

CHAPTER ONE

LOCATION INTELLIGENCE AS AN EVOLVING FIELD

1.1. Disciplinary Development: A Need for Building and Broadening

Geographers have for decades played important roles in the search for solutions to some of the most significant issues impacting society. Questions such as the trajectory of climate change, the impact of human action on the physical environment, the availability of resources that are central to human well-being, and the factors central to the spread of disease are only a few examples of research venues where geographers have made substantial contributions. In the global workforce, geographers are employed within business, government and non-profit organizations providing a myriad of insights from a geographic perspective. Solem *et al.* (2013) map out the multitude of employment opportunities that require a geographically-informed background.

Yet, geography as a whole continues to find itself challenged to capture public attention and gain widespread recognition for the important answers provided by the field and its practitioners. There is no Nobel prize for geography.¹ It would be a rare geography degree graduate indeed who expects to find “geographer” job listings anywhere outside of academia (Dobson, 2014). For many in the public, the key context where geography might come up by name is as a question category in televised game shows or family board games. Thus, the public sphere has an unfortunate gap in its perception of the role and contribution of geography to the broader good.

¹ It should be acknowledged that the discipline of geography does have awards that acknowledge high levels of academic achievement. These awards include most prominently the *Lauréat Prix International de Géographie Vautrin Lud*, informally known as geography’s “Nobel Prize” (University of Texas at Dallas 2005). However, geography has no prize with the public visibility and acknowledgement that accompanies a Nobel Prize.

This low public profile has contributed to an ongoing, internal debate within geography on how the discipline can gain a more appropriate degree of recognition. No better example of this discussion exists than is provided by Cutter *et al.* (2002). “The Big Questions in Geography” is a wide-ranging article written with the specific purpose of stimulating geographers to better articulate the real-world relevance of geography and its spatial perspective (see Figure 1).

1. What makes places and landscapes different from one another, and why is this important?
2. Is there a deeply held human need to organize space by creating arbitrary borders, boundaries, and districts?
3. How do we delineate space?
4. Why do people, resources, and ideas move?
5. How has the earth been transformed by human action?
6. What role will virtual systems play in learning about the world?
7. How do we measure the unmeasurable?
8. What role has geographical skill played in the evolution of human civilization, and what role can it play in predicting the future?
9. How and why do sustainability and vulnerability change from place to place and over time?
10. What is the nature of spatial thinking, reasoning, and abilities?

Figure 1. Susan Cutter, Reg Golledge, and William Graf’s “Big Questions in Geography” (Source: Cutter *et al.* 2002, 307)

Cutter *et al.*’s (2002) ten “Big Questions” and associated discussion form a useful framework for geographers to shape more and better communication about the purpose and utility of incorporating geographers and geographic expertise in public efforts to solve society’s most important problems. The article addresses the need for broad understanding of fundamental ideas that impact all research in geography (such as the concept of scale), along with familiarity with more specific, topical questions that relate to any of many more specialized subfields within geography (such as the movement of people, resources, and ideas). In this way, the “Big Questions” provide a catalyst for communication about the discipline. However, as important as these questions have been, it is important to recognize the limits of the article and to identify what else is needed to

further advance geography as a whole.

Thus, as they acknowledge, the work of Cutter and colleagues forms more an invitation for better geographical knowledge dissemination than a completed and comprehensive end product in itself (see also Goodchild (2000) and Golledge (2002)). While valuable, geographers must continue work to fill in the gaps where Cutter *et al.* (2002) leave off. A need continues to exist for geographers to better explain what they do and to define the benefits that result from their work. Such a need exists across the discipline broadly, but it equally applies to geography's subfields. Researchers and practitioners working in specialized areas of geography have important opportunities to better communicate and critically assess the roles they play (see, for example, Goodchild's (2015) critique of the geographic information science field). Given the public perception gap that exists for geography broadly, the discipline's subfields have an equal or greater need to better account for their contributions and ensure that maximum use, however it is measured, is made of their expertise.

One subfield in need of better communication and formalization of a conceptual core is the discipline traditionally known as "business geography." In Thrall's (2002) classic definition, business geography "integrates geographic analysis, reasoning, and technology for the improvement of the business judgmental decision" (Thrall 2002: v). Businesses have long sought geographic analysis and advice to facilitate decisions related to the efficient deployment of available resources. However, such advice is often provided internally within corporations, typically reaching only a small core of decision-makers at the top of the corporate hierarchy. Thus, the involvement of geographers in such situations has a small public profile, leaving even the most substantial contributions of business geographers important in terms of organizational results, but invisible in terms of credit. To the extent that empirical and conceptual breakthroughs occur in such settings, businesses have a strong incentive to keep the precise nature of such findings internal, thus maintaining within their corporate hierarchies the competitive advantage that accrues from their organizational investment in knowledge management and analytical expertise (Frazier 2015). While completely understandable with consideration to corporate positioning in a highly competitive marketplace, this situation creates challenges for business geography as a continuing field of research and teaching. Business geographers need to assemble, maintain, and disseminate a core body of knowledge and information sufficient to allow the field to continue and grow, independent of the resources, record-keeping, and training capabilities of any individual corporation.

Additionally, some consideration must be given for applications of business geography's key conceptual and methodological elements in non-business settings. The core business geography competencies that focus on location analysis, site selection, market analysis, network planning, transportation routing, and related activities for businesses also provide substantial benefits for organizations that do not seek a profit. Indeed, decision-makers for a wide range of organizations require geographic analysis, reasoning and technology to make the most efficient use of their available resources. Governments and their departments, public agencies, non-governmental organizations, and non-profit and charitable entities are all examples of organizations that operate in geographic space, are constrained by location factors, and can make substantial use of the same concepts developed and employed through decades of development in the business geography field. It is important to consider the ways in which our use of the "business geography" field descriptor might artificially limit the range of applications of concepts and applications developed in the field that in reality have broad applications across many kinds of public, private, and non-profit institutions and settings.

The above thus provides the basis for two key statements of need that provide the motivation and direction for the remainder of this book.

1. **First, following the pattern of Cutter *et al.* (2002), a need exists for business geographers to coherently establish the conceptual core of business geography and communicate the applications and benefits associated with business geography practice in particular.** Such a core needs to be further supported by an extensive, active, and coordinated network of academics and practitioners focused on maintaining, building, and further disseminating the field's key concepts, skills, and methodologies. Work addressing both of these elements (that is, the establishment of the field's conceptual core and applications, and clarification and definition of the field's existing network of academics and practitioners) can have an important, positive impact on business geography as a whole.
2. **Second, following the provision of business geography expertise in settings that include but also transcend business, a need exists for the field to be framed in a way that encompasses geographic applications in both profit-seeking and non-profit-seeking contexts.** One important and unavoidable element of this re-framing process is selection and implementation of a revised field name that encompasses all areas of application, avoiding the bias and potential for misunderstanding that arises from the

explicit incorporation of “business” in “business geography”. *To that end, this book adopts the “location intelligence” field name to reflect the true, wide range of the field’s relevance.* In this context, location intelligence refers to the cumulative conceptual, analytical, and methodological contributions of geography in support of improved decision-making for organizations of all kinds.² Thus, location intelligence reflects the broad ability of geographic researchers and practitioners to provide decision-makers in any organization with location-based advice that contributes to improved organizational decisions.

Based on the above, this *Location Intelligence* volume aims to provide two specific contributions to the literature of geography: to summarize and exemplify some of the benefits offered by geography to improve the decisions made by organizations of all kinds, and to provide some definition of the development and extent of the community that contributes to locational intelligence research and applications. The book addresses these goals in two ways.

1. First, the book provides an indication of the historical developmental trajectory of research in location intelligence, using the field as broadly defined here. This is done by drawing on a source of an extensive array of historical case studies: the complete set of research compiled in the annual *Papers of the Applied Geography Conference* publication (now *Papers in Applied Geography*). This publication venue began with the inception of the Applied Geography Conference (AGC) in 1978 and continues through the present. Papers considered for inclusion in the present *Location Intelligence* volume came from the 1978 through 2013 editions of the *Papers*, a 36-year span (although the papers actually selected for this volume cover the 25 years between 1989 and 2013). The AGC thus provides an excellent historical collection of applied geographical research suitable for discernment of developing trends in geography.
2. Second, the book uses the breadth of its AGC peer-reviewed paper source to represent the diversity of research and application that is

² This revised field identifier results from discussions held and consensus achieved in a series of business geography panel sessions held at the 2011, 2012, 2013, and 2014 Applied Geography Conferences and Association of American Geographers annual meetings, and credit is due to the entire group of colleagues who participated in these discussions.

included in the location intelligence field as defined here. As a primary venue for presentation of all research done with an applied geographical focus, it is important to acknowledge that the AGC encompasses applied research completed across geography, including many investigations that range outside of the organizational decision-making context addressed here. It is also important to note that the AGC papers include research that would not have been classified as falling within “business geography” at the time of publication, but does fit the broad and more inclusive profile of “locational intelligence” research as defined here. Thus, selection of papers from the broad, AGC cross-section provides *Location Intelligence* with an important and powerful capability: to go back, reassess, and reclassify past research in a consistent manner.³ Given this ability, *Location Intelligence* represents the diversity inherent in the broadened, redefined field through its organization around a wide-ranging set of topic-based sections, namely sections devoted to service, finance, industrial, and public-sector applications.

Thus, this book focuses on a survey of a 36-year research record in a newly-defined context, with the aim of capturing new perspectives and insights into the application of geographic investigation. Geography’s search as a discipline for recognition suggests that initiatives such as this are very much needed. No doubt there are other ways yet of capturing new perspectives on geography’s existing body of research and societal contribution. However, for geographers working with and for organizations, the decision-making framework that forms the focus here is a vital one that demands to be addressed. The pages that follow provide some explorations that we hope will spur on further investigation and applications that bridge the gap between geographers and the world they seek to serve.

1.2. Book Organization

This book presents case studies of applied research, organized by broad areas of application. Following this introductory chapter, the reader will find chapters focused on *service*, *financial*, *industrial*, and *public sector* location intelligence case studies. Each chapter begins with commentary providing

³ Consistent with this objective, the book editors considered for inclusion all papers published by the AGC whose research focus relates to decisions made by any for-profit, non-profit, or governmental organization.

context for understanding the contribution of location intelligence in its area of application. The chapter introductions summarize overall research threads and potential teaching resources within each thematic area.

Additionally, most chapters are organized into subsections that provide further focus by subarea. The case studies in each subsection are presented chronologically by year of appearance in the *Papers of the Applied Geography Conference* publication, beginning with the most recent studies and progressively proceeding to the earliest. Where possible, authors have provided brief commentaries to update what has changed in the field associated with each case study; where available for a given case study, a commentary appears following the conclusion of the case study. Lastly, the book concludes with a chapter summarizing the key themes addressed by the book and highlights developing trends that, in our assessment, are likely to impact location intelligence research and application in the years ahead.

One caveat needs to be emphasized at this point, related to the book's organization and historical nature as a reflection of the evolving priorities of the AGC research community. The subject area emphases presented here speak to the complex dynamics of knowledge production, transformation, and dissemination through the research community, as the group and its members have collectively decided on which sectors and topics have been of most interest for investigation. However, what this collection does not address is the issue of what research emphasis distribution might be "optimal" or "most needed", however we might define these terms. For example, the breadth and depth of service sector research (Chapter 2) compared to public sector investigation (Chapter 5) should not necessarily be taken as indicative of a greater need for one over the other. This caveat, while representing a limitation, also leads to one of several potential uses for the book discussed below.

1.3. How to Use This Book

In a classroom context, this book is designed for use in a wide range of urban, economic, business geography and urban planning courses at the advanced undergraduate level. Its intended application is as a broad source of applied readings (and ultimately classroom discussion) linking geographic research and analysis to specific, real-world problems and solutions drawn from across the applied urban/economic geography spectrum. In this way, *Location Intelligence* aims to connect the classroom with the workplace where geographers apply their skills, perspectives, and conceptual understanding of the world. Instructors have much flexibility in tailoring the use of this book to their specific classes, as the examples found

here can support either a focused course such as retail or industrial geography, or broader survey classes covering the foundations of applied urban/economic geography more generally. Given this flexibility, this book can be used in conjunction with any of the excellent foundational textbooks available for use in urban, economic, and business geography (a number of suggested textbooks are provided for further reference within the introduction to each section of this book).

This book also has uses outside of an instructional setting. The broad range of case studies included in this volume provide at least two kinds of input for applied practitioners and researchers.

1. First, as a record of some of the most prominent research presented at the AGC over three decades, this book effectively summarizes many of the best applications for geographic knowledge and analysis created by the research community associated with the conference. The case studies recorded here demonstrate how applied geographers see their skills, methodologies, and concepts in relation to many crucial issues in the service, finance, industry, and public policy fields. Industry leaders and decision-makers who are looking for insight into the relevance of spatial thinking will find useful ideas and approaches here.
2. Second, through both its areas of emphasis and its gaps in coverage, this volume provides food for thought for researchers looking to extend on geography's applied contributions to business and government alike. As already noted, some sectors represented here are covered by a wealth of investigation, while other sectors remain important to society but have been underrepresented, to date, in the body of AGC research represented here. A careful reading of what has (and has not) been accomplished in this book's case studies, and of what each author sees as important avenues for future examination, has the potential to direct more and better research in the field of location intelligence over the years to come.

In this way, *Location Intelligence* aims to provide a contribution on geography's application relative to the needs of decision-makers within a broad set of organizations. We hope that students, researchers, and practitioners alike will all benefit from a thoughtful reading of this volume.

References

- Cutter, S., R. Gollidge, and W.L. Graf. 2002. The big questions in geography. *The Professional Geographer* 54(3): 305-317.
- Dobson, J. 2014. Geography in the workplace: Good news to share. *Ubique*

- 34(2): 2.
- Frazier, J. 2015. Applied geography: Then and now. *Papers in Applied Geography* 1(1): 8-14.
- Golledge, R. 2002. The nature of geographical knowledge. *Annals of the Association of American Geographers* 92(1): 1-14.
- Goodchild, M.F. 2000. Communicating geographic information in a digital age. *Annals of the Association of American Geographers* 90(2): 344-355.
- Goodchild, M.F. 2015. Two decades on: critical GIScience since 1993. *The Canadian Geographer* 59(1): 3-11.
- Solem, M., K. Foote and J. Monk. 2013. *Practicing Geography: Careers for Enhancing Society and Environment*. Upper Saddle River, New Jersey: Prentice-Hall.
- Thrall, G.I. 2002. *Business Geography and New Real Estate Market Analysis*. New York: Oxford University Press.
- University of Texas at Dallas. 2005. *Press Release: U. T. Dallas' Brian Berry to Receive World's Top Honor for Geographers*. <http://www.utdallas.edu/news/archive/2005/berry-lud.html> (last accessed March 2, 2015).