

**2005 Annual Report**  
**The Applied Geography Commission**  
**Of the**  
**International Geographical Union**

**Submitted by**

**Professor Antoine Bailly, President, AGC**  
**University of Geneva, Switzerland**  
[antoine.bailly@geo.unige.ch](mailto:antoine.bailly@geo.unige.ch)

**Professor Lay James Gibson, Secretary, AGC**  
**University of Arizona**  
**Tucson, Arizona USA**  
[Ljgibson@ag.arizona.edu](mailto:Ljgibson@ag.arizona.edu)

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**Introduction.** During the 2004 year the AGC completed its ambitious 2000-2004 work program and launched an equally ambitious work program for the 2004-2008 period. The linchpins of the 2000-2004 program were first, a series of annual meetings of the Commission along with the organized paper sessions with scholarly papers which explored critical themes in applied geography. Second, we prepared a book, *Applied Geography: A World Perspective* edited by Antoine Bailly and Lay James Gibson. This book was 17 chapters and 320 pages in length. The book was published by Kluwer in 2004 and it was presented at the 2004 IGU Congress in Glasgow, Scotland.

The 2004-2008 work program of the AGU was initiated at the Glasgow Congress with a series of excellent paper sessions and a most productive business meeting. During the 2005 year we built on the work started in Glasgow and we made solid progress on two fronts. First, we reached out to the larger community of applied geographers and brought new colleagues into the circle of "Friends of AGC". Second, we organized a two stimulating paper sessions in November and in doing this moved convincingly forward toward our goal of preparing another book on applied geography which is planned for presentation at the 2008 IGU Congress in Tunis.

The one sad note in an otherwise good year was the loss of our colleague Frans Dieleman. Frans was a distinguished applied geographer, member of the Faculty of Geographical Science of the Netherlands Graduate School of Housing and Urban Research, and a founding member of the AGC's International Industry Advisory Committee. But perhaps more important, Frans was a good friend and valued colleague. We will miss him greatly.

**Applied Geography Book Project.** The book which the Commission presented in Glasgow has been very well received. Given the strong interest internationally in applied geography we have initiated a second book project. This book will be edited by Antoine Bailly, Lay James Gibson, and Kingsley Haynes. The book will be published in late 2007 or early 2008 and it will be presented at the IGU's 2008 Tunis Congress.

The book will focus on three critical themes:

**Theme I.** Applied Geography in the Geography Curriculum: Issues for Undergraduate and Graduate Education

**Abstract.** Geographers in business and government often find themselves making the geography-applied geography connection after they have graduated and are on the job. We have selected this theme because we think that a more effective and efficient approach is to have the applied geography message be an explicit part of the undergraduate and graduate curricula. Among the approaches to be considered are internships; industry case studies; having applied geography themes embedded in "traditional" geography courses; "professional courses" that make explicit the use of geographic concepts and techniques for solving common problems found in government and business; student visits to employing firms and agencies; and campus visits by potential employers and industry allies.

## **Theme II.** Industry Applications

**Abstract.** In every region of the World there are success stories – stories that can often best be told by geographers who have successfully made the move from the academy to positions of responsibility and leadership in business and government. In some cases the story involves the move from student status to post university employment. In other cases the success stories involve geographers who have successfully made the jump from professorships to corporate and civic environments.

Our intention here is to celebrate success while exploring the attributes of geographic education that seem to be especially valued by “those who know.” We also want to explore the differences in corporate cultures and value systems that sometimes stand between those in the academy and those in industry and government. Finally, we want to identify and better understand successful partnerships between academic geography, corporate geography and government-based geographic applications.

**Theme III.** Ethics: Should Applied Geographers be Objective Technocrats? Passionate Advocates? Or Can They be Both?

**Abstract.** Give widespread concerns about questionable practices by both corporate and civic officials it is appropriate that the Applied Geography Commission bring this debate to the discipline. Geographers can and have assumed a variety of postures when addressing questions of policy and practice. Are there rules governing those who serve as applied geographers? What have geographers done to assure that they are “credible professionals” and what have they done (or should they do) to avoid conflicts of interest. Does the behavior of geographers who do not work in the civic and corporate sectors have consequences for those who do?

**2005 Meeting of the IGU Applied Geography Commission.** The 2005 meeting of the AGC was held in conjunction with the 2005 North American Meetings of the Regional Science Association International. This, the 52<sup>nd</sup> Annual Conference, was held during the period November 10-12, 2005 at the Riviera Hotel and Casino in Las Vegas, Nevada. The AGC organized two paper sessions with a total of eight papers. Session 4 was convened on Thursday the 10<sup>th</sup> and Session 50 was held on Friday the 11<sup>th</sup>. The papers were of high quality and the discussion was lively. The two sessions are:

### **Entrepreneurship and Regional Science I: Applications for Business and Government (Capri 109)**

**Chair:** Lay Gibson, University of Arizona

- *Spatial Variation in Technologic Regimes: A Multivariate Poission-Binomial Approach*, Hanas A. Cader, Kansas State University; John Leatherman, Kansas State University
- *Small but Potentially Viable Growth Companies and Edogenous Growth in US Metropolitan Regions*, Roger R. Stough, George Mason University
- *The Business of Business (Re)Location*, John R. Lombard, Old Dominion University
- *A Proposed Graduate Program in Location Sciences, Technology and Business Management*, Grady Meehan

**Discussants:** Kingsley E. Haynes, School of Public Policy, George Mason University; Grady Meehan, Burrell Montz, Binghamton University; Lay Gibson, University of Arizona

**Sessions 10:30 AM-12:10 PM Entrepreneurship and Regional Science II:  
Applied Regional Science Curriculum (Capri 113)**

**Chair:** Antoine Bailly, University of Geneva

- *Matching Geospatial Concepts with GeoEd Demands*, Reginald Golledge, University of California Santa Barbara; Sarah Battersby, University of California Santa Barbara; Meri Marsh, University of California Santa Barbara
- *The North American Curriculum in Applied Geography and Regional Science*, Richard Boehm, Texas State University
- *Client Driven Education? Issues for an Applied Geography and Regional Science Curriculum*, Burrell Montz, Binghamton University
- *Planning of the New European Space Economy: Rethinking the Role of the Geography/Regional Scientist*, Jorge Gaspar, University of Lisbon

**Discussants:** Antoine Bailly, University of Geneva; Kingsley E. Haynes, School of Public Policy, George Mason University; John R. Lombard, Old Dominion University; Robert J. Stimson, University of Queensland

**The 2006 Meeting of the Applied Geography Commission, International Geography Union.** The 2006 meeting of the AGC will be held in conjunction with the IGU's Regional Congress in Brisbane, Australia. The dates are July 3-7, 2006. The AGC have organized three paper sessions and a practitioner session. In addition, the AGC is organizing a business meeting and applied geography field seminar during the period just prior to the Brisbane Congress. The dates are June 30-July 2 and the venue is Noosa, Queensland. This is a coastal environment which has experienced rapid growth driven by tourism and retirement. The AGC's Brisbane Sessions are as follows:

Entrepreneurship and Geography:

- I. Industry Applications
- II. Education and Ethics
- III. Educating Applied Geographers

Three sessions organized for the Brisbane IGU 2006 Regional Conference

Regional Responses to Global Changes

3-7 July 2006  
Brisbane, Australia

For additional information please contact:

Lay James Gibson  
Secretary, IGU  
Applied Geography Commission  
[Ljgibson@ag.arizona.edu](mailto:Ljgibson@ag.arizona.edu)

## Session I: Entrepreneurship and Geography: Industry Applications

1. Andrew Beer, Professor, School of Geography, Population and Environmental Management, Flinders University of South Australia and Dr. Emma Baker, School of Geography, Population and Environmental Management, Flinders University of South Australia, *Developing a Workable Model of Housing Need: Applying Geographical Concepts and Techniques to a Problem of Public Policy.*
2. Roger R. Stough, NOVA Endowed Chair and Professor of Public Policy, Director, Center for Entrepreneurship and Public Policy, School of Public Policy, George Mason University, *Small but Potentially Viable Growth Companies and Endogenous Growth in U.S. Metropolitan Regions.*
3. James Rowe, Senior Planner Economic Development, Manukau City Council, *Auckland Regional Economic Development Strategy: A Case in Institutional Capacity Building, Stakeholder Buy-in and the Perception of Success.*
4. Andrew Beer, Professor, School of Geography, Population and Environmental Management, Flinders University of South Australia, *Understanding the Impacts of Employment Loss: Space, Place and Public Policy.*
5. Jorge Gaspar, Professor, University of Lisbon, Faculdade de Letras, Cidade Universitaria *Planning the New European Space Economy: Rethinking the Role of the Geographer/Regional Scientist.*

## Session II: Entrepreneurship and Geography: Education and Ethics

1. Richard Boehm, Jesse H. Jones Distinguished Chair in Geographic Education, Audrey Mohan, Ph.D. Research Assistant in Geographic Education, Department of Geography, Texas State University, *Assessing the Validity of a Core Curriculum in Applied Geography*.
2. Burrell Montz, Professor, Department of Geography, Binghamton University, *Client Driven Education? Issues for an Applied Geography Curriculum*.
3. John Lombard, Assistant Professor Urban Studies and Public Administration, Old Dominion University, *The Business of Business Relocation*.
4. Kingsley Haynes, Dean and Professor, George Mason University and Robert Stimson, Professor, Geographical Sciences and Planning, Centre for Research into Sustainable Urban and Regional Futures, *Making Geographic Findings Matter*.
5. Grady B. Meehan, Consultant, Reston, Virginia, *A Proposed Graduate Program in Location Science, Technology and Business Management*.

Session III. Entrepreneurship and Geography: Educating Applied Geographers.

1. Reginald Golledge, Professor, Sarah Battersby, Meri Marsh, Department of Geography and Research Unit of Spatial Cognition and Choice, University of California – Santa Barbara, *Matching Geospatial Concepts with Geo-Ed Demands*.
2. Sarah Battersby, Reginald Golledge, Meredith Marsh, Department of Geography and Research Unit of Spatial Cognition and Choice, University of California – Santa Barbara, *Development of Abstract and Real-World Understanding of Geospatial Concepts*.
3. Meredith J. Marsh, Reginald G. Golledge, Professor, Sarah E. Battersby, Department of Geography and Research Unit on Spatial Cognition and Choice, University of California Santa Barbara, *Abstract vs. Real World Understanding of Spatial Relationship Concepts Among K-Undergraduate Students: Implications for a “Minimal” GIS*.
4. Lay James Gibson, University Distinguished Outreach Professor, The University of Arizona, David Rutherford, National Geographic Society, Osa Brand, National Council for Geographic Education, Susan Hollier, The Woodlands High School, *Geography Learning: Building a Research Agenda for Meeting Societal Needs*.
5. Antoine Bailly, Professor, Departement de Geographie, University of Geneva, *An Epistemology of Applied Geography*

*Developing a Workable Model of Housing Need: Applying Geographical Concepts and Techniques to a Problem of Public Policy*

Professor Andrew Beer  
School of Geography, Population and Environmental Management  
Flinders University of South Australia  
GPO Box 2100  
Adelaide, SA 5001  
[Andrew.Beer@flinders.edu.au](mailto:Andrew.Beer@flinders.edu.au)  
Telephone: 011-61-08-8201-3522  
Fax: 011-61-08-8201-3521

And

Dr. Emma Baker  
School of Geography, Population and Environmental Management  
Flinders University of South Australia  
GPO Box 2100  
Adelaide, SA 5001

**Abstract.** Governments increasingly seek to target public sector welfare expenditures to those most in need. In Australia this has resulted in a shift away from the direct provision of social housing to models of assistance that rely upon private sector provision, with cash subsidies to those in housing stress (Beer and Paris 2003). In Australia attention has increasingly focused on the question of housing need: its conceptualization, measurement, application to policy and expression across space. This paper reports on work undertaken by geographers for the Government of South Australia on the development of a workable model of housing need as a way of establishing priorities for public sector expenditures. The paper considers the history of research into housing need within the geographical and related literature, the emerging focus on housing need – and its variants, complex need, extreme need et cetera – amongst Australian governments and the challenges of developing putting into operation the multi-faceted concepts embedded within the notion of “need”.

*Small but Potentially Viable Growth Companies and Endogenous Growth in U.S.  
Metropolitan Regions*

Roger R. Stough  
NOVA Endowed Chair and Professor of Public Policy  
Director, Center for Entrepreneurship and Public Policy  
School of Public Policy  
George Mason University  
4400 University Drive  
Fairfax, VA 22030-4444

**Abstract.** There are many factors that influence how much entrepreneurial activity occurs in a metropolitan region. Cyclical and other exogenous factors are certainly noteworthy in this regard in that it is known that the rate of company start ups varies with recessionary and boom periods but not always in the same way from place to place. However, in this paper the concern is with the relationship of the level of enterprise development activity to endogenous factors. The paper examines the relationship between enterprise development patterns in U.S. metropolitan regions and endogenous growth. Specifically the hypothesis that enterprise development is an increasing function of endogenous induces growth is examined. Endogenous induced growth is measured as the regional shift component from shift-share analysis for the metropolitan regions. Various instrumental or intervening variables such as size, industry structure, income, education, etc. are controlled in different regression models used to examine the hypothesis. The research may identify critical links between regional and community effort and company formation. This is important because rate of company formation is a known positive correlate of regional economic performance and thus may be hypothesized to be a control variable in regional economic development strategy and policy.

*Auckland Regional Economic Development Strategy:  
A Case in Institutional Capacity Building, Stakeholder Buy-in and the Perception of  
Success*

James Rowe  
Senior Planner Economic Development  
Manukau City Council  
[jrowe@manukau.govt.nz](mailto:jrowe@manukau.govt.nz)  
Telephone: 64-9-262-5191  
Fax: 64-9-262-5171

**Abstract.** Geographers who find themselves working in the economic development profession are in a position to see the “disconnect” that sometimes stands in the way when regional analysis forms the basis for regional policy. This case study focuses on the role of political infighting that upsets the process of moving from theory to practice.

*Understanding the Impacts of Employment Loss: Space, Place and Public Policy*

Professor Andrew Beer  
School of Geography, Population and Environmental Management  
Flinders University of South Australia  
GPO Box 2100  
Adelaide, SA 5001  
[Andrew.Beer@flinders.edu.au](mailto:Andrew.Beer@flinders.edu.au)  
Telephone: 011-61-08-8201-3522  
Fax: 011-61-08-8201-3521

**Abstract.** Economic globalization has contributed to substantial change in the distribution of manufacturing industry across the globe. Since the year 2000 there have been a number of high profile plant closures in Australia as both local firms and multi-nationals have sought relocated to lower wage countries such as China, Indonesia, Fiji, and India. This paper discusses some of the outcomes of a research project examining the health, housing and labor market outcomes of the closure of the Mitsubishi Motors Australia Ltd. (MMAL) plant at Lonsdale, in the southern part of metropolitan Adelaide. The paper considers some of the ways in which location has affected the responses of retrenched employees to their new circumstances. It also draws out the implications for public policy.

*Planning the New European Space Economy:  
Rethinking the Role of the Geographer/Regional Scientist*

Jorge Gaspar  
Professor  
Centro de Estudos Geograficos  
Universidade de Lisboa  
1600 - 214 Lisboa  
[jbgaspar@netcabo.pt](mailto:jbgaspar@netcabo.pt)  
Telephone: 351 217965469  
Fax: 351 217121250

**Abstract.** Globalisation and the so-far main answer to it in macro-regional terms, the construction of the European Union, are two processes with numerous interactive facets, with profound consequences on spaces and territories and implying a wide range of challenges facing geographers. In addition, the traditional organization of academic knowledge has not yet revealed capacity to address all emerging problems, either in social, economic or cultural terms, or in terms of spatial and territorial restructuring. As long as it demands an assessment of consequences at the global level, it is also necessary to measure as well as know how to evaluate regional-local interactions – in order to manage threats and opportunities. The role of the geographer in addressing these issues is the central theme of this paper.

*Assessing the Validity of a Core Curriculum in Applied Geography*

Richard Boehm

Jesse H. Jones Distinguished Chair in Geographic Education

And

Audrey Mohan

Ph.D. Research Assistant in Geographic Education

Department of Geography

Texas State University

San Marcos, Texas 78666-4616 USA

[Rb03@txstate.edu](mailto:Rb03@txstate.edu)

Telephone: 512-245-1823

Fax: 512-245-1653

**Abstract:** In an earlier paper, the authors developed a core curriculum in applied geography by surveying the course requirements of ten applied geography degree-granting programs in North America. A core curriculum in applied geography will serve to ensure students are appropriately educated and trained in applied geography coursework. The current research involves a survey of members of the specialty group in applied geography of the Association of American Geographers to determine if the core curriculum established during previous research is appropriate or if it needs to be modified with the addition of other courses. This research should be useful to geography departments as faculty plan programs that address "societal problems with spatial dimensions," a definition of applied geography offered by past AAG President Reginald Golledge.

*Client Driven Education? Issues for an Applied Geography Curriculum*

Burrell Montz  
Department of Geography  
Binghamton University  
Binghamton, NY 13902-6000 USA  
[bmontz@binghamton.edu](mailto:bmontz@binghamton.edu)  
Telephone: 607-777-2615  
Fax: 607-777-6456

**Abstract.** Applied geography has become well accepted as an approach that utilizes geographic methods, tools, and concepts to address real world problems, frequently for a client. Much early discussion centered on what applied geography is, but it is hoped that we have moved beyond that and can address another pressing issue: how to balance "client" needs with disciplinary foundations? In an era where professional masters' degrees are being promoted both within and beyond universities, and certification programs, especially for GIS, are widely available, the distinction made in 1998 by Gibson and Wellar between client driven research and curiosity driven research becomes particularly relevant. This paper evaluates the advantages and disadvantages of these two emphases as examples of important initiatives in education. Specific curricula are compared based on a set of criteria, and recommendations are made for how to balance approaches and needs.

*The Business of Business Relocation*

John Lombard  
Urban Studies and Public Administration  
Old Dominion University  
2089 Constant Hall  
Norfolk, VA 23529-0218  
[jlombard@odu.edu](mailto:jlombard@odu.edu)  
Telephone: 757-683-4809  
Fax: 757-683-4076

**Abstract.** This paper explores the two primary opportunities for a career in business location: the private sector based business site selection consulting industry and the public sector based business attraction field, typically found within public economic development agencies. The paper focuses on the participants in the comprehensive business relocation process and discusses the central role of the relocating business. It will also describe the entities in the private sector that make a living by supporting there locating business, and the players in the public sector who benefit both economically and politically from the new business investment. Within both sectors, several specialists work to perform the business of business relocation. These specialties include numerous opportunities for geographers. The paper will discuss these opportunities and comment on the differences between those that exist in the private and public sectors.

*Making Geographic Findings Matter*

Kingsley Haynes  
Dean and Professor  
School of Public Policy  
George Mason University  
4400 University Dr.  
Fairfax VA 22030  
[khaynes@gmu.edu](mailto:khaynes@gmu.edu)  
Telephone: 703-250-3317 Home  
Telephone: 703-993-2280  
Fax: 703-993-2284

And

Professor Robert Stimson  
Geographical Sciences & Planning  
Centre for Research into Sustainable Urban and Regional Futures  
Level 8 Computer Science Bldg. 69  
St. Lucia Qld 4072  
Australia  
[r.stimson@uq.edu.au](mailto:r.stimson@uq.edu.au)  
Telephone: 011-3-365-6307  
Fax: 011-3-365-3561

**Abstract.** Applying geography is not just using geography and geographic procedures and principles in relevant research. Conducting applied research in geography places onerous responsibility on the practitioner. It involves a complex mix of ethical and scientific issues. It includes being concerned and sensitive to local circumstances, making the research methodology and findings open and transparent. It may include reporting on results that may be controversial and assuring that the data, procedures and interpretations are open to all interested parties. As the famous political scientist and budget analyst Aaron Wildavsky once wrote, this is learning to “speak truth to power”. It is something that we do not teach our students and often only comes with considerable experience. Often feedback on the impact of results is rapid and easy to measure but at other times results have long gestation periods and only become important as they are accumulated with other findings (i.e., become a preponderance of evidence). This is where meta-analysis plays a critical role. However in all cases it is “evidence based” research that is central to making geography matter in the real world if it is to be informative for policy and planning decisions and for business decisions.

*A Proposed Graduate Program in Location Sciences, Technology and Business Management*

Grady B. Meehan  
Consultant  
Reston, VA  
[GMeehan2@aol.com](mailto:GMeehan2@aol.com)

**Abstract.** Geographers have explored all areas of the world in the past two centuries. Currently, our “terra incognita” is in most management offices of the large corporation. Efforts to introduce geographic technology have been usually directed toward the information technology, real estate and site selection departments for somewhat limited applications. Grant Thrall’s definition of business geography emphasizes the integration of geographic reasoning, technology and data in support of decision-making. Since the typical business manager often lacks a formal background in geographic reasoning, a graduate program focusing on geographic core concepts supported by geographic technology will be the foundation of business process transformation. A graduate program that infuses the culture of business with a geographic perspective will lead to better business questions that can be leveraged by geographic technology and data. Geographic inputs to business strategy, planning and operations to optimize the business model will support the improved competitive position of companies that are able to leverage geography.

*Matching Geospatial Concepts with Geo-Ed Demands*

by

Professor Reginald G. Golledge  
[golledge@geog.ucsb.edu](mailto:golledge@geog.ucsb.edu)

Sarah Battersby  
Meri Marsh

Department of Geography &  
Research Unit on Spatial Cognition and Choice  
University of California – Santa Barbara  
3616 A Ellison Hall  
Santa Barbara, CA 93106 USA  
Telephone: 805-893-2731  
Fax: 805-893-3146

**Abstract.** The general application of geospatial knowledge to problem solving in everyday activities is at times limited by a lack of understanding of the geospatial concepts that are necessary to the problem solution process. For example, GIS are being used extensively throughout the world as a “most favored” problem solving method. But many users do not understand the complex abstract concepts in GIS and are still taught “buttonology.” Without an appropriate concept and task-based ontology, attempts to integrate Applied Geography into a K-12 curriculum will suffer the same problem faced by geographers generally throughout the recent history of the discipline. This is the problem of matching concepts and tasks with acceptable and known age and developmental levels that facilitate comprehension and use. Many school programs today (including the US Geography Standards) are guilty of this mismatching. They do not examine the “inherited structure and content” of a concept or task before introducing it. For example, the “maps” concept is introduced before concepts of “grid,” “coordinate,” “scale,” “legend,” “symbolization,” etc., whereas the reverse should be the case. Little prior testing has been done to see what levels of concept and task complexity can be reliably and validly introduced at what grade, and even less has been done to specifically examine which type of support system (low vs. high tech; verbal/written vs. map/graphic) is most appropriate to host such introductions. In this paper, we present a task ontology and empirical examples of K-12 and college testing of tasks to suggest the order in which concepts should be introduced. Since we develop a task-based structure, we also use these results to suggest the types of applied problems that can be profitably integrated into geographic (or other) teaching areas that will eventually produce ways of thinking and reasoning geospatially that support appropriate ways and means for solving applied geography problems in job-related scenarios.

*Development of Abstract and Real-World Understanding of Geospatial Concepts*

Sarah E. Battersby  
Reginald G. Golledge  
Meredith J. Marsh

Department of Geography &  
Research Unit on Spatial Cognition and Choice  
University of California Santa Barbara  
3616 A Ellison Hall  
Santa Barbara, CA 93106 USA  
[golledge@geog.ucsb.edu](mailto:golledge@geog.ucsb.edu)  
Telephone: 805-893-2731  
Fax: 805-893-3146

**Abstract.** Through examination of results from studies with primary, secondary, and university age students, we evaluate several key geospatial concepts to determine how abstract and real-world understanding of geospatial concepts is developed incidentally throughout the curriculum. This work is a portion of a larger project aimed to create a geospatial task ontology and a hierarchical organizational system for concepts based on the complexity of the task. This paper will specifically discuss results from experiments at the primary, secondary, and university level to examine how students innately understand a variety of geospatial concepts ranging from simple location description tasks to more complicated tasks such as interpolating values, and answering complex questions using map overlay. This discussion will extend to include how students were able to successfully (or not) show understanding of geospatial concepts through "real-world" application style questions and through the students own description of the concepts involved in different tasks. In addition, the results of these studies will be framed in terms of suggested methods for improving geospatial education at all levels of the curriculum using geographic tools such as a "Minimal GIS."

*Abstract vs. Real World Understanding of Spatial Relationship Concepts Among  
K-Undergraduate Students: Implications for a "Minimal" GIS*

Meredith J. Marsh  
Reginald G. Golledge  
Sarah E. Battersby

Department of Geography and Research Unit on Spatial Cognition and Choice  
University of California Santa Barbara  
3616 A. Ellison Hall  
Santa Barbara, CA 93106 USA  
[geolledge@geog.ucsb.edu](mailto:geolledge@geog.ucsb.edu)

**Abstract.** As Geographical Information Systems (GIS) are increasingly implemented in K-12 classrooms, the risk becomes one of teaching "buttonology" or simply how to point and click to complete certain functions. Three years of research has culminated in greater insight into age and grade related differences in geospatial concept recognition and understanding. Simple paper and pencil tasks were given to 3<sup>rd</sup> grade, 6<sup>th</sup> grade, high school, and undergraduate students to provide insight into different levels of concept understanding, specifically in terms of descriptions of spatial relationships, which exist between each age/grade level. Results indicate significant differences in geospatial concept recognition and understanding among the age groups tested. Additionally, results indicate that students at every age level tested more easily identify and understand spatial relationship terms in real-world depictions as opposed to abstract diagrams. This data has been used in the argument for a "Minimal" GIS in which age and grade appropriate concept understanding becomes the driving force behind the GIS, in turn making it an effective support system for spatial thinking.

*Geography Learning: Building a Research Agenda for Meeting Societal Needs*

Lay James Gibson  
University Distinguished Outreach Professor  
Director, Economic Development Research Program  
The University of Arizona  
1955 East 6<sup>th</sup> St. – PO Box 210184  
Tucson, AZ 85719 USA  
[Ljgibson@ag.arizona.edu](mailto:Ljgibson@ag.arizona.edu)  
Telephone: 520-621-7899  
Fax: 520-621-7834

**Abstract:** Education and training in geography can equip college graduates to contribute to a wide range of societal needs. Geography as part of a broad liberal arts education fulfills the societal need for citizens who can contextualize their lives, jobs, and actions within broader social and philosophical frameworks. Training in applied geography meets the societal needs of (1) ensuring that students obtain employment after graduation, and (2) staffing positions in both public and private sectors with capable geographers who bring important geographic understanding to corporate and public decision-making processes. This paper focuses on training in applied geography for meeting societal needs, and it suggests two research paths, the first related to marketing applied geography and the second to product development of an applied geography curriculum.

*An Epistemology of Applied Geography*

Antoine Bailly  
Professor  
Departement de Geographie  
University of Geneva  
Bd du Pont-d'Arve 40  
CH-1211 Geneve 4  
Switzerland  
[antoine.bailly@geo.unige.ch](mailto:antoine.bailly@geo.unige.ch)

**Abstract.** This paper deals with the links between fundamental research and applied research. The focus is on the ways that geographical knowledge is constructed and then transferred to politicians or institutions for decision making.

**The 2007 meeting of the Applied Geography Commission, International Geography Union.** The venue of the 2007 meeting of the AGC has tentatively been set for San Francisco. The proposal is to hold the meeting in conjunction with the April 17-21 meeting of the Association of American Geographers.

## **Appendix A**

### **Members of the Applied Geography Commission (2005)**

**International Geographical Union  
Applied Geography Commission  
Members of the Commission (2005)**

Professor Antoine Bailly, Commission President  
University of Geneva  
UNI-Mail - Blvd Carl-Vogt 102  
CH-1211  
Geneve 4  
Switzerland  
[antoine.bailly@geo.unige.ch](mailto:antoine.bailly@geo.unige.ch)  
41-22-705-8340  
41-22-705-8353

Gyorgy Enyedi  
Membre de l'Academie des Sciences  
Roosevelt Ter 9 - 1051 Budapest  
Hungary  
[enyedigy@office.mta.hu](mailto:enyedigy@office.mta.hu)  
Telephone: 011-361-331-4379  
Fax: 011-361-302-4808

Professor Jorge Gaspar  
Faculdade de Letras  
Cidade Universitaria  
1699 Lisboa Cedex  
Portugal  
[cedru@netcabo.pt](mailto:cedru@netcabo.pt)  
Fax: 011-0035121 7938690

Lay James Gibson, Commission Secretary  
University Distinguished Outreach Professor  
The University of Arizona  
1955 E. 6<sup>th</sup> St.  
Tucson, AZ 85719  
[ljgibson@ag.arizona.edu](mailto:ljgibson@ag.arizona.edu)  
Telephone: 520-621-7899  
Fax: 520-621-7834

Professor Claude Manzagol  
Faculte des arts et des sciences  
Departement de geographie  
Universite de Montreal  
C.P. 6128, succursale Centre-ville  
Montreal QC Canada H3C 3J7  
[claude.manzagol@umontreal.ca](mailto:claude.manzagol@umontreal.ca)  
Telephone: 514-343-8058  
Fax: 514-343-8008

Professor Michael Pacione  
Department of Geography  
University of Strathclyde  
Glasgow G1 1XH  
UK  
[Michaelpacione@aol.com](mailto:Michaelpacione@aol.com)  
Telephone: 011-0141-548-3793

Professor Emeritus Michel Phliponneau  
23 bis Bd Volney - 35700 Rennes  
France  
Telephone: 011-33-2-99-36-28-74  
Fax: 011-33-2-99-36-28-74

Professor Bob Stimson  
Geographical Sciences & Planning  
Centre for Research into Sustainable Urban and Regional Futures  
Level 8 Computer Science Bldg. 69  
St. Lucia Qld 4072  
Australia  
[r.stimson@uq.edu.au](mailto:r.stimson@uq.edu.au)  
Telephone: 011-3-365-6307  
Fax: 011-3-365-3561

Professor Harry Timmermans  
Architecture & Planning  
Eindhoven University of Technology  
Postvak 20 Postbus 513  
5600 MB Eindhoven NL  
The Netherlands  
[eirass@bwk.tue.nl](mailto:eirass@bwk.tue.nl)  
Telephone: 011-31-40-247-3315  
Fax: 011-31-40-245-2432

**Appendix B**  
**Members of the AGC's International Industrial Advisory Committee (2005)**

**International Geographical Union  
Applied Geography Commission  
Members of the International Industry Advisory Committee (2005)**

Martin Clarke  
Professor & Director  
GMAP  
One Park Lane  
Leeds  
LS3 1EP  
U.K.  
[Martin.Clarke@gmap.com](mailto:Martin.Clarke@gmap.com)  
Telephone: 44-113-242-4334

Dennis Donovan  
Director, Global Site Selection  
The Wadley-Donovan Group, Ltd.  
A Grubb & Ellis Company  
101 Fieldcrest Ave., Suite 1F  
Edison, NJ 08837-3628  
[dennis.donovan@grubb-ellis.com](mailto:dennis.donovan@grubb-ellis.com)  
Telephone: 732-225-0433  
Fax: 732-225-6167

Mauro Gabella  
Directeur  
Sanofi-Synthelabo S.A.  
11, rue de Veyrot - CH-1217 Meyrin 1  
Geneve  
Switzerland  
[mauro.gabella@sanofi-synthelabo.com](mailto:mauro.gabella@sanofi-synthelabo.com)  
Telephone: 011-022-989-0147  
Fax: 011-022-989-0255

Professor Reginald Golledge  
Department of Geography  
UC-Santa Barbara  
3616A Ellison Hall  
Santa Barbara CA 93106  
[golledge@geog.ucsb.edu](mailto:golledge@geog.ucsb.edu)  
Telephone: 805-893-2731  
Fax: 805-893-3146

Kingsley Haynes  
Dean and Professor  
George Mason University  
4400 University Dr.  
Fairfax VA 22030  
[khaynes@gmu.edu](mailto:khaynes@gmu.edu)  
Telephone: 703-250-3317 Home  
Telephone: 703-993-2280  
Fax: 703-993-2284

Brian. P. Holly  
Project Review Coordinator  
Center for Economic Studies  
Office of the Chief Economist  
U.S. Census Bureau  
4700 Silver Hill Road, Stop 6300  
Washington, D.C. 20233  
[brian.p.holly@census.gov](mailto:brian.p.holly@census.gov)  
Telephone: 301-763-1883  
Fax: 301-457-1235

Kim Young Il  
Businessman  
CPO Box 943  
Seoul  
Korea  
[k80101@netsgo.com](mailto:k80101@netsgo.com)  
Telephone: 011-82-549-5800  
Fax: 011-82-2-548-6138

Grady Meehan  
Consultant  
[GMEEHAN@aol.com](mailto:GMEEHAN@aol.com)

Christian Pierret  
Ministre  
Hotel de Ville  
88100 Saint-Die-des-Vosges  
France  
Telephone: 011-01-44-87-17-17  
Fax: 011-33-329551302

Doug Richardson  
Executive Director  
Association of American Geographers  
1710 Sixteenth St. NW  
Washington, DC 20009-3198  
[drichardson@aag.org](mailto:drichardson@aag.org)  
Telephone: 202-234-1450  
Fax: 202-234-2744

Grant Thrall  
Professor  
Department of Geography  
University of Florida  
2605 NW 38th St.  
Gainesville FL 32605  
[thrall@afn.org](mailto:thrall@afn.org)  
Telephone: 904-392-0494 Vail, CO  
Fax: 904-392-3584 Vail, CO (FAX)  
Telephone: 352-372-6440 U of FL Phone  
Fax: 352-392-8855 U of FL Fax  
Fax: 352-335-7268 home fax

Professor Sir Alan G. Wilson  
Director General  
Department of Education and Skills  
Sanctuary Buildings  
Great Smith Street  
London  
SW1P 3BT  
[Alan.Wilson@dfes.gsi.gov.uk](mailto:Alan.Wilson@dfes.gsi.gov.uk)

**Appendix C**  
**Friends of the AGC**

**International Geographical Union  
Applied Geography Commission  
Friends of the AGC (2005)**

Ronald Abler  
International Geographical Union  
1710 Sixteenth Ave.  
Washington DC 20009-3198 USA  
[rabler@aag.org](mailto:rabler@aag.org)  
Telephone: 202-431-6271  
Fax: 703-527-3227

Andrew Beer  
Department of Geography  
Flinders University of South Australia  
GPO Box 2100  
Adelaide, SA 5001  
[Andrew.Beer@flinders.edu.au](mailto:Andrew.Beer@flinders.edu.au)  
Telephone: 011-61-08-8201-3522  
Fax: 011-61-08-8201-3521

Richard Boehm  
Jesse H. Jones Distinguished Chair in Geographic Education  
Department of Geography  
Texas State University  
San Marcos, Texas 78666-4616 USA  
[rb03@txstate.edu](mailto:rb03@txstate.edu)  
Telephone: 512-245-1823  
Fax: 512-245-1653

William Bowen  
Ph.D. & President, Faculty Senate  
Cleveland State University  
Maxine Goodman Levin College of Urban Affairs  
1860 E. 22nd St.  
Cleveland OH 44114 USA  
[bowen@wolf.csuohio.edu](mailto:bowen@wolf.csuohio.edu)  
Telephone: 216-687-9250  
Fax: 216-687-9215  
Telephone: 216-687-9226 (Urban Affairs)

Anne Buttimer  
Professor  
Department of Geography  
Belfield Dublin 4  
Ireland  
[anne.buttimer@ucd.ie](mailto:anne.buttimer@ucd.ie)  
Telephone: 011-353-1-706-8174  
Fax: 011-353-1-269-5597

Handas Cader  
Department of Agricultural Economics  
Kansas State University  
Manhattan, Kansas USA  
[acmhanas@agecon.ksu.edu](mailto:acmhanas@agecon.ksu.edu)

Graham Clarke  
School of Geography  
University of Leeds  
Leeds LS2 9JT  
United Kingdom  
[graham@geog.leeds.ac.uk](mailto:graham@geog.leeds.ac.uk)  
Telephone: 011-3-233-3323  
Fax: 011-3-233-3308

Lorraine Craig  
Royal Geographical Society  
1 Kensington Gore  
London SW7 2AR  
UK  
[L.Craig@RGS.org](mailto:L.Craig@RGS.org)  
Telephone: 44-0-20-7591-3022  
Fax: 44-0-20-7591-3001

Jack Dangermond  
President  
Environmental Systems Research Institute  
380 New York St.  
Redlands CA 92373 USA  
[jdangermond@esri.com](mailto:jdangermond@esri.com)  
Telephone: 909-793-2853  
Fax: 909-307-3025

John W. Frazier  
Department of Geography  
Binghamton University  
PO Box 6000  
Binghamton, NY 13901-6000 USA  
[frazier@binghamton.edu](mailto:frazier@binghamton.edu)  
Telephone: 607-777-6179  
Telephone: Secretary x 2755  
Fax: 607-777-6456

Arthur Getis  
Stephen and Mary Birch Foundation Chair of Geographical Studies  
Co-Editor, Journal of Geographical Systems  
Department of Geography  
San Diego State University  
San Diego, California 92182  
[arthur.getis@sdsu.edu](mailto:arthur.getis@sdsu.edu)  
Telephone: 619-594-6639  
Fax: 619-594-4938

Nikita F. Glazovsky  
Institute of Geography  
Russian Academy of Sciences  
Staromonetni pezeulok 29 -  
10917 Moscow  
Russia  
[nikita@ntserver.cis.lead.org](mailto:nikita@ntserver.cis.lead.org)  
Telephone: 7-095-959-0040  
Fax: 7-095-959-0033

John Paul Jones III  
Professor and Head  
Department of Geography and Regional Development  
University of Arizona  
Harvill Bldg. 409 - PO Box 210076  
Tucson, AZ 85721-0076 USA  
[jpjones@email.arizona.edu](mailto:jpjones@email.arizona.edu)  
Telephone: 520-621-1652  
Fax: 520-621-2889

John Leatherman  
Department of Agricultural Economics  
Kansas State University  
Manhattan, Kansas USA  
[jleather@agecon.ksu.edu](mailto:jleather@agecon.ksu.edu)

Changming Liu  
Institute of Geographical Science  
The Chinese Academy of Sciences  
Bldg. 917, Datun Road, Ahwai  
Beijing 100101  
China  
[liucm@dls.iog.ac.cn](mailto:liucm@dls.iog.ac.cn)  
Telephone: 86-10-6488-9306  
Fax: 86-10-6488-9309

John Lombard  
Urban Studies and Public Administration  
Old Dominion University  
2089 Constant Hall  
Norfolk, VA 23529-0218  
[jlombard@odu.edu](mailto:jlombard@odu.edu)  
Telephone: 757-683-4809  
Fax: 757-683-4076

Markku Loytonen  
Department of Geography  
University of Helsinki  
PO Box 64  
FIN-00014 Helsinki  
Finland  
[markku.loytonen@helsinki.fi](mailto:markku.loytonen@helsinki.fi)  
Telephone: 358-9-1915-0781  
Fax: 358-9-1915-0760

Lindisizwe M. Magi  
Durban-Umlazi Campus  
University of Zululand  
Private Bag X10  
Isipingo 4110  
South Africa  
[lmagi@pan.uzulu.ac.za](mailto:lmagi@pan.uzulu.ac.za)  
Telephone: 27-31-907-700  
Fax: 27-31-907-311

Alaric Maude  
Faculty of Social Science  
Flinders University of South Australia  
GPO Box 2100  
Adelaide, SA 5001  
[Alaric.Maude@flinders.edu.au](mailto:Alaric.Maude@flinders.edu.au)  
Telephone: 61-08-8201-2326  
Fax: 61-08-8201-3521

James McConnell  
SUNY Distinguished Teaching Professor  
Department of Geography and Canada-U.S. Trade Center  
Wilkeson Quad - Ellicott Complex, Room 110  
State University of New York at Buffalo  
Buffalo, NY 14261-0023 USA  
[geojem@acsu.buffalo.edu](mailto:geojem@acsu.buffalo.edu)  
Telephone: 716-645-2722 ext. 41  
Fax: 716-645-2329

Michael Meadows  
Department Head  
Environmental & Geographical Science  
University of Cape Town  
Rondebosch  
7701  
South Africa  
[meadows@enviro.uct.ac.za](mailto:meadows@enviro.uct.ac.za)  
Telephone: 27-21-650-2873  
Fax: 27-21-650-3791

Bruno Messerli  
Professor  
Geographical Institute  
University of Bern  
Hallerststrasse 12  
CH-3012 Bern  
Switzerland  
[bmesserli@bluewin.ch](mailto:bmesserli@bluewin.ch)  
Telephone: 011-41-31-819-33-81  
Fax: 011-41-31-819-76-81

Brian Mikelbank  
Assistant Professor  
Cleveland State University  
Maxine Goodman Levin College of Urban Affairs  
Urban Building - Euclid Ave. at East 17th St.  
Cleveland OH 44115 USA  
[mik@wolf.csuohio.edu](mailto:mik@wolf.csuohio.edu)  
Telephone: 216-875-9980  
Fax: 216-687-9342

Burrell Montz  
Department of Geography  
Binghamton University  
Binghamton, NY 13902-6000 USA  
[bmontz@binghamton.edu](mailto:bmontz@binghamton.edu)  
Telephone: 607-777-2615  
Fax: 607-777-6456

Keving O'Connor  
Faculty of Architecture, Building and Planning  
University of Melbourne  
Parkville, Vic. 3010  
[kevino@unimelb.edu.au](mailto:kevino@unimelb.edu.au)  
Telephone: 61-03-8344-7474  
Fax: 61-03-8344-5532

Jose L. Palacio-Prieto  
Instituto de Geografia  
Universidad Nacional Autonoma de Mexico, UNAM  
Ciudad Universitaria  
Coyoacan, 04510, D.F.  
Mexico  
[palacio@servidor.unam.mx](mailto:palacio@servidor.unam.mx)  
Telephone: 52-555-622-4339  
Fax: 52-555-616-2145

Jessie Poon  
Associate Professor  
Department of Geography  
University at Buffalo-SUNY  
105 Wilkeson Quadrangle  
Ellicott Complex  
Box 610023  
Buffalo NY 14261-0023 USA  
[jesspoon@buffalo.edu](mailto:jesspoon@buffalo.edu)  
Telephone: 716-645-2722 ext. 28  
Fax: 716-645-2329

James Rowe  
Senior Planner Economic Development  
Manukau City Council  
Manukau City, New Zealand  
[jrowe@manukau.govt.nz](mailto:jrowe@manukau.govt.nz)  
Telephone: 011-64-9-262-5191  
Fax: 011-64-9-262-5171

Roger Stough  
Mason Enterprise Center  
Institute of Public Policy  
George Mason University  
MS: 2C9  
Fairfax, VA 22030-4444  
[rstough@gmu.edu](mailto:rstough@gmu.edu)  
Telephone: 703-993-2285  
Fax: 703-993-2284

Hiroshi Tanabe  
Faculty of Economics  
Teikyo University  
Otsuka 359, Hachioji\_shi  
192\_0395 Tokyo  
Japan  
[XLH02561@nifty.ne.jp](mailto:XLH02561@nifty.ne.jp)  
Telephone: 81-426-78-3998  
Fax: 81-425-82-2845

Adalberto Vallega  
Professor  
Department Polis  
University of Genoa

StradoneS. Agostino, 37 -16123 Genoa  
Italy  
[a.vallega@iol.it](mailto:a.vallega@iol.it)  
Telephone: 011-39-10-209-5858  
Fax: 011-39-10-209-5891

Barry Wellar  
Department of Geography  
University of Ottawa  
Ottawa, ON K7N N65 Canada  
[wellarb@uottawa.ca](mailto:wellarb@uottawa.ca)  
Telephone: 613-562-5800 ext 1065  
Fax: 613-562-5145

Johnathan Young  
Warden, College Hall  
Knighton Rd.  
Leicester LE2 3TR  
UK  
[jcy@le.ac.uk](mailto:jcy@le.ac.uk)  
Telephone: 011-6-2701-498  
Fax: 011-6-252-3854