

GIS Day 2014

***GIS:
Bringing Geography to the
World & the World to
Geography***

Presentation by

Dr. Barry Wellar

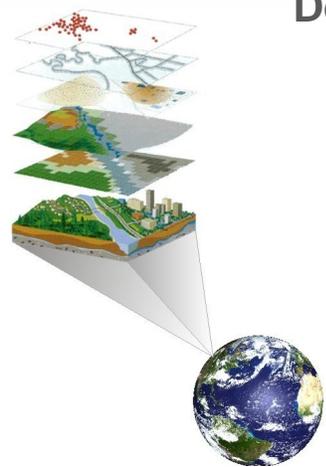
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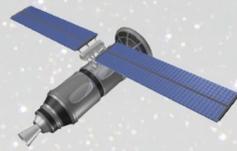
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GIS: Bringing Geography to the World & the World to Geography

Barry Wellar

Context

The ideas and the title for this 2014 GIS Day presentation came to me while preparing presentations for the *Research Colloquium on Using the Retrospective Approach to Mine for GIS Nuggets*. Details about the Colloquium are posted at <http://wellar.ca/wellarconsulting/>.

The first presentation is based on the concept of the Doomsday Map, which I initially presented *circa* 30 years ago to students in the School of Planning and in Geography at the University of Ottawa.

“Abuse v. Care of Land, Water, and Air, 1990-2015: The Doomsday Map Concept as a Compelling Argument to Retrospectively Mine the Popular Literature for GIS Nuggets” can be viewed at <http://wellar.ca/wellarconsulting/>.

The second presentation had its origins in research and policy advising that I did in the 1970s, while at the federal Ministry of State for Urban Affairs.

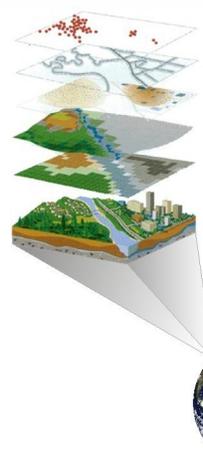
“Searching for GIS Nuggets: Mining Annual Reports by Canada’s Commissioner of Environment and Sustainable Development” can be viewed at <http://wellar.ca/wellarconsulting/>.

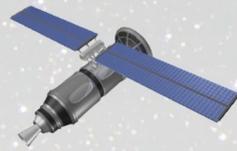
The third presentation, “Searching for GIS Nuggets: Mining Annual Reports and Advisories by Ontario’s Commissioner of Environment” reflects four decades of involvement in planning, transportation, GIS, and other matters in Ontario, and will be posted in the Colloquium file noted above.

For this GIS Day presentation, *GIS: Bringing Geography to the World & the World to Geography*, I refer to a selection of figures and tables from previous works which are available online, and which elaborate both parts of the title.

It is my expectation that this approach will be of considerable value as you continue your academic and/or other interests.

But first, a few remarks about the title itself, which I believe contains a message that you will encounter with increasing frequency in the coming years.





GIS: Bringing Geography to the World

Prior to the advent of GIS technology, and even during the early years of GIS evolution, Geography was primarily represented to the world by such means as: individual maps and collections of maps; individual photographs and collections of photographs or other images; globes; and, various kinds of text documents, including field notes, tables of numbers, essays, reports, atlases, and books.

All in all, pretty boring stuff for many people, so it is small wonder that much of the world limited its interest in Geography to names of oceans, continents, really big islands, countries, capital cities, major rivers, and mountain ranges.

And, conversely, it is small wonder that much of the world paid relatively little attention to the fundamentals of Geography involving such geographic factors as: **accessibility, adjacency, barriers, boundaries, buffers, closeness, clusters, compactness, concentration, congestion, connectivity, contiguity, density, diffusion, dispersion, distance, elevation, encroachment, form, intensification, interaction, isolation, location, migration, mobility, morphology, movement, nearness, networks, patterns, proximity, scale, segregation, separation, shape, sprawl, spread, surfaces, territory, and topography.**

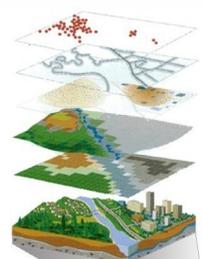
And then along came serious advances in GIS technology. KABOOM! In a span of about 35 years, beginning *circa* 1980, and via the “G” of GIS, geographic factors, functions, and structures such as those noted above have come to occupy a front-and-center position in Canada, and in countries around the world in a wide range of venues: governments at all levels; NGOs; research institutes covering a variety of disciplines, trades, and professions; businesses of all sizes; the media; and in universities, colleges, and schools.

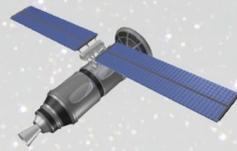
Now, it appears fair to say, GIS is more than a window bringing Geography to the world, it is the window.

GIS: Bringing the World to Geography

By increasing the ease of access to and use of spatial data and information about the built and natural environments, GIS is bringing “the world” – e.g., governments, NGOs, business, academe, researchers, the media, and various interest groups -- to various fields, threads, streams, etc., of Geography, including topics in agriculture, climatology, energy, environment, geomorphology, glaciology, land forms, land use, planning, regional development, remote sensing, research methodology, resource management and use, soils, sustainable development, transportation, and urban development.

However, there are limits to how much GIS technology can do to bring the world to Geography, which leads to such questions as:





“What contribution is Geography making to support and encourage the development and use of GIS technology and GIScience methods, techniques, and operations by governments, NGOs, business, researchers, academe, the media, and interest groups?”

Contributing Inputs from Geography to GIS

GIS Day is a special occasion, whereby we express what we are thinking and doing in our GIS research, education, training, and applications activities. And, it is also is a time to set forth what we wish others would think about and do, such as providing answers to the question:

“What contribution is Geography making to support and encourage the development and use of GIS technology and GIScience methods, techniques, and operations by governments, NGOs, business, researchers, academe, the media, and interest groups?”

The impending *Research Colloquium on Using the Retrospective Approach to Mine for GIS Nuggets* is one such contribution, and a link is provided for those wishing to ‘check out’ what I have in mind for the meeting.

There is, of course, a lot more which can be said and done about contributions by Geography on the topic, ***GIS: Bringing Geography to the World & the World to Geography.***

What follows is a brief selection of figures and tables from productions which are available online, and which elaborate both parts of the title. I trust that the research design imbedded in this approach will be instructive as you continue your work involving GIS, GIScience, and the use of GIS and GIScience.

“Guide for Papers on Using the Retrospective Approach to Mine for GIS Nuggets”

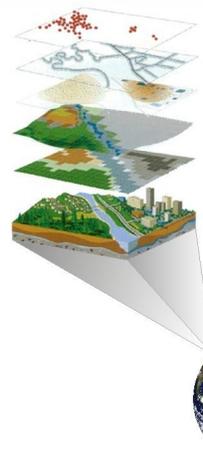
Figure 1. GIS nuggets defined

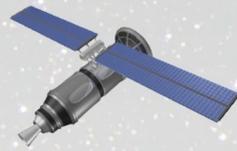
Table 1. Examples of doing in research and doing in GIS upon which to base conference papers

Table 2. Prescribed objects of attention for conference papers

Table 3. An indicative list of principal GIS topics for the *Conference on Using the Retrospective Approach to Mine for GIS Nuggets*

Table 4. A list of question-based topics for the *Conference on Using the Retrospective Approach to Mine for GIS Nuggets*





“Abuse v. Care of Land, Water, and Air, 1990-2015: The Doomsday Map Concept as a Compelling Argument to Retrospectively Mine the Popular Literature for GIS Nuggets”

Table 1. Possible nuggets derived from using the Retrospective approach to examine “the literature”

Figure 11. Another look at Doomsday Map headlines circa 25 years later: How well are we doing now?

Figure 12. Questions investigating the role of GIS in decisions affecting the state of land, water, and air resources

Table 2. An indicative list of oversight agencies with responsibilities for informing about the state of land, water, and air resources

Figure 13. A short list of illustrative good news and bright futures headlines about the care (stewardship) of land, water, and air resources

“Searching for GIS Nuggets: Mining Annual Reports by Canada’s Commissioner of Environment and Sustainable Development”

Table 2. Bodies of literature and other productions to mine for GIS nuggets

Table 3. Federal departments and agencies required to prepare a sustainable development strategy and respond to environmental petitions

Exhibit 4: Reports to Parliament by the Commissioner of the Environment and Sustainable Development

Exhibit 11. Implementing sustainable development strategies

Exhibit 13. Information for decision making

Exhibit 14. Engaging Canadians

In closing, it has been a pleasure to present the concept of **GIS: Bringing Geography to the World & the World to Geography**. Thank you for your attention.

