

Geography's Second Twilight: The James R. Anderson Distinguished Lecture in Applied Geography

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ABSTRACT

Jerome E. Dobson, professor emeritus, University of Kansas; president of the American Geographical Society; and recipient of the 2014 James R. Anderson Medal of Honor in Applied Geography, discusses his career in the context of America's academic purge of geography. Highlights include his time as a Jefferson Science Fellow with the National Academies and U. S. Department of State. Dobson has been recognized with two lifetime achievement awards for his pioneering work in geographic information systems (GIS) and as Alumnus of 2013 at Reinhardt University. His contributions include the paradigm of automated geography, his instrumental role in originating the National Center for Geographic Information and Analysis, and his leadership of the LandScan Global Population Database, the de facto world standard for estimating populations at risk. His recent research includes testing a new system for mapping minefields; designing and promulgating the current world standard for cartographic representation of landmines, minefields, and mine actions; and leading six AGS Bowman Expeditions.

KEYWORDS

Aquaterra, Bowman Expeditions, Continental Drift, Geography, Geographic Information Systems, Popular Geographics

INTRODUCTION: HONOR AND OCCASION

I sincerely thank the Applied Geography Specialty Group for awarding me the James R. Anderson Medal of Honor in Applied Geography. It means a lot to me, especially since I knew Jim Anderson personally. He was at the United States Geological Survey (USGS) when I began my career at Oak Ridge National Laboratory (ORNL). Both of us were in the throes of geographic information systems (GIS) and digital remote sensing, so our paths crossed on several occasions. I always admired, respected, and genuinely liked him. The encounter that means the most to me and says so much about Jim Anderson was, perhaps, my first major presentation to the early GIS community of Washington, DC. I vividly recall standing at the podium in a large auditorium with the other speakers, including Jim, sitting around me in a semicircle. Speaking about satellite remote sensing, I suddenly drew a blank on a simple fact that I should have known. Jim, ever so gently, mumbled the answer and saved me from embarrassment. Whenever I think of him, the obsolete phrase "scholar and gentleman" comes to mind.

Medals get their prestige from the people who accept them, and this one is a doozy. Start with two great geographers who took part in the award ceremony on April 21, 2015: Lee Schwartz, Director of the Office of The Geographer and Global Issues at the U. S. Department of State and Michael

DeMers, Professor of Geography, New Mexico State University. Go back a few years, and you'll find Bill Wood, Lee's predecessor as The Geographer of the United States. Then Roger Tomlinson and Jack Dangermond, who invented, implemented, and popularized GIS. Bill Garrison and Brian Berry, leaders of the Quantitative Revolution. Next, Evelyn Pruitt who led the Office of Naval Research's Geography Program, funded Carl Sauer's Berkeley School of Latin Americanist geography, and coined the term "remote sensing." And Gil White, recipient of the President's National Medal of Science.

GEOGRAPHY'S RISES AND FALLS

For 2,500 years, geography has been the crucible of science. A science itself so comprehensive and productive that it spawned most other earth sciences. A branch of the humanities that uniquely and powerfully connects human and physical systems. An intellectual proving ground where ideas are generated, tested, sometimes proven, always shared with other disciplines, and eagerly received from them as well. From 500 BC to 500 AD geography thrived among the ancient Greeks, Romans, and Chinese. Then came the Dark Ages, and geography itself became a fantasy. For 1,000 years, no word for "geography" existed in the common languages of Europe. Geography's light was extinguished in Europe but kept alive only through the ardent, deliberate, and persistent efforts of Irish, Arab, Persian, and Chinese scholars. (Boorstin 1983)

Finally, Europe's long night ended when its humanists rediscovered what had been known a thousand years before. The centerpiece was Ptolemy's Geography, which had been lost as a hardcopy map but preserved as a set of instructions and drawn again about 1,300 AD. It was the first map projection Europe's new intelligentsia had ever seen, and it influenced all arts and sciences. Compare paintings of Florence by Bernardo Daddi before Ptolemy's impact and by Hartmann Schedel afterward. The older one is flat. The newer one looks realistically up the River Arno and to the distant hills, and the artist said he got his perspective from Ptolemy. (Lester 2009)

Soon after, geography thrived again based on exploration, westward expansion, and geopolitics. Today, with increasing demands driven by geographic information systems, globalization, war, and sustainability, geography is booming as field and function but imperiled as a scholarly discipline in the United States.

WHAT IS GEOGRAPHY? AN ANSWER THAT WORKS

Who among you has not been asked, "What is geography?" Who hasn't struggled to find a simple, understandable definition? Can the answer possibly lie beneath the streets of Washington, DC? I happened to be working there when Dan Brown's *Lost Symbol* came out, suggesting that the Secrets of the Ages are hidden below. As I commuted to work one morning, lo and behold, a huge banner on the floor of Metro Center boldly proclaimed, "Geography = Unique Coffee Flavor." There you have it, folks, geography defined with such mathematical precision that you can almost taste it. Thanks to Starbucks, every Metro rider in our Nation's Capital now knows the answer to the age old question that still stumps Harvard.

But geography is more than just unique coffee flavor, true as that may be. To the novice, I usually say, "Geography is to space what history is to time." I sometimes add, "It is a spatial way of thinking; a science with distinctive methods and tools; a body of knowledge about places; and a set of information technologies, old and new."

In 2006 three "macro engineers" asked, "Is it now opportune to put forth a practical 21st Century definition of geography? Yes, indeed!" they said, "Jerome E. Dobson offered a definition found useful by us..." (Cathcart et al, 2006)

They were referring to this definition in which I tried to provide an overarching, mile-high view of what all geographers do: "Geography is a dimensional science and a branch of the humanities based on spatial logic in which locations, flows, and spatial associations are considered to be primary

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