley (Greenfield) or in the smaller cities to the west of Boston, such as Marlborough. Virtually no three deckers were built in Vermont and northern Maine and New Hampshire, or west of the Taconic Range (Hudson Valley) in New York.

Diffusion and adoption of the three decker approximates the general pattern of initial development in the industrial cities of eastern Massachusetts and Central Connecticut, with subsequent adoption in cities proximate to these initial core areas. Acceptance of the three decker appears to have been limited by the sparse number of potential urban sites in northern New England, and by a non-receptive area to the west. As yet, the parameters of the diffusion sequence of the three decker are not well understood, particularly in regard to negative areas within southern New England such as the Thames Valley as well as the obvious boundary in western Massachusetts and Connecticut.

The local variations in architectural style of the three deckers within southern New England are even more pronounced than the distribution pattern presented above. Abrupt stylistic variations over relatively short distances, such as those between Worcester and Fitchburg, indicate that local builders were sufficiently cohesive in maintaining unique architectural traditions in spite of their proximity to other builders utilizing the same structural form. This localism is perplexing as normal stylistic diffusion of the three decker did occur according to the expected urban rank relationships, as with Boston and the cities of the Merrimac Valley or with Worcester and the urban centers of its immediate hinterland. Yet, the lack of stylistic transfer between Boston and Worcester dispite their proximity in space and rank indicative of a more complex set of

TABLE I

THREE DECKER STYLES
architectural classification

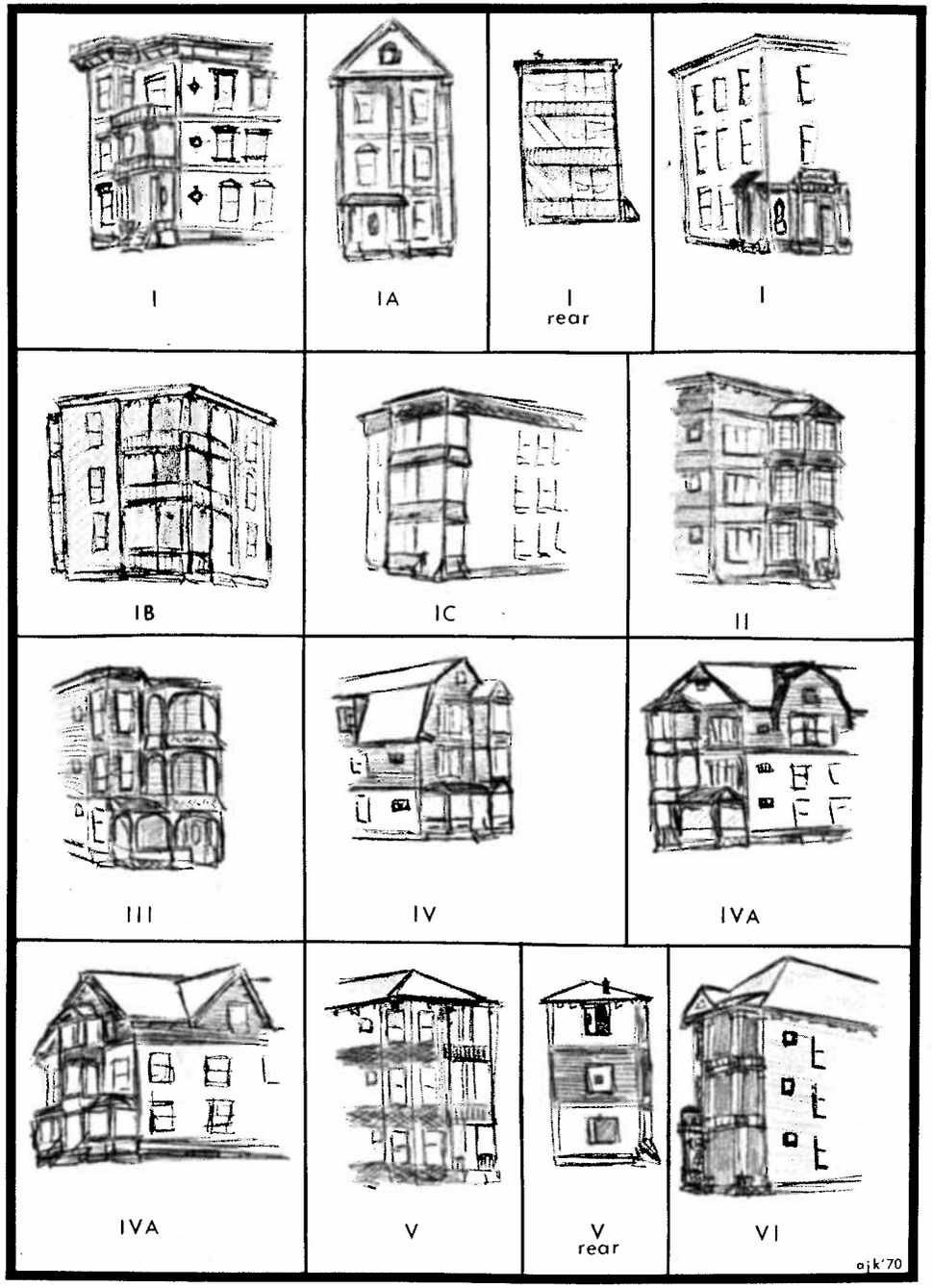


TABLE I

General Classification of Three Decker Styles in New England

Types

I - Boston-Merrimac Valley-Providence: Flat roof; 2 and 3 story off center front porch, 3 story front and side bay windows; very ornate roof cornice; single colors throughout - grays, browns, greens, blues, off-whites; openwork 3 story rear porch; single frame windows; extensive use of detail trim and classical ornamentation; outside of Boston area - very sparse form and detail of structural elements.

Ia - Parker Hill-Brookline: Same as I except: high gabled end roof.

Ib - Central-Western Massachusetts-Connecticut: Same as I except: 3 story porch over front facade; sometimes - wide frieze board over porch in place of cornice - or - low hipped roof; single light colors - grays, browns.

Ic - Fitchburg: Same as I, Ib except: wide frieze board around structure of dark red, green, brown.

II - New Haven-Bridgeport: Same as I except: no cornice, no bay window; 3 story off-center front porch with pediment roof - sometimes inclosed; triple frame row windows on front; single colors - grays, browns.

III - Hartford-Springfield: Same as I except: 'L' 3 story front porch; dark color on 3rd or 2nd-3rd story - dark greens, reds; triple frame front window -or- bay window; older versions in brick with wooden front porch.

IV - Hartford-Waterbury: Same as III except: gambrel roof over 3rd story with side gambrel dormers; roof sometimes red; no bay windows; porch with pediment roof.

IVa - New Britain-Torrington: Same as III, IV except: low gable roof over 3rd story with side dormers; 'Pyramid' 3 story porch with pediment roof in front; often in single pale colors - grays, reds, yellows, browns, - often third story dark reds, greens, browns, blues.

V - Worcester: Low hip roof which covers 3 story off-center front porch and bay windows - often pediment over bay or porch area; multi-colored separation of three stories in banding or at 2nd story with dark colors - red, green, brown, - light colors remaining area - grays, browns, yellows; inclosed rear 3 story porch with sliding 'laundry' windows; extensive use of shingle textures between floors, often ornate detail trim.

VI - Fall River-New Bedford: Same as V except: high hip roof, front porch is not under main roof; single dark colors - brown, gray, blue, or single pale colors - yellows, grays, greens, browns; open work rear porch as in I.

Common Elements: Rectangular ground plan with narrow 'gable' end to street; extensive use of wooden shingles-clapboards, asbestos shingles - 'brick'; porches either railings or covered skirts; small brick vent chimnies, stained-glass stairwell windows; painted red brick or fieldstone basement-foundation; sash windows; often use of 1st floor-street by retail store - dark gray, green; aluminum siding has replaced wood in last decade but

relationships which were operative in New England during the period 1880-1930.

The primary factor seems to have been the operations of the speculative real estate market within each city as well as the region, controlling the acceptance of the three decker after its initial development. In addition, the cohesiveness of the local builders most certainly effected a role in the process of three decker construction and adoption. Thus, the creation of particular architectural styles and structures under similar urban conditions indicates that local urban traditions have exercised a significant role in modifying urban morphology.

The Three Decker as Urban Environment

Where they exist in large numbers (as in Worcester or Waterbury) three deckers create a unique urban environment. Visually it is an environment of muted and somber colors: greys, browns, pale yellows, and dark greens, blues, browns and reds; and of wooden textures: clapboards, shingles, asbestos brick, brackets, columns, railings, punctuated by ornate stained-glass windows and brass doorknobs.

These elements and devices were all derived from the upper class residential architectural styles of the period; the Queen Anne and neo-Classical.[17] When these elements, especially the chromatic range, existed in the context of upper class, low density residential developments, they created an effective foil to the natural landscape.[18] When applied to the three decker constructed at high density the urban environment generates a sensation of dreary sobriety. However fitting this mood seems to the low socio-economic status of the three decker environment, the modern observer should realize that the builder's intentions were positive; he sought to incorporate the upper class architectural modes of his time. The three decker is essentially urban folk architecture, although it fails to evoke an image of quaint honesty in its harsh industrial context.

Footnotes

[1]For examples in New England, see: Baingridge Bunting, Houses of Boston's Back Bay (Cambridge: Belknap Press, 1967). John H. Cady, The Civic and Architectural Development of Providence (Providence: The Book Shop, 1957). Cambridge Historical Commission, Survey of Architectural History in Cambridge, Vol. I East Cambridge (Cambridge: Cambridge Historical Commission, 1965), pp. 16-37.

[2]For example see: Margaret de M. Brown, Dutch Houses in the Hudson Valley Before 1776 Dover (2nd ed.), (New York: Dover Publications, Inc., 1965). Edmund W. Sinnott, Meetinghouse & Church in Early New England (New York: McGraw-Hill Book Co., Inc., 1963).

[3]T.B. Bottomore, Critics of Society Vintage Books (New York: Random House, Inc., 1969), pp. 51-65. Mel Scott, American City Planning Since 1890 (Los Angeles: University of California Press, 1969), pp. 455-58. William H. Whyte, The Last Landscape Anchor Books (Garden City, N.Y.: Doubleday & Co., Inc., 1970), p. 227.

[4]For example see: Howard Barstone, The Galveston that Was (New York: The Macmillan Co., 1966). Bunting, pp. 65-75. Ada L. Huxtable, Classic New York Anchor Books (Garden City, N.Y.: Doubleday & Co., Inc., 1964), pp. 87-107.

[5]Sam B. Warner, Jr., Streetcar Suburbs (Cambridge: Harvard University Press and The M.I.T. Press, 1962), pp. 52-64.

[6]Serious scholarship on the three decker is limited, although the following sources are of some value: Cambridge Historical Commission, pp. 68-69. Roger A. Roberge, "The Three-Decker: Structural Correlate of Worcester's Industrial Revolution," (unpublished M.A. thesis, Clark University, 1965), pp. 105-06. Christopher Tunnard and Henery H. Reed, American Skyline (Boston: Houghton Mifflin Co., 1955), pp. 125-26. Warner, pp. 103, 109, 149.

Field examination has been the primary method of surveying the extent and variation of the three decker. Each potential city and town in New England was examined during 1967-70, except those of extreme northern New England. A traverse was made by car in each urban center, recording by camera what was perceived as typical, atypical, and aesthetically interesting three deckers. In large cities additional examination was made to determine the extend of the distribution. Emphasis was placed on photographic quality (color and texture), and these slides were assembled and presented as an informal lecture on the three decker in the Spring of 1968 and 1969.

At present no attempt has been made to document the construction dates or the specific builders of three deckers because of the difficulty of research in local city and town records. Roberge's study (see above) of Worcester was used as a partial check on dates and style within that city. However, he underestimated the extent of three decker distribution since his working definition was functional rather than architectural. Architectural detailing was used as a rough index for construction dates, as well as the site and location of the three decker in respect to the local urban morphology. Readers are strongly urged to conduct further investigation since the findings are based on visual approximation of the material.

[7]Cambridge Historical Commission, pp. 68-69. _____, Vol. II Mid Cambridge (1967), pp. 76-97. Roberge, pp. 1-2, 36, 103-06. Warner, pp. 141-152. James R. Wheeler, "The Three Decker," Sunday Telegram (Worcester), June 25, 1967, Feature Parade Magazine, pp. 3-5.

[8]Tunnard and Reed, p. 125. Wheeler, pp. 4-5. For an early use of the term see: Worcester Tribute to the Columbia Year (Worcester: Massachusetts Board of Trade, 1893), p. 65.

[9]Roberge, pp. 95-100. Wheeler, pp. 3-5.

[10]Chicago Plan Commission, Master Plan of Residential Land Use of Chicago (Chicago: Chicago Plan Commission, 1943), p. 27. Warner, pp. 103, 149.

[11]Cambridge Historical Commission, Vol. II, p. 93. Roberge, pp. 101-63. Warner, pp. 117-52. Wheeler, pp. 3-5.

[12]Chester B. Fish, Jr., "Three-Story Construction is Past," Evening Gazette (Worcester), July 9, 1949, n.p. Warner, pp. 127-32.

[13]Scott, p. 455.

[14]Roberge, pp. 101-06. Warner, pp. 15-34, 153-66.

[15]Roberge, pp. 1-2. Wheeler, pp. 4-5, - according to a 1940 survey of percent of city population in three story wooden dwellings: Worcester - 50%, Providence - 33%, Hartford - 25%, New Haven - 25%, and Springfield - 5%.

[16]Roberge, p. 105. Wheeler, pp. 3-4.

[17]Cambridge Historical Commission, Vol. I, pp. 32-33, 69, 88-89. _____, Vol. II, pp. 76-87. Warner, pp. 145-51.

[18]Henry-Russell Hitchcook, The Architecture of H.H. Richardson and His Times, The M.I.T. Press (second edition) (Cambridge: The M.I.T. Press, 1966), pp. 218-41.

The Monadnock has been notified that Miss Marjorie M. Shank (Clark M.A. 1923) of Apache Junction, Arizona passed away last December.

GEOTHERAPY[1]

Gerry Hyland

The word geotherapy can be divided into two distinguishable components: 'geo' and 'therapy.' The word geo, of Greek origin, is used in many languages including English as a prefix meaning, earth, or of the earth.[2] It is found in numerous technical vocabularies.[3] The scale of the geo involved varies with each word: thus in geophysics and geodesy, for example, the scale is global; in geosyncline, the word refers to a particular defined portion of the globe's crust; and in the case of geophagy, the practice of eating clay, the geo refers to a very minute portion of the earth's crust.

'Therapy' is the act of curing or healing (from the Greek, therapeuein, to nurse). Therapeutics is the branch of medicine dealing with the treatment of diseases.[4]

An examination of the words prefixed by geo reveals the prefix has two distinct roles: that of a noun in the genitive case, geography, the description of the earth; or that of an adjective, geopolitics, in which geo qualifies the politics. A particular significance can be attached to the last example, since, strictly speaking the geo does not mean earth or of the earth, but of the earth sciences. Geopolitics, being governmental policies derived from the sciences of the earth and its resources in relation to a nation's population.[5]

Geotherapy, then would seem to present three basic meanings: therapy of the geo or simply curing the earth; geotype therapy or curing by means of the earth; and lastly the earth science meaning of geo which could mean either the curing of the earth sciences or curing by means of the earth sciences.

From these three interpretations let us develop four operational definitions of geotherapy:

I. The process of curing the earth's ills.
II. That branch of medicine which uses the physical earth to cure the illnesses of its population.
III. The operation of curing the ills of the physical sciences.

IV. That branch of medicine that employs the concepts of the earth sciences in curing illnesses.

Definitions I and IV seem to offer the widest scope for development. Using geo in a strictly physical sense, (i) geotherapy could well be the work of the conservationists. Using geo in the sense of the whole earth, geotherapy, would have multitudinous followers in its ranks. In definition IV, geotherapy, could, by modifying the existing natural environment and designing the biotope with greater sensitivity, enable the human population of the earth to find a greater sense of well being on the planet.

In conclusion, in somewhat of the manner of an intellectual retreat, let us say that geotherapy is what geotherapists do.

Footnotes

[1] A word, of suspect mintage, coined by Dr. Stea.

[2] David B. Guralik (ed.), Webster's New World Dictionary of the American Language, the World Publishing Company, New York, 1958.

[3] For example: geoanticline, geocentricity, geodesy, geoid, geology, geometry, geomorphology, geopolitics, geophagy, geography, geosyncline, geotechnology. Henry Pratt Fairchield (ed.), Dictionary of Sociology and Related Sciences, Paterson, New Jersey: Littlefield, Adams & Co., 1964. W.G. Moore, A Dictionary of Geography, Baltimore, Maryland: Penguin Books, 1963. Guralik, op.cit.

[4] Guralik, op.cit.

[5] Pratt Fairchield, op.cit.

RUM, SLAVES, AND MOLASSES: THE SLAVE TRADE OF NEWPORT, RHODE ISLAND, 1650-1769 (1)

Margaret Anne Tindal

It is interesting to note that while much study and attention has been devoted to the problem of Negro slavery and its various social, economic, political, cultural, and religious effects, manifestations, and variations in the southeastern United States, little effort has been directed toward the study of slavery in colonial New England. In fact, many people are unaware of the fact that slavery existed in New England or that the slave trade played an important role in the development of many areas in coastal New England.

Not only did slavery exist, but many persons in New England were engaged in the carrying slave trade. Newport, Rhode Island, located at the southern tip of the island known as Aquidneck was, during a part of the colonial period, the great center of the slave trade in the colonies.

It is contended then, that Newport was indebted to the benefits derived from the slave trade for making her a great commercial center in colonial New England. Moreover, the slave trade is seen to have exerted profound effects upon Newport's commercial orientation, cultural development, population, and physical morphology. By subjecting each of these elements to vigorous analysis in periods before the rise of the slave trade in Newport (1650-1698) and after the slave trade became a major enterprise (1715-1769), it is possible to get a "before-after" view of the town, which can then be utilized in demonstrating not a catholic, cause-effect relationship, but the close association of the slave trade with the prosperity of the town.

The earliest mention of Negroes in Rhode Island can be found in a law of 1652 which attempted to prohibit life slavery of Negroes and white indentured servants, and to impose a fine upon those who disregarded the law (2). As no specific date can be found for the introduction of Negroes into Rhode Island, a perusal of collateral reports and official documents and correspondences was made. This leads one to conjecture that Negroes were introduced into the colony sometime between 1638 and 1652.

As Newport was a port town, little agriculture was practiced there. The first cargo of Negroes imported from Africa was brought there in 1696. Between 1698 and 1707, twenty or thirty Negroes a year were imported into Rhode Island via Newport. The nature of the climate and other factors did not encourage the use of slave labor, but Newport merchants found the sale of slaves to be a very profitable enterprise. After 1700, merchants began to engage in the importation of slaves, and by 1707, they were thoroughly enmeshed in the trade.

Three causes may be cited to which the astonishing increase of slave trade in the eighteenth century can be attributed. First, the breaking (by Parliament) of the monopoly upon the trade held by the Royal African Company in 1698 and the opening of commerce to private competition by William and Mary served to stimulate involvement by merchants and traders. Secondly, the Assiento of 1713, which gave England the monopoly of supplying slaves to her colonial possessions, encouraged the participation in the trade of human flesh. Thirdly, and most relevant to Newport, the unprofitableness of slavery and the fact that the New England soil was unsuited to extensive agricultural production served to encourage the sale of slaves as a means of economic livelihood (3).

Newport's greatest involvement with the slave trade began during what Bridenbaugh has termed her Urban stage of development (4). She reaped a golden harvest from the slave trade and very few merchants in the town were not involved in the trade either directly or indirectly.

The slave trade was significant because it gave impetus to inter- and intra-Colonial trade. Trade relations with Africa, the West Indies, and Europe were developed. Europe was of especial importance as a focal point of trade as many items needed to carry on trade with the West Indies and coastal Africa were acquired in European trading ports.

The trade was significant in other respects. It stimulated production of goods by the formerly neglected back country; the benefits derived from the trade made it possible for Newporters to obtain specie with which to settle the adverse balance-of-trade with England; it created new industries and jobs for the populace of the town, one of the most noteworthy of which was distillery of rum. Newport was a great rum distilling center of New England, and this industry gave constant employment to many of the town's inhabitants.

Newport merchants became wealthy as a result of their involvement in the slave traffic. With the accumulation of wealth came fashion, function and ceremony, and before the onset of the Revolution, the exalted social status of Newport's wealthy citizens received widespread recognition (5). Newport became a town of great sophistication. Her economy provided a vigorous commercial base for cultural advancement. The town advanced during this period and established a social culture equal to any in the colonies. Characteristic developments included the establishment of cultural institutions, the creation of a class comprised of wealthy merchants and aristocrats who, in turn, became patrons of the arts, encouraged cultural development, and built splendid homes.

The involvement of Newport in slave traffic was reflected in the population of the town, which showed a marked increase. Immigrants of various nationalities came. Prior to 1700 a large number of Jews came to Newport. Quakers arrived in such numbers that by 1700, one-half of the

populace belonged to the Society of Friends (6).

There was a marked increase in the Negro population, as might be expected. The number of Negroes in the town and in the colony may be associated with the slave trade. For example, in 1708 there were 220 slaves in Newport out of a total population of 2203--the largest number of Negroes present in any town of the colony at this time (7).

The spatial expansion of Newport can be correlated with her growth as a slave mart. Maps of Newport during the period in which the slave trade flourished are very valuable in that they show what the town was like; and by comparing these maps with maps of the town before the onset of the slave trade, a fairly good picture of how and in what direction the town grew may be had. Exemplary of Newport's great commercial growth is the fact that by 1739 the town wharf was extended in a westerly direction, and its length was 2,183 feet. Perhaps the most significant map which can be used is that drawn by Rev. Ezra Stiles in 1758. This map shows the full panoply of wharves and designates many of them by name.

Even though it is not possible to prove a direct cause-effect relationship between the slave trade and Newport's meteoric rise to prominence during the colonial period, it can be seen that they are closely associated. It is not the claim here that the slave trade was the only economic enterprise engaged in by Newport's citizens. It is merely contended that the slave trade formed an integral element in the economic life and structure of colonial Newport, and that its influence can be detected in many aspects of the town's commercial, cultural, demographic, and physical development.

By 1769, then, Newport was the principal northern slave mart and the most important commercial center in New England.

Footnotes

[1]Margaret Anne Tindal, "Rum, Slaves, and Molasses: The Aspects of the Slave Trade and Its Role in the Development of Newport, Rhode Island, 1650-1769," (unpublished ms., Clark University, 1969), for historical and geographical background, maps, illustrations, and bibliography.

[2]Elizabeth Donnan, Documents Illustrative of the Slave Trade to America, Vol. III: New England and the Middle Colonies, Washington: Carnegie Institution of Washington, 1932, p. 108.

[3]Richard M. Bayles, History of Newport County, Rhode Island, 1638-1887, New York: L.E. Preston and Company, 1888, p. 497.

[4]Carl Bridenbaugh, Cities in the Wilderness: Urban Life in America, 1743-1776, New York: The Ronald Press, 1938.

[5]Herbert Lawton, Historic Newport, Newport: Chamber of Commerce, 1933, p. 2.

[6]Edward Peterson, History of Rhode Island and Newport in the Past, New York: John S. Taylor, 1853, p. 59.

[7]Lorenzo J. Greene, The Negro in Colonial New England, New York: Athenaeum Press, 1968.

THE ECOLOGICAL PERSPECTIVE AND SYSTEMS RESEARCH IN GEOGRAPHY

Robert E. Black

The man-land or man-environment concept, although of central concern to geographers, has been of some interest to several other disciplines for many years. The perspective given to this association of man in his milieu varies with the discipline; however, several basic ideas are common to all investigative approaches. Despite this fact no universally acceptable terminology or meaning has developed among the various academic schools of thought to cover even these basic particulars. Realizing this, Harold and Margaret Sprout attempted several years ago to offer a unifying approach to researchers, particularly those interested in international relations, concerned with the study of man-environment relationships.[1] Decision making and the elements, behavioral and environmental, which are associated with the decision making process at all levels of the social spectrum are of paramount importance in the Sprout's analysis of the man-land concept. In light of the behavioral movement currently taking place in geography, it seems that too little attention is being given to the provocative insights presented by the Sprouts. It is the purpose in the first part of this paper to review the Sprout's analysis and approach to the study of human affairs within an ecosystem framework, and then briefly in the latter sections this ecological perspective will be discussed with reference to the behavioral and systems research trend in geography.

The Sprouts' findings simply stated but developed and elaborated upon in the following paragraphs are that psycho-ecological concepts (the milieu as perceived and reacted to), and theories of cognition, motivation, and decision making will not work at all at the level of systems theory. The reason for this is that despite the convenience, it is purely metaphorical to attribute psychological characters to such abstract entities as the state, the political system, or the international system. Abstract entities such as political and socio-economic systems are not biological organisms, and do not resemble such organisms in any behavioral sense. Psycho-ecological concepts and theories formulated with reference to human persons, as individuals and formal groups of people, simply make no sense whatever when applied to systems or other high level abstractions.[2] To geographers this is quite apparent, presents no real problem and will be dispensed with later in the paper. The reason for this over-simplification,

according to the Sprouts, is due to the ambiguous definitions attributed to various behavioral and environmental terms and concepts, and consequently the slovenly and non-rigorous use of these terms by scholars and non-academicians alike.

In order to appreciate the Sprout's reasoning it is necessary to examine their statements concerning the man-land concept, and to become familiar with their attempt to define the appropriate terminology so necessary in understanding and working with the concept. It is difficult, if not impossible, to separate the ecological system from the decision maker as he and the behavioral processes involved are a part of the system's substructure.[3] Therefore, each element will be treated as it seems logical to do so with no attempt to artificially extricate the part from the total system.

In an effort to avoid the ambiguities inherent in the term environment, the authors fall back on the French word milieu to denote the whole range of environing factors, human as well as nonhuman, intangible as well as tangible. The word is used in the relational sense with two parts, viz: the environed unit (an individual actor or formal group of individuals), and the milieu to which that unit is responsive or otherwise related.[4] As can readily be seen we are dealing with two sets of phenomena in the decision making process: structures and properties of the environed unit (what might generally be referred to as personality), and factors of the milieu.[5] A further distinction is made between the milieu as it actually is and the milieu as it is perceived and reacted to by the environed unit. The latter is called the psycho-milieu consisting of images or ideas derived from some sort of interaction between what he selectively receives from his milieu and his personality, i.e. his scheme of values, memories, training, and experience. In the execution of any decision, the complex factors to be considered are always less than the total aggregate in his milieu. Different observers bring different critical criteria to bear. The set factors thus identified comprise the operational milieu of the environed unit in question and are the complex conditions and events that will determine the outcome of whatever the unit decides to undertake. "He may react imaginatively or stupidly, rationally or irrationally, to what he perceives. But it is his percepts and reactions to his milieu, not the milieu as it is, or as someone else apperceives it, that determines what is to be undertaken."[6] This thesis points up that factors of the milieu can affect human activities in only two ways. They can be perceived, reacted to and taken into account by the environed unit, thereby influencing or conditioning the decisions of the actor. This is known as the "undertaking". The relation of the factors of the milieu to the operational outcomes or results of decisions and undertakings present an additional dimension. Or they may be viewed as a matrix which limits or otherwise channels the execution and outcomes of undertakings. We have then, the undertakings resulting from the psycho-milieu, and the outcomes thereof influenced by the operational milieu.

According to the Sprouts, difficulties arise with reference both to the abstraction nation-state and the still more abstract system concept. Environed unit and milieu are concepts with strong spatial connotations. But a social system is neither a physical entity nor a biological organism. "How then can one speak of such a system as having an environment or milieu? What is environed by what? It is questionable whether it is sensible at all to employ ecological concepts and theories with reference to such abstractions."[7] It is often impossible to differentiate clearly between genetic and environmental limitations when dealing with the individual as the

environed unit. The same can be said of differentiating limitations derived from an organization's substructure and from the milieu in which it operates. In the latter case, as in the former, both structures of the unit (personality for the individual, and internal management organization for the group or firm) and the factors of its milieu may be significantly relevant to explaining or predicting decisions, but with one essential difference: in the case of the social organization, or system, the only entities psychologically capable of making decisions are human individuals who appear from the perspective of the system as a whole to be substructures of the system. "Troublesome ecological difficulties arise when the behavior of the system's human agents is attributed to the system qua system."[8] Environing conditions and events can affect decisions only by being perceived and reacted to psychologically in the light of the environed individual's felt needs and previous experiences, i.e. his personality. The Sprouts therefore conclude that reification of abstractions such as systems leads only to intellectual confusion.

Over-emphasis of the reification problem detracts from the intrinsic value of the concepts presented in the "ecological perspective", and it is with some difficulty that a reader of the Sprouts conclude that their reasoning is not to be construed as an attack on the systems approach or on all aspects of systems theory. Quincy Wright's substitution of "geographic and analytical fields in place of environment, in his scheme for analyzing the international system, and S.B. Jones' "unified field theory" are according to the Sprouts, attempts to deal with systems using a minimum amount of psycho-ecological rhetoric. "When the analytic focus is shifted from psychological behavior (decisions, undertakings, strategies, policies) to operational results of decisions (outcomes, achievements, relational patterns derived from interaction), the methodological difficulties reviewed above either disappear or at least become less troublesome."[9]

For geographers interested in environmental perception and the behavioral approach to spatial research within a systems context, the Sprouts' conclusions present an apparent dilemma. To those pursuing answers to the how and why of location theory, analysis of individual and group performance is essential for obtaining any real world answers to the causes of location. Traditional theory accounting for the location of economic activity no longer satisfies the demand to "tell it like it is." "The gulf between observable economic-geographic phenomena and the neat optimal solutions of economic location theory is the product of imperfect knowledge and non-optimizing behavior on the part of actual individual decision-making units....."[10] Regardless of one's research or instructional use of the rational vs satisfying man concepts of locational decisions, it goes without saying (and in this respect it is difficult to fault the Sprouts) that man acts within the operational constraints of his particular milieu and his image or perception of the milieu. "What this means is that for any individual organism or organization, there are no such things as facts. There are only messages filtered through a changeable value system."[11]

The difficulty which the Sprouts have with the systems outlook is more apparent than real since it is their feeling that the ecological perspective (i.e. environmental concepts and relationships) is inherent in, and central to, any serious discussion of human affairs. It appears that in dwelling on the reification of the system, they have fallen into the trap which they themselves warn against, viz: separating the activity of the human actors within the system from the system itself. It seems clear to anyone dealing with the ecological perspective that the milieu which the

Sprouts describe is itself an open system. That is, the particular system in which each individual finds himself, his own personal component, shared in part by other units, of a much larger system or environment. If we consider this actor system as the basic component or subsystem within an overall social system of human activity, then the problem of charging the system with a personality is minimized if not overcome. That is, as the Sprouts suggest, by equating a social system's activities, e.g. political system, urban system, communications system, with the action of the system's human participants, the difficulties inherent in system personification are avoided.

Since geography was nurtured by the environmental deterministsgeographers today are less inclined to attribute human-like qualities to such abstractions. For this reason the Sprouts looked to this discipline for avenues which would bypass the reification problem. Geography's traditional concern with spatial dimensions and environmental relationships was viewed by the Sprouts as fruitful ground. "This concept of geographic quality is central to the ecological perspective and to any scheme for analysis of ecological relationships. This is so because systematic analysis confirms common-sense observation that the distribution and arrangement of phenomena upon the earth's surface are always, or nearly always, related significantly to what people undertake and to what they accomplish. The ecological perspective and ecological theories bring the dimensions of location, distance, space, distribution, and configuration sharply into focus in many social contexts....."[12]

Since an objective of this paper is to bring together this perspective and the systems approach, let us turn to an area, as an example, which offers relevant and truly significant problems for geographers to apply their talents----urban systems research.[13] Clearly, as a scientific discipline, geography must concern itself primarily with the development of the theoretical study of spatial distributions and their correlates. But this does not necessarily mean that all geographic research must be irrelevant or unrelated to the most pressing problems confronting man on the earth's surface in the next decade. There are strong arguments supporting the inductive methods of theory building and stronger ones demanding a solution to the very practical problems facing the world.

Divorcement of what is studied from tangible problems and observations in the real world is neglect of details in favor of the overview. Many believe that the relationship of these details to the concept is that of generating it. The rapidly changing world has made concepts by which we sought to make sense of external realities considerably out of date. In an effort to build new concepts there is an extreme need for geographers to spend more time working in the laboratory, especially during their study and internship years. Whether that lab is a sedimentation tank or the inner city, a planning region or a one-acre farm, a return to the study of details is a necessity if geographers are to maintain a relevancy to the interaction of man and his environment.

Social and economic dominance of the urban or metropolitan region as conceived in the past is no longer adequate to explain the role of the urbar system. There may in fact be danger on the part of some planning organizations of becoming trapped by earlier conceptions of community development because of strong emotional attachments to those theories. The social and technological revolution of which we are part is so all penetrating that not only is past theory unable to lessen the surface noise but also it is

becoming very difficult to come up with the conceptual apparatus to comprehend what is going on. Although all the elements of this upheaval are not obvious at the present time, some of them are slowly emerging and clamoring for attention in a fresh light and with new tools. For example the interaction taking place in the inner city points up the disconcerting fact that we no longer have the same sort of relation between the physical form of communities and their socio-economic organization. Structural or organizational shifts within the secondary and tertiary sectors of the economy are reflecting vast improvements in communications and transportation. Air shipment of both farm and commercial products has greatly affected the relative location patterns of producer and consumer. With the advent of the jumbo jet the anticipated cost to transport a ton of product between the United States and the Far East will be roughly cut in half. Wholesaling and warehouse locations now show only slight resemblence to a former period when railroads dominated the freight handling scene. Firms operating out of two or three warehouse locations can serve the entire nation overnight. Just as von Thünen's principle was considered to be less relevant in the age of fast overland exchange of goods and services, so will the Christaller-Lösch concept of central place come in for modification when it is easier to move between certain of the major metropolitan areas, which have sophisticated jet air and ground facilities, than it is to move between many of the smaller ones. We may in fact be by-passing smaller communities, depriving them of certain functions which in an earlier period were traditionally theirs.[14] In any event, the situation has now become so complex that nothing short of an interdisciplinary attact on these problems will be effective.

You may ask with justification, what has all of this to do with the ecological perspective? Where does the systems approach fit into the problem solving of the 1970's? The answers have been suggested elsewhere and are reiterated here because of their importance. The ecological perspective was presented as a logical viewpoint for the investigation of man's relationship to his milieu. The Sprouts' argument for standardization of terms and definitions when dealing with the ecosystem, and the common language found in General Systems Theory, provides both the perspective and the research vehicle which must be available for a sensible and coordinated multi-discipline effort against our current man-environment problems. For only a unified effort meshing together the theory and research of science, the technology of industry and the controlling powers of government will be sufficient to bring man and his environment in balance and harmony.

Footnotes

[1]Harold and Margaret Sprout, The Ecological Perspective on Human Affairs. (Princeton: Princeton University Press, 1965).

[2]Ibid., page 42.

[3]It appears that the Sprouts are talking about the ecosystem as defined by E.A. Ackerman, "Where is a Research Frontier," AAAG, V.53 (1963), pp. 429-40; and D.R. Stoddart, "Geography and the Ecological Approach," Geography, V. 50 (1965), pp. 242-51; D.R. Stoddart, "Organism and Ecosystem as Geographical Models," in Models in Geography, R.J. Chorley, and P. Haggett (eds.), London: Methuen & Co., 1967, pp. 511-48.

[4]Sprout, p. 27.

[5]Little attention has been given to an understanding of the functioning of the personality by geographers. An exception to this is: Robert D. Campbell, "Personality as an Element of Regional Geography," AAAG, V.58 (1968), pp. 748-59. Perhaps this omission is entirely logical, as the subject matter rests primarily in other fields. However, if geographers are ever to come to grips with the factors involved in locational decisions, particularly at the micro-level, inquiries into personality formation and other elements of the behavior must be made. One method of understanding the personality which is relatively uncomplicated and rather utilitarian in its approach is that of the Personality Assessment System (PAS) as propounded by Dr. J.W. Gittinger and others at Psychological Assessment Associates, Inc., Washington, D.C. They view personality development in three dimensions: primary level which constitutes the set of abilities that are considered inherited or innate and are the patterns used by children for adjustment in their early years. This is followed by a state which is stabilized by early adolescence called the basic or attained level of personality. The patterns of this personality level constitute the "real" person and are relatively permanent. There is a further modification of behavior which represents the achievement of a surface, contact, or ideal personality. This level stabilizes in early adulthood and provides a mechanism allowing the individual to present a behavior pattern which conforms or adjusts to a confrontation which otherwise would have stymied his basic personality. The advantage of this behavioral system to geographers is that with a minimum amount of training, personality assessments can be made in the field through observation and if necessary without formal testing procedures.

[6]Sprout, p. 207. On psycho and operational milieu see Sprout, pp. 29-33, and pp. 60-63.

[7]Ibid., p. 39.

[8]Ibid., p. 205.

[9]Ibid., p. 211.

[10]Allan Pred, Behavior and Location. Foundations for a Geographic and Dynamic Location Theory. Part I. Lund Series in Geography Series B, Human Geography, No. 27. (Lund Sweden: Gleerup Publishers, 1967), pp. 22-23.

[11]Kenneth Boulding, The Image. (Ann Arbor: University of Michigan, 1956), p. 14.

[12]Sprout, p. 14.

[13]The benefits of systems theory to geographic research was stated succinctly by Stoddart (1967, p. 547): "Systems analysis at last provides geography with a unifying methodology, and using it geography no longer stands apart from the mainstream of scientific progress."

[14]For a detailed treatment of these ideas see: Derek Senior, (ed.), The Regional City. (Chicago: Aldine Publishers, 1966).

THE PITFALLS OF INTERDISCIPLINARY STUDIES, OR THE DEVELOPMENT OF JARGONIC DIFFERENCES - ONE EXAMPLE -

Reed F. Stewart

While reading an anthropological study of one of the Mossi peoples (Hammond, 1966), the present writer ran across the following footnote on page 45:

> This creates a problem in nomenclature. In Anthropology the term horticulture has been usually used to refer to less effective or efficient techniques of food growing. The exclusive use of handtools; the absence of fertilizers and/or crop rotation and fallowing; and ignorance of irrigation are usually implied - all factors conducive to lower productivity. Agriculture, on the other hand, is a term that has been used for more efficient techniques of food growing. Neither term works very well for the Mossi. For in many ways the techniques they use in gardening, the "horticultural" aspect of their subsistence technology, are more efficient than the techniques used on their farms.

The linking of horticulture with inefficient practices and of agriculture with efficient ones bothered the writer, since he thought of the difference between the two terms as a matter of intensive as against extensive use of the land, with horticulture being also regarded as a class of the larger grouping of agricultural practices.

Reference was made to four dictionaries: Funk and Wagnalls Desk Standard Dictionary, 1938; The Random House Dictionary of the English Lauguage, The Unabridged Edition, 1966; Webster's Seventh New Collegiate Dictionary, 1967; and The American Heritage Dictionary of the English Language, 1969. The definitions in the Random House dictionary may represent the consensus:

> agriculture, 1. the science or art of cultivating

> land in the raising of crops; tillage; husbandry; farming. 2. the production of crops, livestock, or poultry. 3. agronomy.
>
> horticulture, 1. the cultivation of a garden, orchard, or nursery; the cultivation of flowers, fruits, vegetables, or ornamental plants. 2. the science and art of cultivating such plants.

The sense of intensive as against extensive tillage comes through all definitions fairly well, as does the subsuming of horticulture under the broader heading of agriculture.

Next, reference was made to two dictionaries of geography. Moore (Moore, 1958) defined only agriculture, speaking of it as "The practice of cultivating the soil in order to produce crops...sometimes loosely used to include Pastoral Farming as well...", Monkhouse (Monkhouse, 1965) defined both terms and confirmed the sense of the more general dictionaries consulted earlier:

> agriculture - Used in a wide sense as the growing of crops and the rearing of livestock; the whole science and practice of farming. However, some writers restrict the term to the growing of crops alone.
>
> horticulture - Orig. the cultivation of a garden; it is now used more widely to cover the intensive cultivation of vegetables, fruit and flowers on a small plot, including market-gardening, nursery-gardening and glass-house cultivation.

The next step was to check with a dictionary of anthropology. The only one available was a paperback (Winick, 1958). One can see the closer agreement with the sense of Hammond than with Monkhouse and with the more general dictionaries:

> agriculture - The process by which societies grow vegetable food. ... The use of animal power for manpower and the use of such devices as the digging stick and plow are often found in early agriculture, as are food plants, the hoe, and some sort of irrigation. ... With agriculture are often found metal-working, the wheel, writing, larger buildings, and larger social organizations.
>
> horticulture - Hand tillage of the soil, using such implements as the hoe, which can be operated by human power. The digging stick is probably the most frequently used tool. Women engage in a large part of horticulture. Shallow cultivation is generally the rule. ...

There seems a certain logic in the divergent views. Handtool work would limit crop raising to a small area. As plows came into use, handtools were relegated to garden-sized plots, while animal power was used in larger

fields. Note that Winick does not specifically say this, nor does he explicitly say that horticulture is less efficient than agriculture. "Shallow cultivation," however, suggests less effective work. It would also seem that the anthropologists have been conditioned by their focus on past cultures and on "primitive" man to equate handtools and small scale work with inefficiency. It is to Hammond's credit that he recognizes that the equation is a faulty one. Perhaps it is a tendency on the part of geographers to focus on the present (pace sequent occupance and cultural-historical geographers) that has allowed geographers to recognize that small scale work, with handtools, has often necessitated efficient use of time and soil, with the result that geographers have stayed in closer touch with the general understanding of the two terms. Certainly the contemporary widespread use of machines, sprinklers, drain tiles, greenhouses, etc. has influenced geographers as they think about horticulture as small scale agriculture, by no means inefficient.

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THROUGH MY FIELD GLASSES: SOIL AS A RESOURCE IN THE YEAR 2000 IN THE UNITED STATES

Dhevarajh S. Rajah

If the events of the past two decades can be a basis for judgment on the character and type of society, then it can be envisaged that in the year 2000 culture and way of life in the United States will be overwhelmingly technological and scientifically orientated. It is estimated that in the year 2000 United States will have a population of nearly 330 million, 90 per cent of whom will reside in large megalopolises.[1]

We have already witnessed significant technovations in the United States affecting the daily lives of people and this trend will accelerate in the coming decades. The increasing application of accumulated scientific knowledge will reduce man's dependence on soil. The input mix in the agricultural production function will be altered.[2]

I forsee changes in people's taste and values which will have profound influence on their attitude toward soil as a resource. Dramatic changes will take place in the way food and fiber are produced and distributed in the United States. The acreage under cultivation will be drastically reduced, the number of working hours on the farm will be cut by half and the latter part of the century will be one of radical transition as a result of combining industrial processes and science in the production of food and fiber.

We can expect with some confidence that new principles will be discovered and important agricultural applications made in the future, principles and applications which will make it possible to grow more food on less and less land with less and less human effort.

A significant advancement will be greater knowledge of the ways in which plants adjust themselves to temperatures in which they grow and thus the creation of artificial environment at more nearly optimum levels. Moreover, this technological transplant can take place over a wide climatic range. Food and fibers can be grown under simulated weather conditions in 'cages,' 'greenhouses' or 'hot houses.'

At the same time notable progress will be made by plant geneticists in breeding new varieties of plants which will be quick maturing and high yielding. Plastic-coated seeds - disease resistant and high yielding - whose germination can be controlled will be in widespread use.[3]

The soybean, for example, which has a high protein content with more branching and pods per plant will have high yields. Multi-eared corn varieties not only high yeilding but containing more protein will be common.[4] The real potential of these developments is as a source of food for people in the underdeveloped countries.

A whole new production process under totally new environmental conditions will involve changes in the growing methods, harvesting, storage and more importantly new machinery and equipment. The huge, bulky and expensive farm machinery of today will be obsolete.

Data for each 'field' or greenhouse will be stored in computers and the simulator approach will be used in production and harvesting. Increasing use will be made of computer simulation techniques in agricultural production which can now be controlled to prevent surpluses. We can expect a broader view of the problem of efficient production and the concern will shift to yield of nutrient per acre or per dollar input rather than yield per acre.

Technological advances will permit us to obtain protein and fat directly from the plant rather than secondarily through animal products. At present only 10 per cent of the calories fed to animals is returned to man as a source of food in the form of milk, meat and eggs. The loss will be counteracted by extracting more protein from vegetable sources, viz., soybeans and alfalfa. Textured protein foods will be developed from vegetable sources and combine with flavors to simulate meat or nut-like and fruit-like products.[5] These products will give consumers interesting food choices and at the same time supply the much needed proteins in diets around the world. I forsee a change in the dietary and food taste of society in the coming decades. The modification of food technology would permit human diets to be supplemented with needed amino acids (presently derived from animal products) at a fraction of the cost in acres that characterizes the present system.

What effects will these agricultural innovations have on soil? First of all, there will be a drastic reduction of the acreage under food crops and fibers due to high yielding varieties grown under simulated weather conditions. The decreasing dependence on animals as a source of protein will mean a reduction in the animal population and consequently the acreage under grazing and pasture. New ideas about fertilizing grass for a reduced cattle population can keep fields productive indefinitely. Soil erosion and soil conservation will no longer be major issues facing the nation. There will be a new outlook and orientation to and a tremendous savings in expenditure on soil conservation. Whatever rehabilitation of eroded land necessary will take place by addition of appropriate synthetic soil-structure-building materials. Furthermore, by the year 2000 agriculture may be regulated as a public utility adopting big business techniques. Displaced farm population may perhaps find employment in the food processing plants established in rural areas. Cropland will be shifted to other uses, perhaps recreational as the urban population with more leisure time will have larger needs of scenic, wilderness and wild life values.[6]

The technocratic society of the year 2000 will continue to rely on the ingenuity, technical skill and creative imagination of the scientists for the solution of its problems that may arise in a society with changed values and attitudes toward soil as a resource. In this period it may be scientifically possible or at least research may be concerned with the methods of producing food, fiber and wood without the use of soil.

Footnotes

[1]Hans H. Landsberg, Natural Resources for United States Growth: A Look Ahead to the year 2000, (Baltimore: The Johns Hopkins Press for Resources for the Future, Inc., 1964), p. 16; The Bureau of Census projections based on fertility assumptions indicate a population range from 295-420 million in the year 2000. See United States Bureau of the Census Report, Current Population Reports, Series P-25, No. 187 (Washington, D.C.: Government Printing Office).

[2]R. Burnell Held and Marion Clawson, Soil Conservation in Perspective, (Baltimore: The Johns Hopkins Press for Resources for the Future, Inc., 1965), p. 304.

[3]Progress Report - "Plastic-coated Seeds," Crops and Soils, XXI (January 1969), p. 11.

[4]Arnel R. Hallauer, "Corn with built-in Insurance," Crops and Soils, XXI (February, 1969), p. 16-17; Charles L. Prior, "Shaping the Corn Plant," Crops and Soils, XXI (December, 1968), p. 16-17.

[5]Judith R. Boyle, "New Soybean Products use Textured Protein," Crops and Soils, XXI (January, 1969), p. 12-13.

[6]Marion Clawson, Land and Water for Recreation (Chicago: Rand McNally and Co., 1963); Outdoor Recreation Resources Review Commission, Outdoor Recreation for America: A Report to the President and to the Congress (Washington, D.C.: Government Printing Office, 1962).

THE CLARK STUDENT UNION: A CASE STUDY IN BEHAVIORAL DESIGN AND MICRO-GEOGRAPHY

Tom Koch

Since its creation in 1962, Jefferson Hall at Clark University has housed the University Book Store, a dining room cafeteria for board students (with a major kitchen), a television room (previously a faculty lounge), several small rooms with changing functions and, most importantly from the students' point of view, the Union. The union is a moderately sized cafeteria where resident, off-campus and visiting members of the Clark community would congregate to talk, play cards, write papers and perform almost every other communal function of campus life.

For reasons of efficiency and the institution of a new board feeding arrangement, the union was moved after the spring semester of 1969 to the newer Dana Commons. Opened the year before as a board dining location, the Dana area was in many ways an acknowledged improvement. Its wood floor and tables, situated with, on the whole, an aesthetically more pleasing vista was both more comfortable and more relaxing than Jefferson's prefabricated cinderblock walls, tile floor and molded furniture.

The change, however, failed. It is the purpose of this short paper to attempt to explain the dissatisfaction of the Clark community with the change.

Background

The Clark Campus (see map) is divided into several sections. The oldest section is bordered by Jonas Clark (J.C.) Hall (principal classroom area), Atwood Hall Auditorium (where large lectures are given), the Geography Building and the Jefferson Hall complex. It is in J.C. Hall that the majority of classes are held and where many of the professors have their offices. To its left are the two major science buildings, one of which houses a large lecture hall in which several popular classes are given.

Behind J.C. Hall is the new Goddard Library which is flanked by the

two oldest dormitories--Bullock and Wright. These are the traditional underclassmen dormitories. Moving away from Main Street we encounter two new complexes. The older consists of two dormitories (Sanford men's and Johnson women's) faced on the third side by Little Commons which functions as a board dining hall, little theater and small lecture and auditorium location. Dana Commons, completed in 1968, contains not only the Commons but also two dormitories (Dana and Hughes) and a dining complex. It is to here that the union was moved.

Ramifications

As school reopened in September, returning students were quick to voice their disapproval of the change. The complaints, however, were never organized and most students attempted to resign themselves to the change. Within a few weeks the differences were seen. Except at lunch time, the union was relatively empty. Whereas the old union grossed over one hundred dollars between 7:30 and 11:30 in food sales, the new union averaged less than half that. The bridge games which were a constant feature of the old union all but disappeared in the new union. The new union was never full and "table hopping," a ritual of amiable visitation common in the previous location, was rendered impossible in the new union due to the sectionalized nature of the second floor and the lack of a clear view of all the inhabitants.

Local public establishments increased their sales to Clark students. Bove's in particular, situated on the corner of Main and Downing next to the Geography Building and Atwood Hall became a meeting place for geography and psychology graduate students and many undergraduates. In short, the changing of the location of the union created a severe disorientation of campus life as it had traditionally functioned since, for several reasons, the new union could not fulfill the same functions as the old.

Reasons

The most often stated reason was, simply, that the new union was "too far." Too far from the hub of campus activity. Too far from J.C. Hall, from Atwood Hall and from the Geography Building. "You really going to walk all the way over there for a cup of coffee?" was an often heard question. It was separated from both tradition and activity and lacked the convenience and centrality of the old union. In geographic terms, it was without the gravity to draw activity towards it. The old union was indeed the center of the campus activity, and its draw was that of the combined functions of the previously mentioned buildings. The new union as a single entity did not operate in conjunction with anything, and the pull it exerted was not sufficient to warrant overcoming the friction felt in the three to four minute walk.

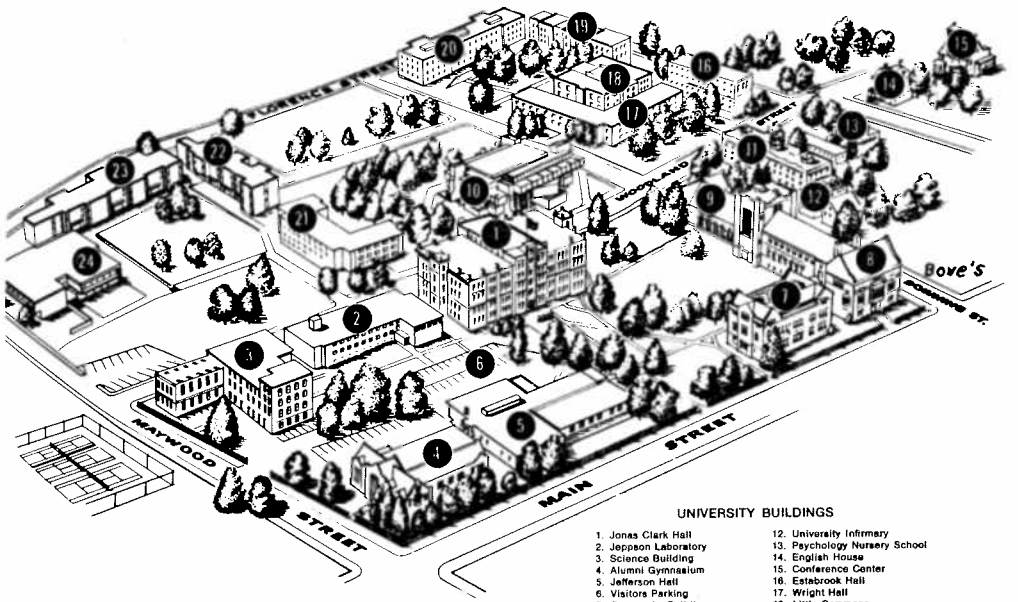
At the same time, the interior design, while admirably adapted to a dining hall failed miserably as a union. The large round, wood tables, for instance, were too large to provide a comfortable position for solitary work. The old union's smaller tables were ideal for individual reading and study and were in sufficient quantity to provide privacy for one, two or three individuals if it was desired (that is, excepting the busiest hours, noon time and 10 to 11:30 p.m.). In the same vein, the tables were too large for bridge games. As one student stated, "Ya need binoculars to see if you are going to go down one." The informality of the game as indeed the informality of the building, was lost in the new location. A second problem arose concerning the tables. Because of the fine finish on the wood tables

it became more obviously destructive to write on the tables; the formica of the tables in the old union could be instantly cleaned with a small amount of cleanser. Dana was, indeed, too neat, too nice and too formal for a union.

Conclusion

And so, after the short space of two months, the union was returned to the old location. By February the union at Jefferson Hall had regained much of its function as the spatial and cultural center of much student life. Bove's permanent clientele has increased since some students, particularly graduate students, find it a more peaceful gathering place. By and large, however, the student union has resumed its traditional role in student life now that it is at the hub of activity once more.

Clark University




SAVE!