

Anderson, Peter G., United States Military Academy: "George Catlin: Founder of the Biosphere Reserve Concept?"

George Catlin is considered the first person to use the phrase "a nation's park." His vision of a nation's park occurred forty years prior to the establishment of Yellowstone National Park, the world's first national park. However, if one considers the evolution of the national park concept in the United States, a different pathway for Catlin's vision might be observed. I suggest that Catlin's writing and vision reflects more closely upon the biosphere reserve concept. This paper reviews Catlin's nation's park vision, the national park concept and movement in the United States, and the biosphere reserve concept, and attributes the biosphere reserve concept to Catlin's farsightedness. Although he did not use the term biosphere reserve, nor describe the concept in detail, I suggest his vision provides the first foundation of the biosphere reserve concept, and more closely parallels this ideal than the national park concept.

Badurek, Christopher, University at Buffalo, SUNY: "Visualizing the Consistency of Spatio-Temporal Similarity Queries in GIS".

Understanding processes and patterns inherent to events, cycles, and diffusions are fundamental questions of interest to researchers across the social and environmental sciences. However, representing change in areas over time is a complex problem. For example, time is an abstract concept and there are many ways to conceptualize, reason, and speak about change depending upon temporal and spatial scales used. Analyzing trends in spatial phenomena over time with current GIS is 'cognitively expensive' and a means to more efficiently query similarity of spatial change is needed. The method proposed in this study addresses how to enable users of GIS to directly make comparisons of similarity of change in crime rates in the city of São Paulo, Brazil.

In order to use queries based on similarity of rates as a surrogate for examining process, three kinds of sample queries are evaluated: (1) comparison of rates of change in spatial unit A to all other spatial units; (2) the similarity of unit A to unit B over varying temporal resolutions; and (3) the amount the similarity of unit A to unit B varies over temporal resolutions. Comparisons of these queries show that temporal resolution has a measurable effect on the consistency of information retrieved by each query. Comparing these results in terms of their consistency yields quantitative measures of the degree of information loss by the use of different temporal intervals.

Badurek, Christopher, La Dona Knigge, Wendy Miller, and LJ Morgan, University at Buffalo, SUNY: "Evaluating the State of GIS Education in Guatemala".

Building human capital is recognized as a significant problem in developing countries, particularly for sustainable development, natural resource planning, and environmental management. In Guatemala, there is specific interest in the development of a GIS workforce to meet the needs of the country's cadastral project. Building on previous work concerning potential technical improvements to this project, we were interested in determining how well Guatemalan academic programs and government agencies are able to develop a workforce to support the project. This purpose of this

paper is to present preliminary findings on the state of GIS education in Guatemala and to discuss how teaching materials from the U.S. may help advance development of the GIS workforce there. Through interviews and visits to several government GIS labs and academic departments in Guatemala, we were also able to collect information on the state of GIS education and workforce development and have summarized potential improvements to these. We have also developed an information resource and education website to increase general knowledge of GI Science, GIS, and land information systems; enabling further development of advanced GIS professionals. These findings and potential usefulness of this approach to GIS education are discussed in light of developing human capital.

Bane, David, , “Geography’s Role in Protecting the Schuylkill River Watershed”.

The Schuylkill River and its tributaries have long been recognized for the important role they play as a source for drinking water and as fish habitat. In order to improve and protect the Schuylkill River Watershed, a group of governmental agencies and officials, watershed organizations, and concerned citizens formed The Schuylkill Action Network. As a partner in this effort, the Philadelphia Water Department’s Office of Watershed Management provides GIS and cartographic support to further advance the goals of The Schuylkill Action Network. This presentation will provide an overview of the various ways in which the Office of Watershed Management applies geographical concepts and tools in order to protect this precious resource.

Blumler, Mark A., SUNY-Binghamton: “Differing Perceptions of Traditional Agropastoralism North and South of the Sahara”.

Globally, there is much concern today about desertification/land degradation. Typically, pastoralism and other traditional agricultural practices are cited as major causal factors. Over the past few decades, a major critique of this orthodoxy has developed for sub-Saharan Africa. In contrast, critics of the received wisdom do not predominate in any other region of the globe (though neither are they absent). Yet it would be odd if traditional agropastoralism in sub-Saharan Africa were somehow drastically less degradational than elsewhere. This situation cries out for application of the comparative method.

Here, I compare the regions north (Mediterranean and Near East) and south of the Sahara, which have played crucial roles in the historical development of the desertification/land degradation thesis, and in which pastoralism is longstanding. I use *Environmental History* as an exemplar, presenting an analysis of recent articles from that journal that focus on one of the two regions. The analysis demonstrates the enormous regional differences in perception of the issue, and sheds light both on weaknesses of the orthodox view, and on some assumptions of its critics. A largely unrecognized aspect of the debate is that “overgrazing” really has two meanings: 1) grazing that temporarily sets back the herd, a phenomenon that unquestionably occurs again and again, everywhere; and 2) grazing that causes deterioration of the soil resource and hence, an inability of the pasture to recover fully. The latter, if it happens at all, does so only under local, highly unusual circumstances.

Bodenman, John E., Bloomsburg University: “The Spatial Dynamics of the Institutional Investment Advisory Industry: Metropolitan Philadelphia, 1983-2003”.

This paper examines the spatial dynamics of the institutional investment advisory industry, 1983-2003, focusing on the Philadelphia Metropolitan Area. Traditionally, high order financial services located in Pennsylvania like institutional investment advisory services have been concentrated in the Philadelphia Central Business District (CBD). However, analysis of the industry's organizational structure and spatial dynamics over the 1983-2003 study period indicates significant growth of the industry within the Philadelphia Metropolitan Area, but relative decline within the traditional core--the Philadelphia CBD. The Money Management Directory of Pension Funds and their Investment Advisors (1983-2003) provides the data for the analyses. Maps and tables describe the institutional investment advisory industry's spatial organization at both the inter- and intrametropolitan scales.

Boorstein, Margaret F., C.W. Post College of Long Island University, “Three Approaches to Protection of Three River Gorges in the Eastern United States”.

Three river gorges, Genessee, in Letchworth State Park in New York State, Red River, in Daniel Boone National Forest in Kentucky, and New River, in New River Gorge National River in West Virginia, and their surroundings were all exploited for their natural resources. The environmental degradation was severe, but little evidence remains today, largely because of protection by state or federal agencies. Each river gorge is geologically spectacular, but each is administered under different mandates: New York State Park System; United States Forest Service; and the National Park System. The combination of the particular requirements of each government entity, along with the specific history of each area, has led to distinct patterns of land use and human-environmental interactions in each area.

Brew, Wayne, Montgomery County Community College, PA: “Landscape Change in Hollywood, Pennsylvania”.

A local developer named Gustav Weber while on a trip to the West Coast in the 1920's fell in love with the Spanish influenced Mission Style of architecture popular at the time in California. When he came back to the Philadelphia area he planned a residential enclave of this style just outside of the city limits near Rockledge which is located in Abington Township, Montgomery County. He called the development Hollywood and also named the streets from locations in California (Los Angeles, San Diego etc.). The project was abandoned by Weber and went into bankruptcy during the depression. The project was eventually completed in the 1940's by a Montgomery County developer named Sidney Robin. The original plans had called for construction techniques and foliage suited for a Mediterranean Climate which had to be changed to adapt to a colder Northern Climate. There are a total of 120 houses in the development. Many of the homes have been modified (ranging from slightly to drastically) to update the houses as styles have changed. The Pennsylvania Historical and Museum

Commission has listed this enclave as eligible for the national registry. This presentation will focus on the modifications that have been made to these houses over the years.

Collins, Jennifer, Bloomsburg University of Pennsylvania, and **Susan Ryan**, California University of Pennsylvania: “Travel Experiences as Part of the Post Secondary Curriculum”.

Educational tourism relies upon the experience of travel as a facilitator to learning. Authenticity is sought through bringing the student experiences that are not available in the traditional classroom. Although the importances of travel-based and experience-based learning are well recognized in the literature the value of these learning approaches is minimally integrated as part of the post-secondary curriculum (Ritchie 2003). The outlined project researched the value of travel-based learning as a mechanism to overcome teaching and learning challenges in rural post-secondary institutions.

This research project was a joint effort between California University of Pennsylvania and Bloomsburg University of Pennsylvania. It was conducted to determine if travel-for-credit/educational tour experiences should be formally integrated into the liberal arts curriculum at these institutions. The economic environment from which many students originate and the rural nature of the communities at California and Bloomsburg Universities both inhibit learning in the classroom, where practical examples are limited to textual matter and visual aids. This research focused on measuring the overall experience of travel as a contributor to student personal and professional growth. The need and benefit of travel experiences to the researched post-secondary institutions was confirmed. However, it was determined that this value is not fully integrated into the post-secondary curriculum. Experience-based tourism is in great demand. According to students and faculty surveyed, this demand is currently untapped in the post secondary educational market.

Cox, Jennifer R., William D. Solecki, Sara Hodges, Hunter College-CUNY, **Cynthia Rosenzweig**, NASA-Goddard, and **Lily Parshall**, Columbia University, “Skin of the Big Apple: Landscape Heterogeneity and the Urban Heat Island of New York City”.

The objective of the paper is to examine the statistical relationship between surface temperature and a set of explanatory variables for the defined study area – greater New York City. We test a series of hypotheses associated with the landscape conditions of the entire area and for specific sub-regions defined by land use (e.g., residential, commercial) and location (proximity to open space and water bodies). Creation of a raster-based GIS will allow for a geographic analysis of the following variables 1) surface temperature as the dependent variable; 2) albedo; 3) NDVI (normalized difference vegetation index); 4) standard deviation of building heights; 5) size of water body; 6) distance to water body; 7) population - housing density; and 8) road network density.

The study area includes New York City and the immediate surrounds areas of northeastern New Jersey, Westchester County, and Long Island. Thermal data and other

variables are derived from a Landsat 7 ETM image (August 14, 2002 at approximately 10:30am) and an ASTER image (Sept 08, 2002). Additional variables, including parcel level on building heights and census tract data, are derived from existing statistical and GIS data bases. The results indicate that while the amount of vegetative cover and albedo are statistical the most significant variables in explaining surface temperature for the study area as a whole, the sub-regional analyses reveal the relative strength of other variables as explanatory factors. The sub-regional analyses provide policy relevant information on the potential influence of urban forestry programs and UHI mitigation strategies.

Cunningham, Mary Ann and Seth Schromen-Wawren, Vassar College: “Why Not Bike to Work? Green City Strategies in Denmark and the US”.

Transportation is a central consideration in environmentally-oriented urban planning, and bicycle transport is one important strategy for "green" urban development. While bicycles are a dominant mode of urban transport in Europe and Asia, they retain a largely recreational, and thus class-restricted, function in the United States. In this paper we examine some of the perceived impediments to bicycle transportation in American cities, using Poughkeepsie, NY as a case study. Poughkeepsie is a mid-sized urban center surrounded by rapidly expanding suburbs on the edge of the New York City commuter region. We examine strategies for bike route development in Copenhagen, Denmark, which has included bicycles in transportation planning since the 1970s. We conclude that cultural expectations are more important obstacles to this aspect of green urbanism than are the customary practical objections to alternative transport--economic costs of redeveloping infrastructure, population density, and the scale of American cities.

Dinero, Steven, Philadelphia University: “Bridging the Technology Gap? A Case Study from Native Alaska”.

Using preliminary results from a 3-year (2003-2006) National Science Foundation Partnership for Innovation project now under way in native Alaska (USA), this paper will address if and how information technologies can be incorporated into indigenous, geographically-isolated environments in order to bring positive social and economic benefit to those who are often the “victims,” rather than the beneficiaries, of economic globalization. It will be argued that information technologies such as e-commerce may be used *not to supplant* traditional social and economic structures, but rather, to *enhance and strengthen* them.

It will be the contention of this paper that by bringing badly needed income into Alaskan Native communities, information technologies can help sustain and perpetuate subsistence activities that now require substantial cash inputs. Indeed, the Alaskan Native telecommuters participating in this project, nearly all of whom reside in small villages hundreds of miles from the nearest highway or city, are now caribou and moose hunters by day – and webmasters and product marketers by night.

Neither agrarianism nor the Industrial Revolution suited the mobile lifestyle of many indigenous peoples around the world. The Information Revolution, it will be argued, provides an ideal opportunity for formerly nomadic and other indigenous peoples

like the Alaskan Natives in this study to participate effectively in the global economy, and to thereby become empowered participants, rather than victims, of the new flows of knowledge and information that are now facilitating the further restructuring of the 21st century global economy.

Dougherty, Percy H., Kutztown University of Pennsylvania: “Geography of the Pennsylvania Wine Industry and an Analysis of Recent Trends”.

Wine production in Pennsylvania has a long and illustrious history. William Penn planted the first vineyard in America, and America’s first commercial winery was along the Schuylkill River. With its diverse landforms and climatic regions, Pennsylvania is capable of producing wine from many vinifera grapes as well as the prodigious French hybrid varieties. There are over 14,000 acres of grapes grown in Pennsylvania, making it the fourth largest grape producing state in the United States and the eighth largest wine producer. There are 90 wineries in the State with several applications for new wineries pending. Seven well developed wine regions and four officially designated American Viticultural Areas produce a wide variety of wines. Award winning Riesling and Cabernet Sauvignon wines share the limelight with Chambourcin and Seyval Blanc. Growth of the wine industry continues in the face of restraints imposed by an archaic State system that controls alcoholic beverages. This presentation analyzes why there is a Pennsylvania wine industry in the first place, and looks at the trends that are rapidly changing the face of this activity.

Doyle, Brian James, The United States Military Academy: “The European Union and Development of the Periphery through the Infusion of FDI”.

This paper is a reflection of how Eastern Europe, in the two decades bridging the 1989 transition and under very specific conditions can be understood. Specifically it is intended to examine the role of Foreign Direct Investment (FDI) in the economic development of Eastern Europe. Within development studies the question of whether convergence or divergence is occurring between and among the economies of the world’s states is contentious. This paper focuses on the trends in the economies of Eastern Europe only. This paper will assert that there is strong evidence to support that convergence is occurring between Eastern Europe and Western Europe. The growth in GNP and the concentration and origin of FDI are indicative of this dynamic. This convergence is the result of two major forces; the legacy of socialist networks and the investment strategy of the current members of the European Union. Far from reaching an incontrovertible conclusion, the hope is that this paper may continue a dialogue as to what the enlargement of the European Union means to the economic development of former socialist economies.

Fraser, Elizabeth A., State University of New York at Cortland: “Multiple Scales of Land Use Priorities and their Manifestations in the Río Plátano Biosphere Reserve of Northeast Honduras”.

Protected areas of the developing world confront several obstacles in their struggle to be more than just a 'paper park'. One fundamental fault that impedes the success of protected areas is found in the wide range of priorities emphasized by the parties involved. The Río Plátano Biosphere Reserve of northeast Honduras provides a clear example of the different actors and priorities that may influence protected areas. This paper will discuss both the actors and their priorities, and how the varied priorities influence the planning, creation, and maintenance of the Río Plátano Biosphere Reserve.

Frazier, Tim, Pennsylvania State University: “When Speed Really Matters: Assessing Evacuation Potential of Subdivisions Along the South Carolina Coast”.

Recent hazard events, such as the Mississauga train derailment, the Three Mile Island scare, and hurricanes Floyd and Georges, resulted in some of the largest peacetime evacuations in North American history. In the examples of hurricanes Floyd and Georges, interstate roadways became parking lots as the number of vehicles attempting to flee the storms overwhelmed the road network's capacity and, thereby, put fleeing motorists in the potential devastation path of the storms.

The problem of safely evacuating large numbers of people becomes an issue of choke points in road networks that influence clearance times by reducing the flow of traffic when many vehicles seek simultaneous access. Although such reduced flow is a taken-for-granted norm for millions of commuters during weekday rush hour, the effectiveness of the transportation network is a more critical issue in crisis settings. Accordingly, this research explores how subdivision designs affect evacuation potential by converging quantitative results from transportation simulation modeling with impending qualitative interview responses from local actors. The Carolina Lowcountry was chosen as a research location because it is a region with a well documented evacuation history and is also under constant pressure to improve existing evacuation plans.

The results showed that subdivision design influences evacuation. Smarter subdivision designs could potentially save lives by offering more efficient evacuations in hazard events. This study also developed a better understanding of subdivision vulnerability that gives officials the opportunity to reduce the susceptibility of populations to hazards by requiring smart subdivision design in higher risk areas.

Frothingham, Kelly M. and Natalie Brown, Buffalo State College: “Determining the Suitability of Using Biotechnical Stream Bank Stabilization in Reaches of Cazenovia Creek, NY”.

In recent years, stream managers have been implementing “soft” biotechnical engineering practices to reduce sediment input to a stream from bank erosion, rather than traditional “hard” engineering. Biotechnical bank stabilization uses vegetation to stabilize eroding stream banks instead of large amounts of rock or concrete. The objective of this study was to use stability threshold analysis to determine the appropriateness of using biotechnical bank stabilization for bank repair in reaches of Cazenovia Creek, NY. Previous work identified five stream reaches in Cazenovia Creek that were unstable. Field work took place in these reaches during summer lowflow

conditions and included surveying the reach using a total station, taking water velocity measurements, collecting bed sediment samples, and determining percent riparian cover. Data from this field work was used to perform stability threshold analysis, which compares field data with permissible velocity and shear stress thresholds to determine what type of material should be used to stabilize a stream bank. Reach-scale lowflow velocity and shear stress values were calculated directly from the collected field data and bankfull velocity and shear stress were calculated using an estimated bankfull channel depth and Manning's equation. Results indicate that lowflow velocity and shear stress values for the five reaches were within the acceptable threshold limits for all types of biotechnical bank stabilization construction. Bankfull shear stress values for all the reaches were also within the threshold limits; however, bankfull velocity values were greater than the permissible velocity values at three of the five sites. Because bankfull velocity values were high, we would recommend using a combination of rock rip rap and biotechnical bank stabilization.

Gaines, David, Pennsylvania State University: "Geographical Perspectives on Disability: A Socio-Spatial Analysis of the Mentally Disabled Population in Russia".

This paper juxtaposes historical analyses and perspectives with existing practices of the treatment of people with developmental disabilities in Russia. People of disability have long been viewed as embodiments of abnormality and rejection that had no place in the mercantilist, Soviet system. Though the fall of Communism and the materialization of democratic ideologies resulted in the relative liberation and empowerment of Russians with developmental disabilities, these changes have hardly been thorough, as these groups continue to personify a subjugated role in the broader cultural, economic, and political arenas. By combining existing western thought and research in the field of "disability geography" with the situation in contemporary Russia, I strive to create a socio-spatial platform from which further analyses may flourish. Of particular interests are the constraining forces that continue to support disability enclaves—mostly urban areas that continue to represent the historical centralization of developmentally, physically, and psychiatrically disabled Soviets. This sector of Russian society has thus far been ignored in western geographical discourse, and I see a need to supplement existing non-geographical perspectives with spatial interpretations of this particular population.

Gentry, Glenn W., Syracuse University: "Strolling Savannah: Negotiation and Tour Participant Empowerment".

An increasingly popular form of tourism both in the United States and globally is the ghost walk tour (see Gentry 2004). Although walking tours are often perceived as structured with preordained direction and content, my study of ghost walk tours in Savannah, GA allude to something strikingly different. Although the tours are not usually free-form and whimsical, interviewed ghost walk tour guides speak openly about how the tour experience is often negotiated and altered by the tour participants. Places that are visited, the length of visit and the stories told all vary between tour groups. Surveyed tour participants, both explicitly and implicitly, suggest that the act of walking

grants them more control over the tour experience. This paper introduces ghost walk tourism as a mobile form of dark tourism; it describes the environment within which the ghost walk tour takes place in Savannah, GA; it discusses the role of walking in the formation of sense of place; and relates the negotiation of the tour experience through verbal exchange between tour guide and tour participants and through tourist performance.

Greenow, Linda, SUNY New Paltz: “When Growth was Good: Images of Prosperity in Mid-Twentieth Century America”.

This paper examines a set of promotional map brochures produced by small cities and towns across the United States in the 1960s, to identify images of prosperity created by their civic leaders. Chambers of Commerce, local business associations and civic boosters are well-known for advertising the successes and potential of their communities in order to attract new businesses and industries. They have produced local maps and promotional materials which provide a written record of the messages designed to create a favorable image of a community. In the 1960s, before the crises of energy shortages, sprawl, air and water pollution, and post-industrial economic restructuring gripped urban and rural places across America, unlimited growth was a primary goal of many communities. Growth, both economic and demographic, was a mark of progress, a source of pride, and a centerpiece of many communities’ identities. In their promotional materials, some communities highlighted their favorable location for trade, while others adopted a catchy nickname including the concept of growth or opportunity. Describing local industries and locating them on the map could also illustrate a community’s vitality. Assets such as an atomic power plant provided evidence of progress, as could data on population growth and infrastructure. In the content and positioning of text, maps, photos and drawings, manufacturing and industry were portrayed as compatible with a desirable lifestyle and attractive recreational amenities. They were part of the appeal to businesses or residents who might be persuaded to join the community’s march to progress and prosperity.

Hamilton, Kristin, Villanova University, **Rosemary Daley**, Pennsylvania State University, and **April Hulett**, Mansfield University, “Human Adaptations to Environmental Impacts on Water Resources”.

Hasse, John, and Andrea Kornbluh, Rowan University: “Measuring the Inaccessibility of Residential Sprawl”.

Suburban sprawl has often been identified as low-density and dispersed development that requires greater automobile vehicle miles to be traveled for daily activities thereby resulting in associated environmental and social impacts. This paper attempts to empirically test some of the spatial characteristics of sprawl by measuring the actual road distance of residential housing units to common every day destinations or ‘community nodes’ in Gloucester County, NJ. A centroid point is identified for all residential housing units county-wide and the road distance measured to each of the nearest community nodes utilizing a gridded road network cost-distance approach within

a GIS environment. The community nodes included such public activity centers as schools, emergency service stations, grocery stores, public transit stops, recreational parks, post offices, and libraries among others. The research demonstrates that older compact communities within the county are significantly more accessible to community nodes than much of the more recent housing development providing substantive evidence that sprawling development less accessible than compact development. The methodology demonstrates a means of objectively quantifying and comparing new urban development patterns for some of the problematic characteristics associate to urban sprawl.

Herbert, Jonathan, Kutztown University: “Detecting and Mapping Climate Change in Texas”.

This study attempts to detect significant changes in annual average temperature and precipitation at individual weather stations throughout the state of Texas. 103 stations were selected, all of which have records from 1931-2000. A linear regression model is fitted to each temperature and precipitation time series, and the slope coefficient tested for significance. The slopes are then interpolated and mapped, and weather stations with significant trends are highlighted. Previous analyses of climate change in Texas have focused on state level trends in temperature and precipitation (Norwine et al. 1995) which are not significant. This analysis reveals many significant trends at individual stations and a more complex pattern of climate change.

Hu, Bangbo, Villanova University: “Cultural Images: Reflection of Political Power in the Maps of Chinese Administrative Gazetteers of the Song Dynasty (960-1279 A.D.)”.

Historians of cartography have recently been interested in relationship among culture, society, and cartography. In both fields of the history of cartography and Chinese studies, the maps in the gazetteers of the Song dynasty (960-1279 A.D.) have been largely neglected and rarely explored. In Chinese culture, a gazetteer is a comprehensive record of a local area. Maps were often considered as an important portion. This paper discusses reflection of political power on the maps in the existed Chinese administrative gazetteers of the Song dynasty (960-1279 A.D.). It examines how political power influenced the production process of the gazetteers and their maps and how this power was reflected on the map selection and images. The result of the examination shows that political power controlled the production process of most gazetteers. By using the techniques of map selection, cartographic design, and symbolization, the emperor's power and state territory were clearly emphasized on these maps. This paper supports the general notion that maps are not only geographical representations of the spatial world but can also be viewed as cultural images that reflect the societies in which they are produced.

Irvine, K.N., S.J. Vermette, T. Tang, Buffalo State College, **M. Sampson**, Resource Development International – Cambodia, **T.P. Murphy**, Environment Canada: “Partnering to Provide Water Quality and GIS Training in Cambodia”.

This poster provides an overview of a water quality and GIS training workshop delivered as a collaborative effort between Buffalo State, Resource Development International – Cambodia, and Environment Canada. Cambodia is amongst the poorest countries of the world and it is estimated that 74% of deaths in Cambodia are the result of waterborne diseases, a situation that could be improved through better education.

There were 12 participants in the workshop who drawn from the Ministries of Rural Development; Environment; Industry, Mines, and Energy; Departments of Environmental Science and Geography, Royal University of Phnom Penh; and UNICEF. The week-long workshop consisted of two components. The first part of the workshop focused on training in water quality sampling and analysis using both a kit approach developed at Buffalo State and a higher tech approach with Hydrolabs to perform water column profiling and continuous data logging at fixed sites. Samples were collected along the Phnom Penh waterfront.

The second part of the workshop consisted of basic training in the application of ArcView3.2. Various digital data were used to illustrate the principles of ArcView, but the most effective applications were associated with the use of Ikonos satellite images of the Phnom Penh area. Participants were taught how to conduct on-screen digitizing of streets and building footprints, develop and query a spatial database, and construct buffers. To link the water quality training, the coordinates of the sample sites were determined using GPS and the water quality data were visualized using the Ikonos images as a base. Well data reflecting arsenic levels in drinking water also were mapped thematically using the Ikonos images.

Participant response to the workshop was overwhelmingly positive and suggestions for future workshop topics (including more GIS training) were contributed. We take this as an opportunity for capacity building and sustainable transfer of knowledge.

Johansson, Ola, University of Pittsburgh at Johnstown: “An Assessment of Urban Sprawl in the Middle States Region 1990-2000”.

One of the unfortunate but seemingly unstoppable consequences of urban growth is sprawl. The Middle States region, despite low population growth in many areas, is strongly affected by sprawl and, as one geographer has noted, is taking on the spatial form of a Galactic City. Despite the widespread use of the sprawl concept, there is no commonly accepted agreement of what it entails, much less an exact quantifiable definition. In this paper I will discuss the growth of 25 cities in New York, Pennsylvania, New Jersey, and Delaware that are the centers of the regions’ Metropolitan Statistical Areas. The main tool I have used is the urbanized area designation as defined by the U.S. Bureau of the Census. The basic criteria for urbanized areas is population density – a minimum of 1,000 people/sq.mi. By investigating changes in urbanized areas from 1990-2000, various measurements of sprawl can be obtained, including absolute spatial growth, change population densities, and size and density of the newly designated urbanized areas v. population changes in older areas. Additional factors such as city size, location and region, and population growth are also incorporated into the analysis.

Kaufhold, Tammy M., SUNY-Albany: “Geography Education: Where is Geography’s Location in our Schools’ Curriculum?”

The discipline of geography is not immune from the effects of federal legislation. The No Child Left Behind Act, 2002, has geographers re-defining their position as a core subject within the educational system. This paper recaps geography’s historical inconsistencies in educational curriculum and evaluates the current status in compliance to Geography For Life: National Geography Standards, 1994. From the state level, primary and secondary public school curricula are analyzed against a matrix of keywords. This matrix funnels from Geography For Life and contains a breakdown by benchmark grade levels (4, 8, and 12). Individual State Department of Education websites provided the source for curriculums in a purposive sample. The output of this conceptual analysis method includes stratifications or report cards for state’s geography curriculum and the coverage of the 18 individual geography standards. Interpretations of the results address issues affecting compliance to Geography For Life and in-turn No Child Left Behind. Some examples include: the social studies filter and teacher training. Encouragement and means of support are suggested for educators and administrators, not just geographers, to think critically about the direction of geography in the curriculum. Substantive geography curriculum is imperative for geography’s place in the next legislation.

Kim, Pyung Ho, Hunter College: “Spatial Pattern Analysis on Public School Districts in New York City Associated with Performance in the Context of Socio-Economic Factors”.

Public education in New York City has been in turbulence since a majority of parents, scholars and educators have raised a question about the effectiveness of the system. Since public education plays a pivotal role in serving the under-privileged and under-represented population, the soundness of the sector is a crucial element of social justice and a fair distribution of social resources. A recent school policy of Bloomberg administration by enforcing a uniform curriculum on all the public schools except 208 well-performing schools has been considered an effort to satisfy the city’s need for quality education. However, the rationale for choosing schools exempt from the standardized curriculum, and the predicted academic performance of the schools with planned unique curriculum has been debated throughout a various sector of the city. As a result, there is a tremendous demand to discover what causes problems in the system and what could improve the school system. In accordance with that, a systematic analysis on spatial pattern provides an in-depth understanding of the structural implications of rebuilding the school system and could facilitate future efforts to implement efficient public school management.

Kory, William B., University of Pittsburgh at Johnstown: “Who Are We: Looking at the Ethnic Origins of the People in Pennsylvania”.

There was an item on the long form of the 2000 Census of Population which asked for the ancestry or ethnic origin of the respondent. A great majority of Pennsylvanians replied with an array of answers ranging from “Arab” to “West Indian”. Although only 1/2 million people in the state were foreign born, there were over 13

million ancestries reported on the questionnaires. Since this figure is more than the total population residing in Pennsylvania, many people reported multiple ancestries. The paper will focus on the size and composition of ethnic population in the state by counties and compare these figures with the foreign born population. The counties will be ranked by the size of foreign born population and by the largest ethnic group in each. The spatial distribution of these groups will also be examined and correlated with a number of demographic and economic variables.

Krueger, A.M., K.N. Irvine, Buffalo State College, **C. Prangio, K. Chaokasad, K. Sukontason, K.L. Sukontason, and R. Ngern-klun**, Chiang Mai University: “Visualizing Water Quality Trends in Chiang Mai Rice Paddies: Possible Links Between Environment and Health Risks”.

Liver fluke (*Opisthorchis viverrini*) infection is a health concern throughout Thailand. Liver flukes use the *Bithynia* spp. snails, which inhabit rice paddy fields, as first intermediate hosts in their life cycle. Water quality and environmental factors could have an effect on snail distribution and their incidence of parasitic infection. Another area of health concern would be the presence of *E. coli* in the paddy water and the risk for human contact. Four rice paddy fields were studied around the Chiang Mai area. Sites 1 through 3 included an irrigation canal and rice paddy and Site 4 was only a rice paddy. Water quality data were automatically recorded every 15 minutes at sites 1 through 3 (canals) over a 48-hour period using a Hydrolab Datasonde 4a, which measures temperature, pH, turbidity, conductivity, and dissolved oxygen. Water grab samples were tested for the presence of *E. coli*. Snails were collected, identified, and their parasitic infection was determined. Bacteria levels typically were higher in the irrigation canals than in the rice paddies and levels progressively were lower at paddy sub-sites, moving away from the irrigation canal source water. Bacteria levels and base turbidity levels at the Site 1 canal always were higher, while dissolved oxygen levels were lower than the other canal sites. Rain events impacted Hydrolab parameters and bacteria levels; for example turbidity and bacteria levels increased during these events. The physical environment (soil type, land use, topography, watershed boundaries/hydrography) was characterized in ArcView using various available digital layers, as well as Ikonos and Landsat 7 satellite images and airphotos. These layers were useful in visualizing factors affecting water quality parameters, within and between the rice paddy fields. The GIS maps show links between the physical conditions and water quality trends and identify areas of high health risk in paddy fields.

Krueger, Amy M. Buffalo State College and **Radchadawan Ngern-klun**, Chiang Mai University: “An Overview of the Natural History and the Major Habitats of Chiang Mai Province, Northern Thailand”.

The purpose of this poster is to present the major habitats in the Chiang Mai Province in Northern Thailand as well as a brief natural history. Thailand has a diverse array of species and habitats. Some of the major habitats include forests, mountains, caves, and the Ping River Watershed. The poster illustrates the species and habitats observed on a research trip to Chiang Mai, Thailand in July of 2004. As the trip was during the rainy season, one of the most popular groups of animals to see in Thailand,

birds, was not seen very often. However, a variety of butterfly species were observed. Major habitat areas visited during this time include Doi Inthanon National Park and Chiang Dao Cave. Doi Inthanon is the highest spot in Thailand and it is covered by forest, including moist evergreen forest, pine forest, mixed deciduous forest, and even 'cloud forest' at its peaks. Chiang Dao is a large cave system and is home to many bat species. Other areas visited include the Maesa Elephant Camp and a Monkey School. These are areas where animals live in captivity for conservation and/or ecotourism purposes. The goal of this poster to highlight some of these areas in the Chiang Mai region as well as present a brief natural history of some of the species observed.

Lee, Jung Yoon, Seoul National University: "The China Effect on Northeast Asian Port Competition: The Port of Busan's Strategies in the 21st Century".

Owing to the export oriented economic growth of South Korea and to its own location, Busan has steadily developed into one of the world's top container ports in the later part of the 20th century. This role is however changing as Busan experiences a shift from a gateway to a hub. After Kobe (Japan) was damaged by the earthquake of 1995, Busan took the initiative to establish its role as the regional hub-port of Northeast Asia. Moreover, the substantial growth of China's industrial and port activities boosted the amount of containerized freight circulating in the region, increased regional integration and underlined the importance of hub ports as regulators of these flows. In such a context, the Port of Busan appears to have a good opportunity for strengthening its role as a regional logistics hub. This role is however hotly contested as Korea, China and Japan are engaging in intense competition to insure their respective position in global maritime freight distribution.

The Port of Busan has elaborated a set of strategies to consolidate its regional position by attracting additional freight. They include the expansion of port facilities, increases in port productivity and the strengthening of feeder networks in Northeast China. These activities are closely related to the Korean government's new policies designed to overcome the challenges its ports are facing in view of a regional shift in containerized freight flows. This paper provides an overview of port competition in Northeast Asia and examines Busan's regional hub-port strategies in the 21st century.

Lemaire, Denyse and David Kasserman, Rowan University: "The International Year of Planet Earth 2005-2007".

The International Year of Planet Earth is the fourth major international effort at scientific cooperation of the modern era. It will commemorate the 125th anniversary of the first International Polar Year of 1882. This paper will examine the aims of a multidisciplinary research involving 250,000 geoscientists across 117 countries towards a better understanding of the Earth systems in relation to humankind.

Loomis, Emily, Vassar College: "Immigrant Identities and Acculturation: The Success of Brazilian Co-Ethnic Communities in Massachusetts".

The immigration of Brazilians to Massachusetts to seek economic and social improvements has led to the formation of a number of Brazilian communities within the state that have successfully provided a support structure for Brazilian newcomers. Using the framework of selective acculturation, this paper will address the advantages that Massachusetts provides to Brazilian immigrants. The precedent of Irish and Portuguese immigrants in Massachusetts has facilitated the general acceptance of Brazilians, due to the religion and language Brazilians share with these more established groups. This acceptance has allowed Brazilian communities to make positive use of existing resources and increase their chances for success. The study, however, also highlights the weaknesses of Brazilian's selective acculturation in a desirable location. The empirical information of this paper is based on recent local news articles and selected personal interviews.

Macey, Susan M., Texas State University and **Dona Schneider**, Rutgers, The State University of New Jersey: "Living Along the Pipeline: Populations at Risk in Urban Texas".

While pipeline accidents are rare, safety issues associated with residing near pipelines are of growing concern for local populations. Persons living near pipelines are at risk for property damage, injury and death associated with equipment failures and accidents. The perceived threat associated with residing near a pipeline put this issue at the forefront of the national agenda and resulted in the passage of the Pipeline Safety Improvement Act of 2002. Passage of the act occurred without examining the non-occupational populations-at-risk for a pipeline-related incident. Therefore, we examined locational data for pipelines from the Texas Railroad Commission for five Texas city-county areas (Austin-Travis, Dallas-Dallas, Fort Worth-Tarrant, Houston-Harris and San Antonio-Bexar) along with US 2000 Census block group data. Using GIS technology, Spearman correlations, and stepwise logistic regression, we evaluated the relationship between presence or absence of a pipeline and local population characteristics to identify populations at potential risk in urban Texas. While the overall explanatory power of the model is low, population density was found to have the most consistent explanatory power associated with the presence of a pipeline, while age, ethnicity/race and income showed mixed results.

Manning, Peter, Phoenicia, NY: "Is Rip Van Winkle Asleep or Awake? – Finding Our Place in the 21st Century Landscape".

With the publication of Rip Van Winkle in 1819, Washington Irving cleverly grabbed the imagination of the American public and not only pointed it at the Catskill Mountains, but sent it scampering up wild ravines. Americans soon wanted to be like Rip. Their desire for an escape could be answered by the mountains that loomed majestically before them, stirring their curiosity with a sense of prospective adventure. In this sense, there is a mythical fascination with the story because it invites us to share the journey and engage in the ritual that takes us from the common place to the dreamworld. In crossing this threshold -- in mind and in landscape -- we see how our need for a sacred

place is an ongoing narrative. Remarkably, the Catskills have sustained this narrative and continue to offer a chance to experience the “other”.

As 2004 brings the 100th anniversary of Catskill Park, this paper celebrates a landscape that remains mythically alive. However, the future of the Catskills will be challenging because tremendous development pressures are questioning the traditional narrative of Rip’s story. Maintaining the delicate balance between economic vitality and watershed protection will demand new levels of bioregional cooperation. As we negotiate our course with the usual guidance of science and laws, let us also keep Rip in mind, and hopefully, we can become lost in fresh mysteries of the unknown, so that we may find our way.

Mano, Jo Margaret, SUNY-New Paltz: “New York Cartographic ‘Legends’: Rip Van Winkle and Major Andre”.

Maps are more than mute testimony to environmental features and human constructions. The cartographic information included or excluded in maps provides valuable insights to contemporary cultural and social understandings. When mapmakers depict historic events or people and identify them with specific locales, they help create a “genius loci.” This both influences tourist promotion activities and shapes travelers’ views.

This study examines the appearance and persistence in New York State cartography of two “historic” figures. One is real (Major Andre) and one is fictitious (Rip Van Winkle). Simeon DeWitt, Surveyor General of New York from 1784-1834, directed the development of State cartography, and oversaw the production of David Burr’s 1829 State Atlas. Burr’s Atlas is an accurate, elegant and precise work, but the 1839 re-publication includes occasional historic references, including an elaborate key documenting the 1780 Andre incident locales. Rip Van Winkle’s story was quoted first in Hudson River travelers’ guides, but later Rip’s mythical adventure was specifically located on maps and in tourist booklets.

The study traces the use of these two “legends” for place promotion in selected New York State maps and tourist literature. Imaginary Rip Van Winkle continues to be a major element in promoting tourism and the “genius loci,” but real Major Andre has faded in importance. This study illustrates the power of tourism promotion in celebrating “historic” incidents at a specific place.

Marr, Paul, Shippensburg University: “Finding Fort Morris”.

On July 31, 1755 following the defeat of General Braddock’s army in western Pennsylvania, Governor Robert Morris commissioned the construction of two stockade forts, one in Carlisle and one in Shippensburg. Built by Colonel William Burd, Shippensburg’s Fort Morris was one of a line of frontier defenses erected to protect local settlers and garrison provincial troops. While the location of the fort at Carlisle is well documented, there has been much confusion over the location of Shippensburg’s small

fort. For over one hundred years local historians have argued about this topic without reaching consensus, to the point that there are now three locations recognized by various state agencies and local organizations as the site of this provincial fort. This research will examine the available historic and modern evidence, paying particular attention to the geo-spatial aspects of the data, in an attempt to find the site of the historic Fort Morris.

McConchie, Alan L., Hunter College: “Regional Variation of the Use of the Terms “Pop”, “Soda” and “Coke” to Describe Carbonated Soft Drinks”.

This poster shows the regional distribution of the words "pop", "soda" and “coke” as used to describe carbonated soft drinks across English-speaking North America. This research uses the results from a long-running World Wide Web-based survey which has received over 150,000 responses since the beginning of research in 1995. Responses were plotted according to their zip or postal code. The large number of responses and the spatial precision provided by zip codes allows for a very accurate determination of the isoglosses between these linguistic areas.

McGlinn, Lawrence A., SUNY-New Paltz: “Defending the Aesthetic : Wind Turbines and the Visual Landscape”.

Since the late 1960s, the American environmental movement has grown to embrace not only aesthetics, but themes of health and social justice, as well. In fact, I would argue that health and social justice have ascended to more solid ethical footing in environmentalism than aesthetics. Consensus has been relatively easy to achieve on issues such as toxic waste dumping or urban sprawl which may threaten health and social justice, as well as natural beauty. But what of purely aesthetic arguments for landscape preservation?

This paper explores the ethical dilemma of wind turbines, a technology that has polarized segments of the environmental movement. Utility-scale wind development in the United States offers the potential to produce as much as 20% of our electricity with negligible addition to regional or global air pollution. Having largely overcome the problem of bird collisions with turbine blades, the only significant environmental obstacle to wind development is the presence of turbines soaring and spinning up to 100 meters above the rural landscape or above coastal waters. Depending on rates of energy conservation, preventing wind energy development means greater production of conventional electricity, generating regional air pollution, greenhouse gases, or high-level nuclear waste. Is this rejection of large wind turbines on the rural landscape morally defensible given the atmospheric consequences? I will frame this question, discuss its significance, and suggest potential alternatives.

Mitteager, Wendy, SUNY Oneonta: “Understanding the Relationship Between Landscape Features on Municipally-Managed Dunes and Residential Private Lots along an Urban Shore, New Jersey”.

As population pressures increase on ocean shores, it is important to restore the images and concept of nature to tourists and the local community. The focus of scientific

research on restoration of beaches and dunes in developed areas has centered on municipally-managed zones while adjacent private lots have received little attention. Private shorefront residential lots in an urban coastal setting are managed according to homeowners' preferences. Suburban ideas of landscaping are commonly utilized, creating lots with flat, green lawns and trimmed shrubs and hedges. Lawns eliminate diversity of topography and vegetation and require more maintenance than natural vegetation. Cultural features such as boardwalks, troughs, and property demarcation lines, disrupt the cross-shore environmental gradient and provide a non-natural image of the coast. Municipalities in New Jersey manage the beach and dune environment many different ways, creating a longshore texture that is inconsistent in appearance and function with a naturally functioning shore. A landscape analysis is performed to identify the relationship between dunes on municipally-managed beaches and the adjacent residential lots using field data collected on 364 lots and video data collected on 1364 lots. Landscaping alternatives to a suburban yard are described, and target states representing more natural restoration options are identified along three segments of the New Jersey shore.

Mosiane, Benjamin, Syracuse University: "Chiefship and the local state: identity, development and nation-building in the post-apartheid South Africa".

In keeping with the universal language of 'local participation', the current efforts of nation-building in South Africa are largely inclusive of a range of stakeholders at various scales. The presence of 'traditional authority' in local coalitions, however, presents a unique complexity for the former bantustan and platteland cities. The nature and role of this institution has been modified historically by colonial and apartheid regimes in order to justify government policy, a defensive shield behind which such actions could not be contested. As one of the extreme cases of invention of tradition during apartheid, the Bophuthatswana government's attempt to rejuvenate traditional structures and mobilize ethnic identity were contradicted by the impetus towards modernization and its implicit emphasis that Batswana culture should be modified, adapted and updated. Although wrenched away from communities and labeled as 'National', the cultural power of tradition, which the Bophuthatswana regime employed to provide a controlling mechanism over rural areas, showed both local variation and ambiguity. That being the case, the ongoing critiques directed toward the bantustan era should not overshadow the continuing resonance and ambiguity of local affiliations for many people in the post-apartheid era. The ways in which the central state and regional administrations interpret and enact the cultural and developmental dimensions of nation-building are already showing to have a critical bearing upon these loyalties and their resilient 'local domains'. This paper, therefore, draws from the experiences of the Bafokeng traditional authority and Rustenburg local state to discuss the place and roles of the institution of traditional authority in the post-apartheid South Africa and their implications for issues of identity, 'development' and nation building. In broad terms, the paper, speculates on the now familiar standoffs between the institutions of traditional authority and government: whether the resilience of the traditional authority represents a response to alienation or whether it constitute a well articulated alternative.

Mossler, Mariana, Rutgers University: "The 'Thousand-Year Flood':

Inundation and Response in Burlington and Camden Counties”.

On July 11th and 12th, copious rains fell in Burlington and Camden Counties, New Jersey. Rainfall amounts exceeded 11” in areas resulting in failure of dams, inundation of structures and the consequent emergency response. This event resulted in a Presidential disaster declaration (DR 1530), and public assistance losses exceed \$20,000,000. Evaluation of the flooding, losses and mitigation efforts are a part of the disaster response, where a significant emphasis is placed on the role of failed and overtopped dams.

This event follows flooding experienced from Tropical Storm Floyd (1999) and the Sparta floods of August 2000. Given the occurrence of these three events in the past five years and the similar role of dam breaching in the Sparta floods, several questions arise for analysis. First, are flood warning systems and management of dams adequate for high-rainfall events in flood-prone areas of New Jersey? Second, what lessons may be applied for improving response mechanisms in the state? Third, how can academic analysis and institutional activity be integrated for optimal improvement of flood hazard management statewide?

This work reviews these questions in the context of existing institutional mechanisms in New Jersey, particularly with regard to emergency management and dam safety programs. Recommendations for management improvements are presented in conclusion.

Nelson, Darcy, Vassar College: “Rugby and National Identity in New Zealand”.

National identity is a primary means of self-identification and legitimization even (or perhaps especially) in our globalizing world. According to Benedict Anderson, one of the characteristics of a nation is that its members have in their minds a shared “image of their communion.” That is, nations draw their coherence, at least in part, through their members’ recognition of a common national identity based on shared history and mythology.

For New Zealanders rugby is one such image of communion that has always seemed to define the nation and unite its members. The focus of this study is to examine how the sport of rugby has facilitated the construction of a New Zealand national identity, as well as how it has acted as an arena for the contestation and reformation of that identity. Specifically, I examine the events surrounding the 1981 South African Springbok Tour to New Zealand. These events marked the culmination of growing dissatisfaction with both rugby and the national identity, which centered on a white-male pioneer ethos that included women and Maori New Zealanders only peripherally. The 1981 Springbok Tour provides a rich case study in the analysis of the problems of national identity and their interaction with sport. This study demonstrates that a nation's shared images of communion can reveal much about the processes and purposes of national identities, as well the ways they are constructed, resisted and maintained.

Patrick, Kevin J., Indiana University of Pennsylvania: “Pennsylvania Caves: Nature as Tourist Attraction”.

Formed underground and in the dark by natural processes, caves are not generally thought of as being part of the built environment. When developed as a tourist attraction, however, a cave is physically manipulated and its features reinterpreted. The show cave is integrated into the regional infrastructure and presented to the public as a natural wonder, but not in its natural state. All 16 former and currently operating Pennsylvania show caves exhibit this melding of natural and built environments unique to commercial caves and related natural attractions. Alterations are both material and non-material. In addition to electric lights, trails, rails and stairs, there are feature names, stories and new uses. The natural cave is timeless, but its public presentation is a reflection of contemporary culture.

Pine, Adam M., Rutgers, The State University of New Jersey: “Exploring the Relationship Between Migration and Neighborhood Development”.

The relationship between migration and urban development deserves increased attention from scholars and policy makers. Often, analyses of immigration to U.S. cities are understood merely as studies of urban neighborhoods, and not connected to the larger literature on urban redevelopment, deindustrialization, and neighborhood revitalization. Similarly, movement *out* of U.S. cities such as through ‘white flight’ and capital disinvestment are analyzed through such theoretical lenses as Marxism and critical urban theory, but are not placed within the larger literature on migration. In this paper I draw upon research conducted in collaboration with the Dominican Grocers’ Association in Philadelphia to discuss the interconnections between migration, transnationalism, and neighborhood development.

Pipkin, John S., University at Albany: “Working on the Concord and Merrimack: Thoreau’s Mills”.

In the 1830s the Concord River flowed from the village of the same name (the heartland of American Transcendentalism) to meet the Merrimack among the textile mills of Lowell (a principal hearth of the American industrial revolution). A trip in 1839 resulted in *A Week on the Concord and Merrimack Rivers*, Henry Thoreau’s first and longest book. It is a collage of classical learning and literary, historical, and philosophical pronouncements linked to perfunctory landscape observation. The book’s transcendentalist distaste for the all-too-visible signs of manufacturing and its silence on labor and capital led Stephen Geric to situate it in the cultural project of American “exceptionalism.” During the remainder of his life Thoreau made himself into a profound if selective landscape observer and a consummate writer of real rather than transcendental landscapes. (He was also a mechanically-gifted innovator in pencil-manufacture). Using writings that followed *Week*, and in particular the *Journal*, this paper examines Thoreau’s conception of manufacturing in the world of the two rivers. His profound visual penetration and increasingly ecological understanding uncovered powerful effects of manufacturing on the landscape. His dogmatic, deeply radical individualism embodied a concept of work and alienation which some authors have compared and contrasted with Marx’s. Neither the local visual appropriation of the world,

nor the radical individualism, found much to say on the place-transcending social relations of manufacturing labor.

Porter, Michael, The City University of New York: “Toxic Facility Clustering and Measures of Environmental Equity”.

Environmental inequity is a term that describes the disproportionate exposure of minority and low-income communities to industrial and environmental pollution. One of the most pressing challenges faced by scholars studying this problem is how to quantify and measure the extent of inequity. For the most part, past work has used either buffers, aggregate units such as zip codes, census tracts or census tract block groups or nearest neighbor distances to achieve this goal. These works, however, fail to discuss the ways in which these industries tend to cluster in urban areas. This is particularly important because populations living in proximity to a toxic cluster suffer from greater environmental burdens than those living near a solitary facility. For my presentation, I will examine toxic facility clustering in New York City both visually, using kernel density measures, and statistically, using a k-statistic. After showing the significance of toxic facility clustering, I would like to present an alternative measure of environmental equity that better represents the impact of toxic clusters. Finally, I would like to compare the results of the proposed measure with the results using techniques commonly used to measure environmental equity.

Schnell, Steven, Kutztown University of Pennsylvania and **Gregory Haddock**, Northwest Missouri State University: “When Here Becomes There: Community Identity in Old and New Pattonsburg, Missouri”.

In 1993, the town of Pattonsburg in north-central Missouri experienced not one, but two devastating floods. After the second flood, townspeople voted to accept federal money to relocate the town out of the floodplain where the town had been for over a century. While it was a massive undertaking, townspeople were able to physically relocate their town. This paper investigates a more difficult question: is it possible to relocate a *community*, a sense of place based on generations of experience at the old location? Is Pattonsburg still Pattonsburg, or is it someplace else altogether?

Sharp, John I., SUNY-New Paltz: “Have Urban Areas in the Hudson Valley Been Revitalized”.

The Hudson Valley suffered economically during the transition from Fordism to post-Fordism. In recent years, however, there have been a number of indicators that suggest the region is beginning to bounce back. However, is there much evidence to suggest that urban areas have benefited from this supposed turn-around? This paper examines the question of whether or not urban areas have benefited from regional growth and explores how scale effects perceptions of growth.

Sheldon, Karen, SUNY-Oneonta: “The Erie and Panama Canals”.

Man has created and invented many things over the centuries that have had both negative and positive impacts on our species and our planet. This paper focuses on and compares these two gargantuan projects of their time for the engineering marvels that they were and still are considered to be today. Although the work involved was often arduous, dangerous and often fatal the rewards have been incalculable; economically, socially, demographically and culturally affecting the world, as we know it then and even today.

This paper argues the elementary importance of each and compares/contrasts the construction of each canal, perhaps in different centuries, but remarkably similar nonetheless. Although the Erie has a regional and national impact and the Panama an international one, I will demonstrate through statistics as well as illustrations that each shares many similar qualities both in their construction and how they benefited mankind. Perhaps also how they did not benefit all.

I conclude by discussing on a larger scale the current positive and negative aspects that they had/have on globalization.

Sobolowski, Stefan, Hunter College: “Exploring the Relationships Between Snowpack and Modes of Atmospheric Circulation Over North America”.

Utilizing the gridded SWE dataset developed by Brown and Brasnet (2003) the relationships between SWE, the Pacific North American pattern (PNA), North Atlantic Oscillation (NAO) and El-Nino Southern Oscillation are examined over the course of North American winters from 1979-Present. This data set is considered to be an improvement over current SWE estimates, especially in the observation rich areas south of 55°N. The data set was designed using a hybrid approach, which utilized observations from 8,000 stations, a snowpack density model and interpolation. The PNA pattern is the dominant mode of atmospheric circulation over North America for the winter months with the NAO exerting considerable influence over the climatology of the North Eastern part of the continent. ENSO effects on North American climate are well documented but the complex interactions between sea surface temperature (SST) anomalies, teleconnections and their effects on SWE are still poorly understood. This paper examines the statistical significance of the relationships between these three sources of climatological variability and SWE from 50° N to 20° N for the entire meridional extent of the North American continent. To this end, correlation and composite analyses are employed to better understand the interactions between the PNA, ENSO and the winter (Dec.-March) snowpack. SWE has a significant impact on spring snow-melt runoff, water resource availability and may be an indicator for summer temperature. Understanding the relationships posited above will aid in water resources planning and research as well as possible benefits to the field of climate prediction.

Steif, Kenneth, Temple University: “Spatial Perspectives on Philadelphia’s Gentrification Process and It’s Effect on Low-Income Residents Amidst Current Public Housing Policy”.

The current trend of urban reinvestment known as gentrification has baffled social scientists for some time now. Even with prevailing global trends involving a decentralized economy, it seems now, more than ever, that the population that fled to the suburbs more than fifty years ago, is now returning at a feverish rate. Philadelphia, like many northeastern industrial metropolises, has invested extraordinary amounts of resources in combating the social symptoms of a city devoid of investment and a wealthy tax base. Government policy to date has been aimed at breaking down the concentration of poverty that has thrust many of our nation's inner-city residents into a life of poverty and under-education. The recent infusion of capital, however, has raised a new debate in both the political and academic realms: What is the future of gentrification? Are returning wealthy suburbanites going to remain within city boundaries? And if so, how can cities encourage sustainable growth without displacing the masses? This study utilizes Geographic Information Systems to analyze demographic data of Philadelphia, in an attempt to track spatial patterns of gentrification and the displacement that occurs as a result. Once a pattern emerges, the next step must be a full scrutiny of current public policy in the face of changing urban housing markets. Will programs like HOPE VI and Section 8 encourage sustainable, mixed-income neighborhoods, or will capitalistic market trends force an eventual re-concentration of poverty and continued social neglect for many of Philadelphia's lower-income residents.

Steve, Thomas, SUNY–Buffalo: ‘National Identity in Niagara Falls, Canada and the United States’.

Some theories contend that national identity is dependent and contingent on having *others*. However, other theories suggest that national identity is based on traits that all members of the group share. These two competing ideas, called relational and unifying characters respectively, are explored using the two border cities of Niagara Falls, Canada and Niagara Falls in the United States. I argue that each national identity present, the Canadian and American, represent the two characters and that national identity can be viewed as a spectrum. Using content analysis, each city's newspaper is studied for its expression of both characters.

Sternberg, Rolf, Montclair State University: “von Humboldt in Tropical South America in 21st Century Perspective”.

Alexander von Humboldt bequeathed to humanity a wealth of scientific data and ideas based on methodically-gathered and organized data about the equatorial region of South America. It is this collection of benchmark data and ideas that serves the continuing research activities of physical and social scientists to register and analyze the changing human imprint upon this study region. von Humboldt's originality and breadth of vision endow his detailed evaluations with enduring relevance to contemporary field work.

This study places von Humboldt's fieldwork in contemporary context to consider its influence upon current field work practices and changing research hypotheses. The physical world served as his *métier*, but the social conditions in this then sparsely peopled region did not escape inclusive analysis. It is during the four years of exploration that

von Humboldt also laid the foundations for a regional climatological inventory and analysis culminating in a climatological atlas for the region. The sum of these observations REISE IN DIE AEQUINOKTIAL-GEGENDEN DES NEUEN KONTINENTS provide a holistic overview of a region currently in active change and transformation in significantly altered contexts. von Humboldt's regional analysis and assessment provide contemporary researchers with scientific information to measure humanity's role in changing the equatorial world over the past 200 years. KOSMOS, the explorer's most famous work, became the intellectual crown of his writings, and registers the relevance of the more topical and regional studies that preceded it. von Humboldt's South American legacy is as much methodological as it is intellectual and universal.

Tang, Tao and Stephen Vermette, Buffalo State College: "Field Course Study in China with Chinese Faculty and Students - Interactions and Exchange Ideas of Geographic Learning".

A geography field course in China was conducted in three weeks during the summer of 2004. Eleven Buffalo State College students with various majors took the course. The course was conducted in collaboration with the faculty in the College of Natural Resources, Environment, and Tourism at the Capital Normal University (CNU) in China. The field course was embedded in a CNU senior comprehensive field geography course. The American faculty and Chinese faculty worked together with course material preparation, teaching, and arrangement of the field trip. American students and Chinese students worked together for the course projects and field activities. This is the first international field course for American students of this type in China.

Each of the American students conducted a field project in Beijing during the first week. Chinese students with similar interest helped with the field investigations and translations. Team learning was followed afterward while traveling from Beijing to other places in China. American students benefited in learning Chinese natural and cultural landscapes by visiting sites such as the Museum of Terracotta Army from the Qin Dynasty, the Yellow River and the Loess Plateau, pinnacle karst on the Yunnan-GuiZhou Plateau and minority Chinese cultures of the region; and through interactions with the Chinese students. Chinese students improved their English communication skills, and learned about their own culture, as well as American culture, through the eyes of the American students.

Tobin, Dennis P., Independent Scholar: "Introduction to Horticultural Geography".

The combination of two academic disciplines, horticulture and geography, adds a timely update to the course selection of each corresponding academic department. Additionally, the inclusion of the new specialty – horticultural geography, subsumed under the two disciplines, supports occupational training and vocational possibilities. The juxtaposition of place and plant, either natural or selected, has waxed with an increase in housing construction, real estate prices, commercial investment, and environmental issues, such as global warming and invasive species. Unmasking the interface of horticulture and geography reveals an intimate relationship between the

fundamental elements of earth and wood while simultaneously prompting the metaphoric sprouting of a new academic branch of the universal tree of knowledge.

Treves, R. Valeria, Hunter College: “Compstat: An Analysis of the Use and Consequences of the NYPD’s GIS?”

Much work has been done regarding the punitive nature of the NYPD’s ‘zero-tolerance’/‘quality of life’ policing as a tool of social and spatial control. However, the NYPD’s Compstat, a GIS used not only for data analysis but also as a managerial tool, remains under analyzed from a critical perspective. In this paper I examine the ways that a punitive strategy is encoded into seemingly benign technological and managerial processes. Through managerial strategies, including rewards and punishments, blindly tied to computerized data collection and analysis, Compstat leads to a double punitiveness, punishing not only those on the streets but law enforcement officials as well. Further, I examine the quick spread and rising popularity of Compstat questioning the role of geographers in this process.

Vance, Anneliese, and Jennifer Scully, SUNY, University at Buffalo: “Transitions Seen through Gender: A Comparison of the New South Africa and the United States”.

Gender norms serve as a lens through which one can witness the underlying power relationships and institutional changes that control other aspects of society. Using Robert Connell’s framework of gender regimes, numerous intersecting institutional dimensions of gender construction are illustrated and patriarchal systems revealed. During times of institutional and societal change, the norms associated with gender and the realities often diverge. Accordingly, barriers and norms relating to gender are challenged. Issues of class, race and ethnicity can further complicate matters. The extent to which gender norms and realities diverge (or the manner in which they change) serves as a tool that can be used to address broader societal and institutional changes. In this study, we will evaluate institutional gender relationships within the contexts of post-apartheid South Africa and the United States. Since the dramatic political shifts in 1994, the South African government has addressed needed changes in race-relations within social, economic and political dimensions. Using an historical context of the United States during times of struggle for racial and gender equality, we will compare the institutional challenges faced by women. Women in both countries still face discrimination, despite current efforts of the new South African state, and the continuing efforts of the United States to promote universal equality. The proposed research will assess not only gender issues, but also the interplay between gender and race within a country that is undergoing considerable change, and one that already has.

Vermette, Stephen, Kim Irvine, Tao Tang, Buffalo State College, and **Mickey Sampson**, Resource Development International - Cambodia: “A Snap-shot of Water Quality along the Tonle Sap, Mekong, and Bassac Rivers near Phnom Penh, Cambodia”.

The authors recently completed a water quality and GIS workshop in Cambodia, hosted by Resource Development International-Cambodia (RDIC). Participants of the

workshop represented universities, UNICEF, and various ministries in the Cambodian Government. This poster describes results for the water quality samples collected along the Tonle Sap, Mekong, and Bassac Rivers (four sites) near Phnom Penh, as well as providing a description of the unique hydrology associated with the merging of the three rivers, and the flow reversal of the Tonle Sap. Samples were collected at the beginning of the rainy season from a boat, and analyzed using a simple kit approach (Aquanaut Program) and an instrument approach, using Hydrolabs. The Hydrolabs were also used to perform water column profiling. Kit parameters included dissolved oxygen, BOD, *e-coli*, nutrients, pH, hardness, temperature, secchi depth, and total solids. Hydrolab parameters included dissolved oxygen, pH, temperature, conductivity, and turbidity. These parameters were used to calculate a Water Quality Index (WQI) that classifies the state of the water on a scale from 0 to 100. Results indicated that the water quality along all three rivers could be classified as “good”, although excessive general coliform and *e-coli* counts, along with high turbidity were parameters of concern. Results of field sample analysis were plotted in a GIS database, with GPS locations and IKONOS satellite imagery. The water column profile showed little variability of test parameter results with depth. The kit and Hydrolab parameter results (dissolved oxygen, pH, temperature, and turbidity/secchi depth) compared well.

Vermette, Stephen, Buffalo State College, and **Mark LaRussa**, SUNY at Buffalo: “A Re-Examination of the Climatological Impact of the Lake Erie-Niagara Ice Boom on Buffalo, NY”.

A seasonal ice boom was first installed across the eastern end of Lake Erie in 1964-65. The ice boom was designed to reduce disruptions of hydroelectric generation caused by ice flowing down the Niagara River. A period of extended lake ice and cool springs in the subsequent years was attributed, by some, to the presence of the ice boom. Research studies conducted in the 1970’s and 1980’s showed no statistically significant relationship between the ice boom and water temperatures, and the local climate, through the critical months of March, April, and May. These earlier studies may be considered somewhat inconclusive in demonstrating a local climate effect, mostly because of insufficient data, and given the fact that the air temperature data were taken from the Greater Buffalo International Airport, located nine miles inland from the ice boom and thus removed from any lake effect. This study extends the climate research to include the years to the present, but also adds newly acquired temperature data obtained from a near-shore site. Pre- and post-ice boom seasonal ice dissipation, water temperatures, and monthly mean air temperatures for the months of March, April, and May reaffirm that the ice boom has had no statistically significant (difference of mean and variance) impact on water and air temperatures in the vicinity of Buffalo. The newly obtained shoreline air temperature data show a statistically significant difference for the month of May, but the trend is for an increase in temperatures.

Wirth-Granlund, Imogen S., Thomas Jefferson University: “Strolling through Clark Park with Jane Jacobs and Kevin Lynch: My Observations of a Public Urban Park Space in West Philadelphia”.

This paper examines the applicability of public space theory to observe and interpret Clark Park, located in West Philadelphia, Pennsylvania, drawing on the conceptualizations of public space offered by Kevin Lynch and Jane Jacobs. Lynch asserts that human beings' mental associations with elements of physical form are crucial to how they make use of urban space. Jacobs' socioeconomic theory of public space compares a park to a store that relies on the sale of demand goods rather than impulse purchases. My research focused on observing and analyzing the applicability of each approach to depict and interpret patterns and processes of the use of Clark Park during four weeks in November 2003.

Based on participatory observations as a member of the community of Clark Park and its environs, I created a narrative and map of park use. My analysis revealed Clark Park as a living history of a highly politicized place and community. Analysis of a non-profit organization's park revitalization plan also demonstrated that while facets of Jacobs' and Lynch's theories apply to Clark Park, certain sociopolitical and cultural aspects of the community(ies) use of this public urban park space cannot be explained within these frameworks. Jacobs' and Lynch's theories, published during the 1960s, do not discuss how political differences and cultural affiliations of the people within a given community affect the conceptualization of public space. I contend that future research in this vein will illustrate that the community's uniqueness informs the collective functions and meanings of a given public space.