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Presidential Address

Beyond Description

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Abstract. Although most Americans are geographically illiterate, they possess a strong innate curiosity about the world. Many geographers share that curiosity, as well as a visceral love of maps and of places. These shared curiosities and enthusiasms form a natural link between professional geographers and the lay public. If geographic illiteracy is to be banished, however, professional geographers must learn both to satisfy the public's curiosity and to touch the public's heart. That can be done best if geographers cultivate their abilities to describe the world in ways that are appealing aesthetically as well as intellectually. To do that, geographers must master new technologies to create vivid images, television in particular. Still more important, human geographers need to recover old knowledge and old skills that they have allowed to atrophy: a command of history and physical geography, the capacity to make handsome maps, and especially the ability to recognize and write vivid attractive English. Above all, students should be encouraged to pay close attention to the tangible world, and to retain their enthusiasm for the wonders of the earth.

Key Words: geography, geographic illiteracy, geographic education, popular geography, description, places, topophilia, maps, cartophilia, television, writing, paying attention.

Geography and the American Public

I sometimes think I am the luckiest of people—that some special deity has been looking after my professional welfare. For as long as I can remember, I have possessed one permanent idea about what would constitute sheer unalloyed delight in my work: that I might spend my days seeking out the wonders of the earth and helping others to see and understand those wonders. Being a professional geographer is the most satisfactory calling that I can imagine.¹

Many geographers feel the same way, of course. So it provokes the keenest kind of frustration in us when we are reminded, again and again, that most Americans are grossly uninformed about geography, both as a subject-matter and as a professional calling. Two not-so-imaginary scenarios can illuminate that point. Both are familiar—and galling.

Here is the first. A geographer, fresh home from work, picks up the daily newspaper and there, opposite the editorial page, is a story about a geography professor in some college somewhere, who has given a test to his class in

introductory geography to find out what they don't know. It emerges from the test scores that many of the students cannot find Europe or China on a blank outline map. Eighty percent cannot find Grenada and 90 percent cannot find Nicaragua, although 100 percent naturally have strong opinions about both places. On the opposite page, the newspaper editor has worked himself up into a fine indignant froth, denouncing "geographic illiteracy" and wondering darkly what -in-the-world-has-been-going-on-in-the-public-school-system. It frustrates us to read stories like that, and for several reasons. First of all, it is irksome to learn that some people think geographic illiteracy is something new in America; we knew it all the time, and have been trying to correct it for years. But it is even more galling to think that intelligent people (like the newspaper editor) equate geographic literacy with knowing the location of Nicaragua. We are glad that the editor has finally found out about geographic illiteracy, but it is annoying to know that his views of geography are so simple-minded.

Here is the second scenario, just as familiar

and just as irksome. You are invited to one of those cocktail parties with throngs of people milling around, and you find yourself talking with an attractive articulate person whom you had never met before. You are thoroughly enjoying the conversation when, politely over the hors d'oeuvres tray, your new acquaintance asks you what you do for a living, and you tell her—or him. “That’s nice,” she says brightly, “I learned all about geography in the sixth grade.” Then, after a deadly pause, she continues: “Those maps of the corn belt were really exciting. I’d certainly like to have you as a partner in Trivial Pursuit.” There is, of course, no courteous response (at least no *brief* courteous response), so you grind your teeth and reflect on the wisdom of spilling your martini in her shoe.

Dreary and frustrating as those stories are, there is a moral to each of them, and the morals are related. The first is this: although the American public does not know much geography (and I am talking about the supposedly educated public, by the way), the public is not indifferent to geography. However vague and wrong-headed their ideas may be, most educated people believe that geography is important, and they deplore the state of geographic ignorance in the United States. But their own knowledge is so primitive that to many, geographic education consists of teaching school-children to locate Tallahassee or Burundi on a blank map—and little more.

The second moral is this: while the public thinks geography is an important subject, intuitively at least, they know very little about geography as an academic or professional field. They know about the *National Geographic Magazine*, of course; after all, 11 million of them subscribe to it, so that *National Geographic* has the third largest circulation of any periodical in the United States. But many people are surprised to discover that major universities have geography departments, with students who actually major in the subject—that government and business employ large numbers of professional geographers who do useful and productive work. Worst of all, the public seems oblivious of the fact that there are perhaps 10,000 professional geographers in the United States, many of whom are specialists at the job of eliminating geographic illiteracy and are eager to undertake that job on a nationwide basis.

Thus, our automatic reaction is frustration mixed with indignation. Why is the public so dense? Why can’t they understand what geography is all about? Why can’t they see the importance of what geographers do—and can do?

But pause a moment. We can lament those stories, or we can learn from them. Before we denounce the public for being simple-minded or obtuse, we need to ask some basic questions. What is the public *really* demanding when it asks for the elimination of geographic illiteracy? What is the public seeking when it subscribes by the million to *National Geographic* and a wide array of travel magazines? And after we answer those questions, we should straightway ask two more: Are those demands intellectually legitimate? And if they are, what can we do, as professional geographers, to help satisfy those demands?

The first question, it seems to me, is not hard to answer. What the public wants in the way of geography is very straightforward and not outrageous at all. The public, in its vague inarticulate way, is saying that it wants an accurate vivid description of the surface of the earth. I repeat: accurate, vivid *description*. That is hardly surprising, of course. After all, most people possess a powerful inborn curiosity about places—places nearby and far-off. They want to be told about those places—where they are—what they are like. They want to be told about the surface of the planet, and in ways that are colorful and absorbing.

Those demands, I submit, are not illegitimate. Indeed, I would go further. The job of describing the surface of this planet—accurately and vividly—lies, and should lie, at the very core of geography as an academic discipline. And that has always been true, irrespective of changing times or shifting paradigms, as far back as Herodotus.

Now I can guess what some of you are thinking: that I am calling for a return to the regional description of conventional textbooks of 30 years ago—the ones that began with descriptions of landforms and climate and vegetation and soils, and then, after a row of asterisks, continued inexorably with more descriptions of coal mines and corn belts and manufacturing regions. For whatever it is worth, I was bored by that kind of textbook when I first encountered it, and it still bores me. It is description with little passion and little purpose.

Geography and a Passion for the Earth

But *good* description is another matter entirely. If we need to be reminded of that, we only need to recall why it was that we became geographers in the first place. What was it that identified us as closet geographers, perhaps as children, long before we knew enough to put a name on our private passions? I have, over the years, talked about this matter with innumerable geographers and aspiring geographers, and the same kinds of answers keep coming back. In most cases, we did not become geographers because of some course in school; most American schools, after all, do not offer geography courses. It was seldom some charismatic teacher, although sometimes a gifted teacher may have helped push us in the right direction. But that was not the main reason.

No, what usually identified us as closet geographers was one of two things, and both reflect this lust for the hard stuff of geographic fact. One thing is cartophilia, a visceral love of *maps*. The second, common to us all, is topophilia,² an equally visceral passion for the earth—more particularly, some magic or beloved place on the surface of the earth. As children, we were bewitched by the description of far-off places and by the experience of unfamiliar places. Sometimes we forget that, as we grow more and more cerebral in our pursuit of geographic science. But it is important to remember how we felt as children. That is the way most of the public feels, right now, and there is nothing disreputable about that feeling.

Take the matter of cartophilia, the love of maps. I should be surprised if many geographers do not share something akin to my earliest geographic memories: as a very young child, lying on the floor of a suburban living room, poring over oil-company road-maps that my father brought home from his frequent business trips to Ohio. For me, those Ohio road maps were magical things, covered with magical names: Toledo, Columbus, Cleveland, far-off Cincinnati—lesser places with delectable names that you could run over your tongue: Defiance, Gallipolis, Delphos, Xenia, and a very strange place called Washington C.H. I had no need for Xanadu; the map of Ohio gave me Chillicothe, complete with Indian mounds. (Some of the maps showed pictures of the mounds, and they looked

like giant earthen snakes.) Tibet might have Mount Everest, but Ohio had its own Himalayas. The map said Bellfontaine was the highest place in the state, 1,550 feet! I had never heard the word “itinerary,” but I traced itineraries anyway—imaginary journeys that lurched drunkenly across the road map from one magic place to another. I did not know it then, but I was beginning to cultivate a lifelong fondness for traveling back roads—what William Least Heat Moon calls *Blue Highways* (1982), those little state and county roads that penetrate an old and private world that mainroad travelers never see. Quite recently I read a spirited novel by Clark Blaise called *Lunar Attractions* (1979) that describes a boy growing up in rural Florida in the late 1940s, but living a life of delicious fantasy on the maps in a 1920 British atlas that his mother happened to have in the house. Mr. Blaise told me in a letter that he was “map-besotted,” and I knew instantly what he meant. I was besotted by that map of Ohio, and I will wager that a good many professional geographers have been similarly afflicted.³

It got so bad, in fact, that I was not satisfied merely with maps of real places, so I made maps of imaginary places. In school, when other students doodled during class, I was inventing a whole geography that existed only in my mind—and then in a secret part of my school notebook. I drew detailed maps of an island continent that I called “Insula,” with rivers and cities and mountain ranges all carefully named, with harbors and straits and a complete railroad network, six independent nations, two colonies, and four languages. By the time I was in high school during World War II, the geography of my imaginary island had gotten very elaborate and its people quite bellicose. My nations went to war with each other, made peace, annexed each other’s territory, built Maginot Lines, and generally behaved in my imagination and on my maps the same way Europe was behaving on the front pages of the *Detroit News* between 1939 and 1945. I never told anybody about my private continent at the time. I was afraid my friends would laugh at me, or my family would think I was going crazy, but I simply couldn’t stay away from that imaginary map, so rich and ripe with geographic incident. You can imagine my relief some years later when I discovered Austin Tappan Wright’s *Islandia* (1942) and learned that a grown man had not only invented and peopled

a continent like mine, but had involved his whole family in the act of geographic creation. *Islandia* is a long rich book, complete with a concocted bibliography, map (of course), and helpful tips for pronouncing the Islandian language. For the benefit of those who have not read *Islandia*, let me tell you that it is a wonderful book, one of the best in the geographic language. And if you doubt my judgment in the matter, you may be comforted to know that even the *New Yorker* gave it a rave review and called it “fabulous,” which it certainly is.⁴

Besides maps, there is a second thing that brings geographers out of the closet and binds us all together in common fraternity with the public at large. It is a passion for the earth, more especially some beloved part of the earth. It is a passion that equates geography with particular places at particular times and does it at a gut level, without any attempt to analyze or dissect that place, or subject it to scientific scrutiny.

I do not expect that everyone will share my own private geographic passions, but I will cite a couple of them to make the point—and wager that most geographers have been possessed by similar feelings at one time or another. My earliest self-conscious love affair with a specific geographic place took form on the great sand dunes along the east shore of Lake Michigan, just north of the little car-ferry port of Ludington. My love affair with those Michigan dunes was not a subject for rational discourse, and for that matter it still is not. It had nothing to do with the Pleistocene history of those dunes, although that is a fascinating matter, as I learned later. It had nothing to do with the place of those dunes in any of several environmental systems. It had a great deal to do with the fact that I was young and healthy and wide awake and had those dunes completely to myself. It had everything to do with violent immediate sensations: the smell of October wind sweeping in from Lake Michigan, sun-hot sand that turned deliciously cool when your foot sank in, the sharp sting of sand blown hard against bare legs, the pale blur of sand pluming off the dune crest against a porcelain-blue sky, Lake Michigan a muffled roar beyond the distant beach, a hazy froth of jade and white. As I try to shape words to evoke my feelings about that far-off place and time, I know why the Impressionists painted landscapes as they did—not literally, but as fragments of color, splashes of pigment, bits of shattered prismatic light. One is meant to feel

those landscapes, not to analyze them. I loved those great dunes in my bones and flesh. It was only much later that I learned to love them in my mind as well. And that, of course, was another revelation—in geographic terms, my second Great Awakening.⁵

One does not need color for such topophilic experience. Quite the contrary. I remember driving across the High Plains of Kansas many years ago on a lonely two-lane blacktop road, heading due west. It was very late at night, and I found myself driving through into the dawn. The sky was overcast—nothing dramatic, just flat gray. There was no sudden glory of sunrise. It simply became light. There was no color at all, just geometry: the straight gray road, the flat gray plains, the immense gray sky—and *light*. The light came from nowhere and everywhere; it was palpable, as if I could feel it on my skin and breathe it into my lungs. I can still feel that elemental conjunction of time and place: no details, no color, no shadows—just earth and road and sky and light and onward motion in primal combination, as the empty plains of Kansas changed imperceptibly from night to day.⁶ Every now and then, that place and time comes back to me with rush of immediacy that makes me catch my breath. That encounter with Kansas is not something that I can talk about rationally, nor do I see any special need to do so. Now and then I hear people say that the landscape of the Great Plains is dull, but I know better.

Each of us has known experiences like that. They depend on time and place and quality of light, and, of course, who you are deep down inside. Some people react that way when they see the Manhattan skyline from the Palisades of the Hudson. Others get that kind of feeling when they come down from the Sierras of northern California and first catch the scent of eucalyptus trees baking in the sun. A good many Easterners seem to have felt that way when they crossed the continent for the first time and saw the Rocky Mountains a hundred miles away like a white frieze on the western horizon. If you are an American old enough to have crossed the Atlantic on an ocean liner, you know the feeling when you came into New York harbor for the first time and passed the Statue of Liberty. Those intense reactions to specific places are basic to the human condition, and we all share them in some form, in some place, at some time.

I cite these experiences at length, not merely

because I enjoy recalling golden moments, but to make a point. Very few of us, I think, became geographers because we were consumed by desire to study the earth's surface as a spatial system. (That might come later—but at a cerebral, not emotional level.) I think, on the other hand, very many of us became geographers because we loved the earth—an immediate, tangible, describable earth, made of particular lands and particular people.

You may respond: that is all very well, but one cannot go through life in a state of topophilic ecstasy, no matter how agreeable the prospect might seem, and one cannot build a professional discipline, much less a science, out of emotional reactions to places. That is quite true, of course, and I am not advocating that the Association of American Geographers set up a special program to arrange geographic orgies. But I am suggesting that if we, as professional geographers, want to talk to the public about geographic matters, we had better start where most of the public *is*—not where we would like them to be. Most of the public is now where we once were, a long time ago, reacting very strongly to very particular places and to accurate vivid descriptions of those particular places—which is precisely the reason that 11 million people buy the *National Geographic Magazine* every month. That is, more than incidentally, where most genuine science begins as well: resting on a solid accumulation of fact, carefully described. (I know of no science worth the name that denegrates its basic data by calling them “mere description.”)

Please don't misunderstand me. I am not proposing that geographers go about describing things at random, and I am certainly not suggesting that academic geography revert to those dreary regional courses, where students were led lock-step through a sequence of rote descriptions, one after another from a check-list. Description, if it is any good, has to be good for something. It has to lead somewhere.

Concerning Geographic Description

Good geographic description, it seems to me, commonly leads in one of two directions. One direction is *aesthetic*, the other *intellectual*. In practice they often overlap, but it helps to distinguish them. Good aesthetic description provokes strong emotion. Good intellectual description provokes strong thought. That dis-

inction has important implications about how we should approach the public, our constituency. But it also points out some directions where we might be heading our students—our intellectual descendants—so that when they succeed us, they can do a better job of public education than we have done.

Description to Stir the Heart

Consider the matter of aesthetic description first. By that, I mean description so vivid that it moves our emotions by the sheer power of its clarity and beauty, without any necessary attempt to move our minds. The track record of American geographers in this area has been spotty, it seems to me, and we ought to do better, especially when we reflect on the wide range of technological opportunities open to us and if we pay attention to the kind of geographic imagery that the public obviously wants and needs.

Things were simpler a century ago, when geographers had to rely on writing or picture-making to describe the world. Most geographers became adept at doing one or the other, and sometimes both. Nowadays, however, there are not many geographers who are accomplished landscape painters, although there are some fine exceptions.⁷ Nor do we have many poets, either of verse or prose, although some of the writings of Donald Meinig and Bret Wallach and Denis Wood and Arthur Krim certainly qualify as poetry, and not bad poetry either.⁸

Now you may object: we are not trained to be painters or poets, and while that is true, I do not think we should boast about it. I do not believe we gained anything, for example, when geography departments stopped teaching their students to make plausible sketches of landscape. Meantime, however, and it is not to be sneered at, most geographers can take fairly creditable photographs, although I know of very few who seem to aspire to the levels of Ansel Adams (e.g., 1979) or Walker Evans (e.g., 1973) or David Plowden (e.g., 1974)—or even those wonderful oblique air photos by John Shelton in his classic textbook, *Geology Illustrated* (1966). But pictorial opportunities for geographers are limitless, I think, especially in television which—whether we like it or not—is the main source of geographic stimuli for most Americans. The National Geographic Society has produced some creditable television programs, but for the

most part American television geography is poor fare. The reason is not hard to find: the camera sees only what it is told to see, and most producers, directors, writers, and cameramen are like most Americans: geographically illiterate. Most geographers, by contrast, see things that ordinary folk do not—see them in different ways, and see them better. By learning the language of television, geographers can help the American public share their special vision.

Consider, for example, the very successful television programs of David Attenborough, which reveal some of the main strengths of television as a medium of geographic description—opulent eclectic photography, nicely combined with spare intelligent description. (The TV series was summarized in Attenborough 1984.) But the other side of Attenborough's films, and a whole genre of television documentaries, is what they do *not* show very often, the rich world of ordinary vernacular human settlement—those human landscapes that are for geographers, rich meat and strong drink. William G. Hoskins has helped point the way with his series for the B.B.C.: "English Landscapes" (based on Hoskins 1955; see also Meinig 1979), but there is a niche that badly needs to be filled on this side of the water as well. I would like to think that there are some bright young American geographers who know enough about both landscape and television to be able to start filling that niche on American TV.⁹

But our best works of really beautiful geographic description, I think, have been cartographic. One thinks immediately of those sumptuous three-dimensional maps that Richard Edes Harrison drew for *Fortune* magazine during World War II—that showed, for example, what Japan looked like when viewed from a point in space high above Siberia (Harrison 1944). My own perennial favorites are Erwin Raisz's landform maps (e.g., Raisz 1956) and block diagrams (in Atwood 1940), that capture the shape of the earth's crust with an economy of line that is elegant and beautiful. I do not know how many cartography students today aspire to draw maps as wonderful as those of Harrison or Raisz, but there is ample room for such maps in places like the pages of *USA Today* or any of innumerable television news programs. (I think I might die happy if I could watch television news some evening and see the Soviet Union depicted in some other way than bright red, in that ballooning Mercator projection. There should be a spe-

cial A.A.G. honor waiting for the geographer who cracks the graphics division of a major American television network and shows them how to make a decent map.)

Some of the greatest opportunities for good cartographic description lurk in the field of computer-aided cartography. There are no kind words to describe the bulk of computer-generated maps—especially the early ones. One needs three words: ugly, ugly, ugly. But, *mirabile dictu*, things may be changing, and there is increasing evidence that computer-generated maps do not need to be repulsive. Recently, the Geography Division of the U.S. Bureau of the Census produced an inexpensive little atlas of American agriculture, based on an immense volume of county data from the 1978 Census of Agriculture (U.S. Bureau of the Census 1982). The maps were made entirely, and evidently quite cheaply, by computer. The atlas is a kind of tour de force, for it synthesizes an enormous volume of information, reveals scores of intricate patterns in the American landscape, and does its job with elegance and grace. I doubt if the atlas-makers' primary purpose was to create a thing of beauty, but some of the maps are really handsome, and they may show the direction in which computer cartography may be going. If so, we can all take heart.

But that is only a beginning. Remote sensing has begun to transform the whole field of cartography. In a few short years, we have become accustomed to those gorgeous views of the earth from space—unearthly, they almost seem, in their opulence—from that first extraordinary camera shot of the blue earth, wreathed in cloud against the blackness of space, through the whole amazing array of Gemini and ERTS and Landsat imagery. With the use of digital transformations, we are seeing imagery that seems almost as revolutionary as the first maps must have seemed to Polynesian navigators a millennium before the time of Christ. Simultaneously, the whole field of geographic information systems has been expanding rapidly, and if the G.I.S. specialists can build aesthetics on a foundation of mathematics so as to produce maps that are not only interesting but beautiful as well, there is a rich future open to them—and one can define rich any way one likes.

I can anticipate the objections to what I have been saying. Most of the examples I have cited are not simply aesthetic exercises. Erwin Raisz's maps delight the eye, but they also chal-

lenge the mind. Ansel Adams's photographs of the Yosemite Valley were designed to be visually dazzling, but they were also intended as powerful propaganda for the preservation of wild land. One of the most gorgeous pieces of geographic rhetoric in the English language is John of Gaunt's familiar soliloquy from the second act of *Richard II*. "This blessed plot, this earth, this realm, this England" stirs the soul and of course that is exactly what Shakespeare meant it to do: it is not just poetry, it is a patriotic polemic, and that was a very useful thing in 1595 when the English nation-state was still under construction. But Shakespeare's polemic was effective because it was, first of all, couched in magnificent language.

And that is precisely my point. We need description in geography; it is indispensable, as it is in any science. But those descriptions, whether they be verbal or cartographic or even cinematic, should be just as fine and handsome as we can make them. That is not just aesthetic self-indulgence either. Part of our job is talking to the public. If we intend to catch the public's mind, we had better catch the public's heart as well.

Description to Nourish the Mind

There is a second kind of description—not primarily for aesthetic effect, but as a basis for intellectual inquiry. The excitement of geography comes from describing the earth's surface—and *then* trying to make intellectual sense of it. To professional geographers, of course, that is second nature—what the field is all about. In fact, that might serve as a kind of rough-and-ready definition of geography: describing the earth's surface and trying to make sense of it. The description comes first, but then we move beyond description. It is the difference between *reading* maps, which is usually fairly simple, and trying to *interpret* maps, which is sophisticated business. It is the matter of going beyond the description of where Tallahassee is, and asking *why* Tallahassee is there, and how its location helps explain the sort of place it is, and then—if we are very clever—how the lessons of what we learn in Tallahassee can be applied to other places and other patterns—to discover what general rules seem to govern their location and distribution—how the location of places affects a host of other matters. It should go without

saying that we employ whatever analytic tools we need to help answer those questions—whether they be maps, air photos, computers, or a good human brain attached to a good pair of observant eyes.

There is no need to continue along this line, not when one is addressing professional geographers, at least. All of this is old hat, you say. Well, it may be old hat to us, but it is emphatically *not* old hat to the public at large. The most exciting intellectual challenges of geography are simply lost on the American public—and by that, I mean the supposedly educated American public. That is not because the public is collectively stupid or obtuse, but because they have never learned, they have never been taught, that geography goes beyond description—and the best geography goes far beyond.

The public ignorance dismays us all. But it simply does not occur to the ordinary American intellectual that a map is more than a thing that describes location. Most Americans only vaguely understand that a map can help *explain* things, which is simply another way of saying that location has devastatingly important consequences. It does not occur to most Americans that a good map *raises* more questions than it answers—that the question of *why* things are located where they are raises important intellectual issues, with immediate serious implications. The public, in sum, is largely ignorant of the devastating intellectual power—and the very practical importance—of the questions that geographers ask and get answers to, routinely, every day.

And that, in my opinion, is the single most important and challenging public task that confronts American geographers today: to persuade the public about the importance of asking the right geographic questions and getting reliable answers to those questions. If one is to judge from the conduct of American foreign affairs, especially in little-known areas beyond our borders, our success in that enterprise may well have mortal importance. If we persist in sending American armies and American treasure overseas, it is not a bad idea to know where we are sending them—and *why*.

Talking to the Public

How do we go about that crucial job of public

education and public persuasion? If the job were easy, of course, it would have been done already, and we would all be living happily ever afterward. Nevertheless, there are a few things we can do, both in the short run and the long run.

The first, given the cosmic level of this discussion, sounds almost trivial, but I assure you it is not: professional geographers should support this Association, and urge their colleagues to support it too. The A.A.G. is more than a cozy fraternal club: it is perhaps the most effective tool we have to bring our collective minds and muscle to bear in places where geography matters: in the making of government policy, in the planning of education for our children, and in helping to persuade the public through the media that they urgently need more and better geographic information than they have been getting.

The second has nothing to do with this Association and everything to do with us as individual geographers. We need to make our geographic work more accessible and attractive to the general public. That can be done in all sorts of ways, but until something better comes along, the best way is to *write* about our geographic inquiries in places where the educated public will routinely read them and in language that the lay public can understand. Historians understand that very well. It is no accident that Bruce Catton and Barbara Tuchman and Arthur Schlesinger, Jr. and Daniel Boorstin are well-known names among America's intellectual elite.¹⁰ Some economists know it too; I doubt very much if there are many educated Americans who have not read something by John Kenneth Galbraith.¹¹ Popular geographic writing, however, has largely been left to non-geographers. It is not as if the public doesn't *want* good popular geography. Joel Garreau's *Nine Nations of North America* (1981), on the best-seller list for many weeks, is a fine perceptive piece of popular geographic writing; so is John Stilgoe's *Metropolitan Corridor* (1983). Most of John McPhee's writings for the *New Yorker* fall into the same category. There is plenty of room in this huge sprawling country of ours for good popular geographic writing—in the form of books, magazine articles, and newspaper columns. And there is good reason for us to do that kind of writing. We are, many of us, in the business of trying to educate the public, and good solid popular writing is one of the best ways to do it.¹²

Educating Tomorrow's Geographers

But the one sure way to guarantee that geographic inquiry continues and flourishes in the United States is to pay attention to the education of students who will constitute the next generation of American geographers.

How do we train students, so that they will learn how to convey the basic insights of geography to the public and do it better than we have? To answer that question, I am tempted merely to cite the presidential address that was read at the first A.A.G. convention I ever attended. It was Carl Sauer's "The Education of a Geographer" (Sauer 1956; also in Leighly 1963, 389–404) read almost 30 years ago at Montreal. It is a mature statement by one of the wisest of American geographers, but I will not try to summarize it here; Sauer in the original is better than Sauer warmed over. But I commend it as basic reading for anyone who is seriously interested in geographic education.

But 30 years have passed since Sauer wrote that essay, and several things have happened since then: the computer revolution, the rise of TV, the interstate highway system, urban renewal, massive enforcement of *Brown vs. Topeka*, and the Vietnam War—to mention just a few. Meantime, a new generation of geographers has come along, many of whom, like me, were nurtured during the times that have come to be called the quantitative revolution.

That revolution, I think has had a good many salubrious effects on the training of young geographers. Quantitative literacy is no longer seen as a luxury, but is correctly viewed as necessary for anybody who plans to work with numbers, which is to say almost every geographer I know.¹³

But in our haste to achieve quantitative literacy for our students, several things have slipped by us in the past few years, and I really think we ought to recover them as we set about to educate a new generation of geographers.

Paying Attention

We need, first and most basic of all, to insist that students pay attention to the immediate world that lies all about them—in short, to use

their eyes, and attach them to their brains. Computer outputs are useful tools, and so are maps, but in the ultimate analysis, they are simply surrogates for the world out there—pale copies. That tangible visible world is the hard basic stuff of geography, and all students should be encouraged on a regular basis to break loose from their library carrels, and light tables, and computer terminals and go outdoors and sample those wonders—not just to stir up bodily juices, but to stir up the brain as well. That world out there is full of *evidence*—of the sort of people we were, and are, and are in the process of becoming. Equally, that tangible visible world is full of *questions* that geographers should be asking. Do you want to know what kinds of cities Americans are building? Read the census to be sure, but then go out and take a look. Do you want to know what is happening in the American countryside? Go out and take a look. Do you want to know where America's future lies? Go out and take a look: it is under construction right now. Students need to be encouraged to use their senses—and to trust them.

I do not mean that students should pay attention *only* to what they see; that would be silly. I take it for granted that students are encouraged to pay attention to things they cannot see, and it should be self-evident that any aspiring geographer reads at least one good daily newspaper with religious regularity.¹⁴ But too many students that I know seem to regard things like field excursions as a kind of self-indulgence that cuts into reading time or time on the computer terminal, and newspaper reading as something one does when there is nothing better to do. That is dead wrong. We geographers should be reporters of the world, the eyes of the public. And we cannot be that, unless we keep our eyes open, and pay attention to what we see.

Reading and Writing

A second place where American geographic education needs a good deal of improvement, I think, is in training our students to describe things well. Paying attention to the world around us is crucial, but it is only half the game. Students should learn to communicate what they see and know, and do it in clear, graceful, vivid English. There is no single formula, of course, for teaching the art of writing, but one thing is

indispensable. Students will never learn to *write* good English unless they *read* good English, and do it habitually. I get a sinking feeling in the pit of my stomach whenever a graduate student tells me that she or he does not have time to read anything but professional literature. That is hardly surprising, of course; students earn good grades when they do that. But most academic journals, alas, are not well known as repositories of good writing. To *write* good stuff, students have to *read* good stuff.

That point is hardly original with me. Many years before Winston Churchill won the Nobel Prize for literature, he remarked that two excellent things happened in the shaping of his own prose. The first was repeatedly failing his elementary English course when he was a schoolchild and consequently being forced to learn the same basic material several times. The second excellent thing was being marooned as a young army officer on the Indian frontier with a copy of Edward Gibbon's *Decline and Fall of the Roman Empire*. It is no accident that you can read Gibbon and then read Churchill and, except for context, sometimes hardly know which one you are reading. They are similar in vocabulary and in cadence, and they are both gorgeous—perhaps a bit too gorgeous to please our post-modern social-scientific ears. But I still commend Gibbon and Churchill, just as I would commend the King James version of the Bible, to any aspiring writer who wants to find out first hand about the rich beauty of disciplined English. Then, if Gibbon's sonorous prose is too rich for your blood, you can always reach for Hemingway or Mark Twain. Or, just read the *New Yorker*, which consistently runs some of the cleanest geographic prose in American English. The *New Yorker* has something almost every week that American geographers might profit from reading, either for content or for style.

Back to Basics

There is a third area where we need to do a better job by American students, especially of human geography. We need to reinforce their training in two major related fields: *physical geography* on the one hand, *history* on the other. I do not mention those two subjects at random. Both history and physical geography provide us

with powerful explanations of why human phenomena are located and distributed the way they are—why places are the way they are. Yet both, in the last few years, have been badly neglected in American geographic curricula, and in some well-known schools a student can be awarded an advanced degree in human geography and know nothing about either history or physical geography.

I do not think our students are well served by this practice. Consider the matter of history: it remains a large ineluctable fact that all patterns of human geography are inherited from past geographies—in fact, largely determined by past events, past technologies, and past attitudes. It follows necessarily that one needs to know more than a little bit about economic and cultural and political history, and, closely related to that, one needs to know more than a little bit about the geography of the past—historical geography, if you please. It is highly unfortunate, in my view, that so many American students of human geography are undereducated in history, and largely innocent of the historic fabric into which so much of our contemporary geography is so deeply woven.

Much the same is true of physical geography, especially landforms, climate, and vegetation. Just as history lays its heavy hand on our contemporary geography, so does physical environment. An elementary grasp of geomorphology, climatology, and biogeography provides a budding human geographer with a highly efficient framework for understanding that physical environment.

I am not proposing that students of human geography become specialists in historiography, nor that they need to undertake advanced research in geomorphic or climatological processes. I am arguing this, however: that for a neophyte student of human geography to undertake his or her studies *without* learning basic patterns of history and of physical geography strikes me as a highly inefficient way to go about designing an education. Indeed, my own advice to a graduate student who is told that these subjects are not important, is to ignore that advice and go learn them anyway. The student will be delighted to see how quickly that knowledge begins to pay off—and, by contrast, how crippling it is for a human geographer to remain ignorant of history or physical environment.

It is a two-way street, of course. Historical

and physical geographers also need to reach out and do their parts as well in repairing those frayed intellectual connections. Many students of contemporary human geography simply do not know *why* it is important to know history and historical geography, and they will never know unless they are shown. The people who are best equipped to do that are historical geographers. The same is true of physical geography; if geomorphology and climatology are important to the understanding of human geography, then geomorphologists and climatologists need to take special pains to make that clear in plain language that non-specialists can understand.

It is easy enough, of course, to lay blame for our omissions. The quantifiers are at fault; the anti-quantifiers are at fault; the environmental determinists were at fault; our sixth-grade geography teacher was at fault. All of that is very likely true. But laying blame strikes me as a pointless and destructive exercise. I would rather let some historian 50 years from now try to ascertain who was at fault in the 1950s or the 1980s. Meantime, right now, we can spend our time more productively in repairing those intellectual bridges that we need so badly if we hope to understand the surface of the earth, and communicate our understanding to the public.

Some Free Advice for Young Geographers

Then there is one final thing that must be done to ensure a good education for young geographers in America, but their teachers cannot do it—only they can. For that reason, I take leave to address them directly.

The best among you, young geographers, possess intellects as good as any in the world. Many of you—perhaps most of you—came into this delicious field of ours because you were in love with the earth—because you wanted to sense it and to understand it—because you wanted to know *everything* about it. You knew that would be an impossible job, but you wanted to try it anyway. I know the feeling very well, because I had it myself when I was a student, and I still do. If I had the decision to make again, I would head straight into geography, that impossible enterprise—the only field I know with such global chutzpah.

So I know you better than you may suspect, young geographers, and I take leave to give you a little advice. It comes in two pieces. Here is the first.

Your education is important, much too important to allow others to take charge of it. Stay in charge of it yourself. Advisors and teachers and fellow-students can help you design a course of study, but they really can't learn you anything. ("Learn" is not a transitive verb.) Only *you* can do that. If you think you need to know something, go learn it—whether it be computer programming or phenomenology, or calculus, or English composition—or the history of turtles in the Galapagos. There is only one kind of advice you ought to ignore: when one of your teachers or fellow-students tells you that there is something you do *not* need to know, when somebody tries to persuade you that truth can be had by ignoring large chunks of the world and following some party line. Watch out for those party-liners, those people who want to put blinders on you. Blinders are easy to put on and they make things much more comfortable, because there are suddenly all sorts of things you no longer notice or have to worry about. A narrow field of vision will make your life much simpler. But watch out for those blinders, young geographers, those premature overly narrow specializations. They will ruin your vision and dampen your mind. And once you put those blinders on, they are devilishly hard to take off. Take my advice and keep your vision broad. Learn the subjects you need to know, and learn them well. Then learn some more. Try it. You'll like it.

Here is the last piece of advice, and if you don't remember anything else, remember this.

Don't let anybody chill your enthusiasm for the world. You will meet many people, of course, who will tell you in all sorts of ways—through words or body-language or just a raised eyebrow—that it is not chic to be enthusiastic about anything—certainly nothing so banal as an academic subject like geography. It is much more fashionable among such folk to be a bit superior, a bit cynical, a bit bored by it all.

Young geographers, those people are poison. Those cynics in their self-inflicted boredom have insulated themselves against the world, and they want you to insulate yourself too and come along for company. The cynics will never make any mistakes, of course, because they will never

commit themselves to anything. The cynics seldom look silly, because they seldom say anything that can be taken seriously. Nobody will ever laugh at them, because they will never risk doing anything that might turn out to be foolishly wrong. That way, of course, there is no risk at all: just the dead certainty of slow intellectual suicide.

Young geographers, remember why you went into the field in the first place and commit yourself accordingly, with zeal. Of course you will make mistakes. Of course you will look foolish now and then; people are sure to giggle as you go about sniffing the world like an adolescent puppy. But those are small risks indeed if you are really serious about understanding the world. Don't let anybody diminish your capacity for *attention*—that God-given ability to see and feel and seek to understand the wonders of the earth.

If you, young geographers, educate yourself as deeply and as broadly as you can—if you make yourself as articulate as you can—if you master the tools of your trade—and, above all, if you retain your passion for this miraculous world we all share, there will be no need to fear for the future of professional geography in America.

Notes

1. In my education as a geographer, I owe a special debt to six generous people: to my father, who showed me the joys and the rewards of paying attention to the ordinary landscapes around us; to my mother, who cultivated in me a taste for the wonders of our English tongue; and to four wise teachers, each of whom helped me see the world in a fresh invigorating way: Stanley Dalton Dodge, Pierre Dansereau, J. Hoover Mackin, and John Brinckerhoff Jackson.
2. The term, "topophilia," was coined, of course, by Yi-Fu Tuan, whose book by that name is well known (Tuan 1974). The word itself first saw print in a note in *Landscape* (Tuan 1961), which contained this call to action: "Geographers, I think, might take off from their practical duties, and join—at least now and then—the artists and the poets in portraying the splendor of the earth" (p. 32). That was not a common idea in the world of American geography in the 1960s. But then, *Landscape* was not an ordinary journal either.
3. Blaise's account of his boyhood ardor for geography and maps will strike a familiar note for many geographers. For those who want to sample his topophilic work, I commend pp. 27–30 in the

- Bantam edition of *Lunar Attractions*, where Blaise describes his antic encounter with his mother's atlas.
4. *Islandia* is one of those hibernating novels that is rediscovered periodically by some astonished reviewer. Its most recent awakening came by way of an enthusiastic but odd essay in the *Washington Post Book World* of April 28, 1985, by Noel Perrin, who reads *Islandia* as a combination of love story and utopian cult novel with racist overtones. Perrin, I think, misses the mark. *Islandia* is more than a conventional utopia; it is a geographic vision.
 5. That happened after Pierre Dansereau, then a member of the faculty of botany at the University of Michigan, introduced me to the plant ecology of midlatitude sand dunes, and thereby opened a whole new world to me. For any geographer, ecology is an especially appealing subject, and the harsh fragile world of the sand dune is a striking place to learn about it. But my special reward was to discover that one could study a place scientifically and continue to love it at the same time. Dansereau has written about similar matters in an elegant little essay called "The Barefoot Scientist" (Dansereau 1963).
 6. It was only much later that I learned about the luminists, that remarkable group of nineteenth-century American landscape painters who captured a quality of light that seems to glow through oil and canvas. For a scholarly exposition of the luminist movement, see John Wilmerding's catalogue for the luminist exhibition, "American Light," in the National Gallery of Art in Washington (Wilmerding 1980). A number of paintings by Fitz Hugh Lane, Martin Johnson Heade, Frederick Church, John Frederick Kensett, and other luminist painters, are wonderfully reproduced in Theodore Stebbins et al. (1983) catalogue for the Boston Museum of Fine Art's exhibiton titled "A New World: Masterpieces of American Painting, 1760-1910." It would exhaust my lexicon of superlatives to praise the Stebbins catalogue adequately; every single painting in the exhibition is reproduced in color, and the quality of reproduction is as good as I have ever seen. It is a gorgeous book, in its own way a masterpiece.
 7. Among geographic landscape painters, I think most immediately of Theodore Oberlander of the Geography Department at Berkeley. To sample Oberlander's art, see the frontispiece to his textbook on physical geography (Muller and Oberlander 1984, 2). But there are others, as Keith Tinkler of Brock University demonstrated in a poster session at the annual meetings of the Association of American Geographers in Detroit in 1985, where a variety of paintings by American and Canadian geographers was exhibited.
 8. Meinig's books are well known, and properly so, but to my way of thinking, his most evocative writing emerges in the form of short essays. One I like especially is "Environmental Appreciation: Localities as a Humane Art" (Meinig 1971). My favorite Wallach pieces are short regional vignettes, dealing with places that have been bypassed by the modern world and now struggle to survive in a world they did not make (e.g., Wallach 1979, 1980, 1981). Denis Wood's writings are harder to find, since many of his essays have not been published and are available only in mimeographed form. I particularly enjoyed reading "What Color is the Sky?," subtitled "An Introduction to the Cartography of Reality," originally prepared as a paper to be read at the New Orleans meetings of the A.A.G. in 1978. Arthur Krim, who acknowledges Denis Wood for inspiration, writes blank verse about such matters as commuting to work on the Massachusetts Turnpike. To my knowledge, however, his "Pike Poems" (1978) have only been mimeographed, but never published.
 9. I have tried my hand at making geographic documentaries for television, and I found the experience intensely interesting (see, e.g., Lewis 1983). Most American geographers, I think, would profit greatly from such an encounter with television. One hopes, of course, that the public also would profit.
 10. All four historians are prolific writers, and no single citation will capture the essence of their work. For samples, however, I recommend Bruce Catton's *American Heritage History of the Civil War* (1960), Barbara Tuchman's *The Proud Tower* (1966), Arthur Schlesinger, Jr.'s, *The Age of Roosevelt* (1957-60), and Daniel Boorstin's *The Americans: The National Experience* (1965). And then, of course, there is *American Heritage*, "the magazine of history," which Catton helped found, and which he edited for many years. The magazine is the single richest repository of good popular historic writing that I know about, and it can be purchased at any good newsstand in America. Significantly, the magazine is sponsored by two major professional organizations, both of which take such writing seriously: the American Association for State and Local History and the Society of American Historians.
 11. I am talking about Galbraith's popular writing, not his economic writing, which I will happily leave to economists. As a writer of crypto-geography, however, Galbraith is in top form in *The Scotch* (1964), his account of growing up in rural Ontario 60 years ago, and one of the sharpest evocations of time and place that I have read.
 12. Charles Laughton, who used to go around the country on lecture tours reading to Americans about America, has collected representative bits from the works of his favorite authors in a remarkable anthology called *The Fabulous Country* (1962). I know of no better sampling of writing about the geography of the United States. Significantly, there are no professional geographers represented in Laughton's collection of fine geographic prose.
 13. The greatest contribution of the quantitative revolution, in my view, was not so much its attention to numbers and quantities and statistical formulae, but rather its emphasis on a kind of abstract but systematic thinking—a search for common geometries that help explain the complicated par-

ticalars of the real world. Central place theory is the best example of what I mean, an extremely powerful idea, whether clothed in mathematical formulae, or simply stated in commonsense language. John Hudson has done an excellent job of that in discussing the patterns of emerging towns in late nineteenth-century North Dakota, in Chapter 3 of his *Plains Country Towns* (1985).

14. In fact, a card-carrying American geographer should read at least *two* newspapers: a good national newspaper and the local newspaper of record. Because there are not many really good American newspapers (*The New York Times*, *The Washington Post*, *The Christian Science Monitor*, *The Los Angeles Times*, *The Miami Herald*, and *The Philadelphia Inquirer* seem to exhaust my personal acquaintance with such phenomena), reading a local newspaper almost automatically means that one regularly plows through stuff that is mediocre at best, dreadful at worst. No matter. If one wants to understand American places, one simply has to read what the local newspaper says about them, on a daily basis. Furthermore, if one lives in a small place, as I do, it helps also to read the best big-city newspaper nearby, in order to follow happenings in the state and region. One risks being buried in newsprint that way, but that is a necessary occupational hazard for any serious geographer.

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