

Geography from the Back of the 2008 AAG Program: Is Geography What We Say or What We Do?

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All tables in this paper may be viewed at:
<http://www.csulb.edu/~rodrigue/cg08tables/>

Introduction

Geography every once in a while waxes reflective about itself as a community, a practice, and an epistemology (e.g., Hartshorne 1939; Schaefer 1953; Pattison 1964; Robinson 1976; Boehm and Bednarz 1994; Johnston 1998; Turner 2002; McDougal 2003; Castree 2005). This cyclical urge to reflect recognizes that the breadth of geography makes its scope a far horizon for those in the discipline and a temptation to challenges from disciplines of narrower reach along that horizon. Usually, these self-examinations focus on what it is that (should) define(s) geography conceptually along a series of dualisms: regional or systematic, content or method, natural science or social science, spatial or ecological, analytical or integrative, regionally integrative or human-environmentally integrative, positivist or post-/anti-positivist. Some have rather dismissively said that “geography is what geographers do” (e.g., Parkins 1934, cited in Whitaker 1940; Jones cited in James 1952; and referenced in Johnston 1980), while others view such centrifugality with despair and try to bound the field in yet another round of introspection.

These discussions take on practical importance for academic geography departments, which face cyclical program review and assessment, may factionalize along these polarities, or face interrogations of their boundaries by competing departments and, sometimes, hostile administrative structures. “What is it you people DO?”

This paper compares and contrasts what California geographers say geography is and what geographers actually do, both in California and at our flagship national conference, the Association of American Geographers. The paper begins with an examination of definitions of geography placed on the Web pages of university departments of geography in the State of California. It then characterizes the dis-

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tribution of tenured and probationary faculty interests, as listed on department Web pages. These 202 California geographers are then categorized into broad specialties (e.g., physical, environmental, human, GIScience, and regional geographers) and their proportions discussed. Lastly, the distribution of topics for sessions at the Association of American Geographers 2008 annual meeting is described. Quite a disparity emerges among what California geographers tell the public geography is, their own interests and specialties, and the foci of the national conference. Implications for the health of the discipline are disquieting.

Data and Methods

This paper proceeds by a mixture of quantitative and qualitative literature content analysis. The AAG session topics and the lists of California faculty interests entailed simple coding and frequency counts. The California departmental Web page definitions of geography required an iterative and emergent coding process, which eventually stabilized into codes that could be counted and compared with the AAG and faculty codes. Analysis then proceeded through the Chi-squared, Kruskal-Wallis, and median tests, using 0.05 as the cutoff for significance.

Classifying California Geography Department Definitions of Geography

I focused on California departments and geographers to yield a manageable number of sites to visit in a single region that is large, diverse, and, hopefully, representative of national trends. Furthermore, I can draw on “local knowledge,” being a California geographer familiar with all 23 of the baccalaureate (9), master’s (8), and doctoral (6) geography programs in the state (having attended two, taught at four, chaired one, directed three graduate programs at two, and reviewed two). These are distributed in the California State University system (18), the University of California system (5), and the private University of Southern California (1).

I located and downloaded the definitions of geography provided in 21 programs’ Web pages (two, CSU Northridge and San Diego State University, had no such definitions anywhere on their Web pages during my June 2008 visits). These definitions were entered into a spreadsheet. Each definition was read several times, and words or phrases describing what they emphasized were coded during each pass-through until each item was consistently named from one pass to the next (Table 1). Some definitions were terse and others

very thorough, yielding anywhere from one through nine coded elements. The mean number of codes per department was 4.95 and the median 4.88, the total adding up to 104 elements among the 21 programs. This iterative process aggregated the 104 into 16 codes: human-environment, integrative, systems, interdisciplinary, landscapes, natural environment, scales (from local through regional to global areal units), globalization, place, human activities, social science, spatial, map, natural science, earth as home of humanity, and planning/applied.

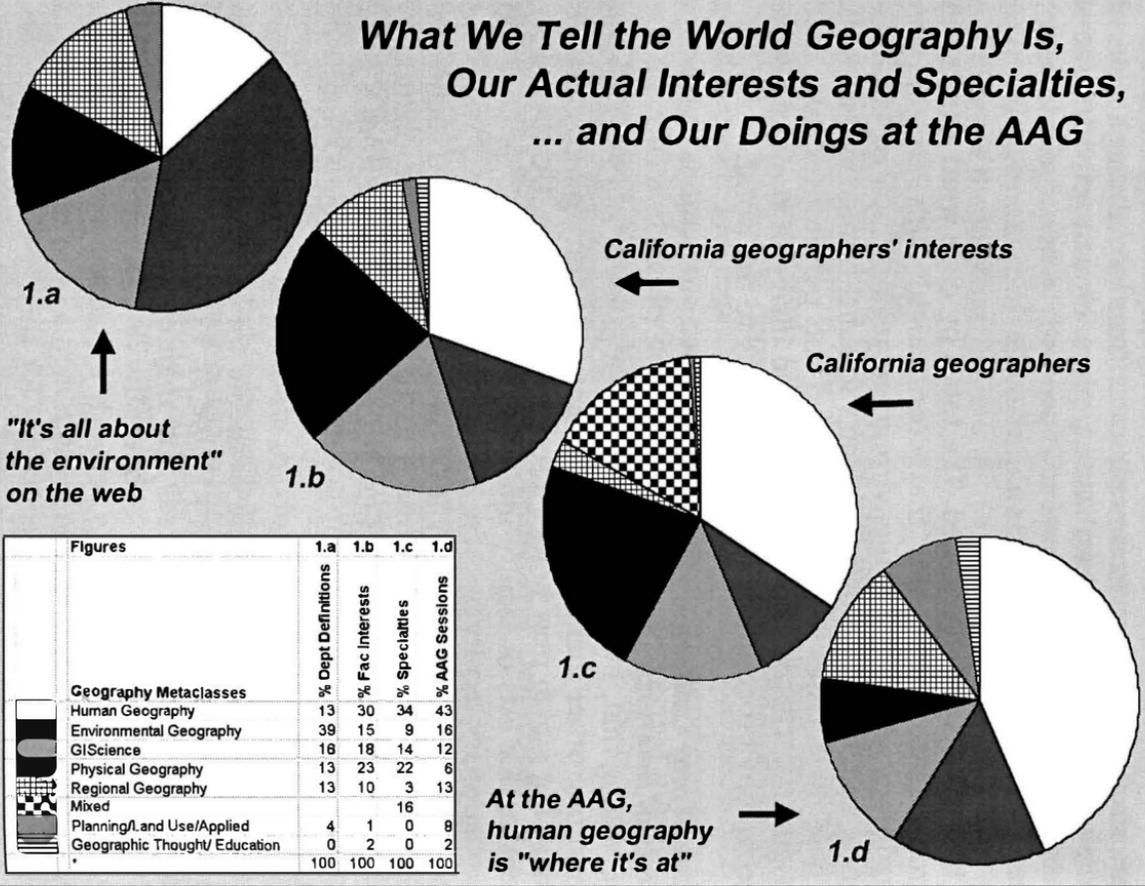
These 16 were then counted. The totals by code word were again grouped into “metaclasses” that accord roughly with Pattison’s four traditions scheme: human-environment, regional, spatial, earth science, and, departing from Pattison’s scheme, human and applied. These metaclasses were also summed and percentages calculated (Figure 1). The outcome is a collective image of how California geography programs represent geography to the world.

Classifying California Geographers’ Lists of Interests

Following that, I went through the Web pages of the 23 programs (and one other that used to be a joint geography-geology department but which now houses a solitary geographer, UC Riverside), looking for lists of faculty interests. There were 202 tenured and probationary faculty in these 23, ranging from 3 at CSU Stanislaus and CSU San José to 23 each at UCLA and UCSB. The 10 bachelor’s-granting programs range from 3 to 10 tenured and probationary faculty, while the 7 master’s-granting programs have from 3 to 12 faculty and the 5 department-housed doctoral programs range from 9 to 23 geographers.¹

Statements of interests were available for all of these 202 California university geographers (Table 2). I classified their interests into as many as six keywords and then coded each keyword by the six metaclasses listed above plus one other: geographical education or thought. This seventh metaclass would appear in AAG sessions and in individual statements of interest, but not in how departments define geography for their Web audiences. So, for example, someone interested in political ecology, environmental justice, or human-animal interactions would have these interests classified in the human-environment metaclass, while interests in riparian vegetation, marine terraces, or Holocene climate history would be classified in the physical geography group.

What We Tell the World Geography Is, Our Actual Interests and Specialties, ... and Our Doings at the AAG



Work on migration, sociopolitical contestation of urban space, or media representations of subcultures, for instance, would be put in the human geography meta-class, while those interested in a particular region or in the interaction of a place with global or regional contexts would have their interests “placed” in the regional geography group. Geographers’ interests in remote sensing, GIS, geostatistics, or cartography would wind up in GIScience, while foci in urban planning or market-area analysis would be classified in the applied-geography meta-class. Expressions of interest in geographic thought, theory, and history or in pedagogy were grouped together in the geographic thought and education meta-class. Again, the balance of stated faculty *interests* (Table 3a) are graphed to compare with the departmental definitions of geography and the distribution of interests in the AAG program (Figure 1).

Classifying the California Geographers Themselves

I then classified the 202 *individuals* as particular types of geographer on the basis of which of these meta-classes contained the most specific interests listed for each person. If no one meta-class dominated that person’s interests but, rather, two or more of them equally shared dominance, I classified that individual into an eighth class, as “mixed,” a category not used for the other items under comparison. Table 3b and Figure 1 display this information. The reason I considered both *individuals* as types of geographer and *interests* held by these individuals is that most individual geographers find themselves with a wider array of teaching interests than their often narrower research interests. Departments often need this widening of teaching repertoire in order to get their students through a balanced curriculum with the professorial resources available.

Most Recent Journal Publication Listed

As a further lens into individual geographers’ interests, I searched for each person’s *curriculum vitae* or other lists of publications on the departmental and campus Web site. This led into an examination of the publication behavior of different types of geographer. If no publication list was provided for an individual, I Googled him or her in Google Scholar and in Google Web in June 2008 and, if a journal publication came up on the first three screens, I used it instead (or, more accurately, the most recent one on the top three screens). For each person, I noted the most recent publication only if it was in the form of a refereed journal article (I did not use books, chapters, popular press pieces, conference presentations, or Web pages). I then used this “one snapshot sample” of a person’s scholarly output to

determine the balance of publication activities among geography journals and non-geography journals for the California university geography community as a whole.

Classifying the journals presented a few judgment calls, since all journals do publish pieces by people in a variety of disciplines and departments.² The list of journals is provided in Table 2 and how I classified them. I did try a run with more generously inclusive definitions of “geography” journals, but the results did not change materially (Table 4d).

I was able to track down 179 journal publications, most within the past several years. A few geographers’ most recent journal publications came from back in the 1980s. The remaining 23 geographers did not provide an online reference to a journal article. Some of these may not have any publications; many more had different types of dissemination, including a few with books. I then cross-tabulated the publication venue (geography, non-geography, and no journal publications) against the eight kinds of geographers for further analysis using Chi-squared (Table 4a). The contingency table had many small cell counts among the 24 cells containing the eight types of geographer by the three journal publication classes (geography, non-geography, and none listed). Therefore I collapsed the eight types of geographers into four to meet the requirements of Chi-squared analysis. This is a conventional preprocessing stage commonly done in Chi-squared (cf., Burt and Barber 1996: 355–356).

To do the collapse, I first did pairwise comparisons of each type of geographer against each of the others (where there were at least six geographers in a category). I would not combine categories if the pairwise comparisons were significantly different at the 0.20 level. I arbitrarily assigned the single geographic thought and education geographer to the human category and the single applied geographer to the environmental geography and GIScience group, based on a sense of their secondary interests. The process is summarized in Table 4b. The four groups of geographers that emerged in this classification process were: (1) physical geographers; (2) environmental geographers, GIScientists, and the solitary applied geographer; (3) human geographers and the solitary thought and education geographer; and (4) regional geographers and those with mixed interests.

To get at what might be driving differences in publication behavior, I used Thompson’s ISI Web of Knowledge *Journal Citation Reports*

to extract Journal Impact Factors (JIFs) for all journals in which California geographers' most recent papers were published, which were also tracked by *JCR*. I calculated means and median JIFs for geography and non-geography journals. The distributions of JIFs were skewed by the few non-geography journals with extremely high JIFs (e.g., *Science*, with 26.372), so, to test the difference in central tendency, I did a median test based on Chi-squared (Table 5). I repeated the tests to include the many journals not tracked by ISI, assigning the arbitrary "JIF" of 0.05 for the journals not tracked by ISI (which was lower than the lowest JIF in this group of tracked journals, 0.075). I also repeated the tests using a more inclusive definition of "geography journal."

I went on to compare each of the four types of geographer in terms of the JIFs of the journals in which they had their most recent publications. Since some of the groups were distorted by the handful of geographers whose most recent publications were in non-geography journals with extremely high JIFs, Analysis of Variance was inappropriate for this four-group comparison, due to its vulnerability to outliers. I therefore performed a Kruskal-Wallis test to evaluate differences among physical, environmental/GIScience/applied, human/thought and education, and mixed/regional geographers in terms of the 2007 JIFs of the tracked journals in which they had their most recent journal publication. I repeated the test for those journals not tracked by ISI Web of Knowledge, again using the arbitrary 0.05 "JIF" (Table 6).

I also looked at the differences in propensity to seek out non-tracked journals in which to publish. I did a Chi-squared test of the frequencies with which the four types of geographers published in tracked and non-tracked journals (Table 7).

Classifying the AAG Program Session Topics

The AAG Program provided several means of locating presentations or sessions of interest to attendees: by presenter's name and time and by topic, for example. To help attendees topically, the back of the program included lists of all sessions, or formal groupings of papers or panel discussions, that addressed 60 different topics (e.g., geomorphology, resources, GIS, planning, cultural, regional, geographic education). The 60 topics listed 6,771 sessions among them, including spoken paper sessions, poster sessions, illustrated paper sessions, and panel discussion sessions. With nearly as many sessions listed as registrants (over 7,000, according to Richardson

2008), each particular session often was listed under more than one topic.

Many paper sessions are organized by the AAG Program Committee from abstracts submitted by authors directly to the AAG outside the specialty group structure, which is the most convenient way to get a paper into the program. Others are organized by individuals, who solicit papers on given topics and collect the abstracts for common submission to the Program Committee. Most of these individuals will seek the sponsorship of one or more specialty groups, hoping thereby to gain a larger audience for their sessions through specialty group announcements to their members. The allocation of sessions to topics in the back of the program is done by the AAG Program Committee, based on specialty group sponsorship and keywords submitted by session organizers or by paper authors. A given session could, thus, appear under several topics.

I classified the 60 topics into seven larger divisions corresponding to the meta-classes discussed above: physical geography, environmental geography, GIScience, applied geography/land use/planning, human geography, regional geography, and geographic thought and education (Table 8). I then counted the number of sessions listed under each topic, summed the counts by the larger divisions, and then graphed them (Figure 1). These sums include the potentially multiple appearances of any one session under various topics. The distribution of the numbers of cross-listings per session by subdiscipline is unknown, and it could conceivably affect the distribution of counts under each topic and the grouping of topics if there are systematic differences in the likelihood of cross-listing by the Program Committee.

Results

This section presents results on how California university geography programs represent geography to the public in their Web page definitions of the field. It then contrasts these definitions with the distribution of interests cited by geographers on their departmental Web page profile lists and with the specialties their interests imply. These definitions, interests, and specialties are then compared with the distribution of AAG sessions by topic. Lastly, the distribution of last-refereed-publication is considered by type of geographer and type of outlet.

What Departments Say Geography Is

The literature content analysis of the 21 geography definitions proffered by the 23 geography departments and programs in California's universities is summarized in Table 1. It presents the 16 codes ranked by the frequencies with which they were incorporated in the definitions (Table 1b). The classification of each code into the six metaclasses is presented as well (Table 1c).

Thirty-nine percent of these code counts fall in the human-environment or environmental geography metaclass. Spatial, or GIScience, accounted for 16% and regional for 13% of the code counts. Human geography amounted to 13%, and applied geography, including planning, comprised another 4%. The remaining 13% fell into the earth science or physical geography metaclass. *So, in presenting geography to outside audiences, geography departments imply that geography is "all about the environment," with roughly balanced contributions coming from physical, human, and regional geography and GIScience.*

Classifying Geographers' Stated Interests

Turning to the individual interests of 202 tenured and probationary faculty in geography programs at California universities (listed in Table 2), 797 were stated out of the 1,212 that could have been stated, had all 202 geographers used six keywords to describe their interests (Table 3a). Of these 797, 23% were in physical geography and 15% in environmental geography. Another 18% were in the geospatial techniques, and only 1% were in the applied or planning area. Thirty percent of the stated interests were in human geography, 10% were in regional geography, and 2% were in geographical education or geographical thought. *The interests of the California university geography faculty, then, appear to give more emphasis to the major topical and technical subfields of the discipline and less to the integrative environmental and regional subfields than the departments' Web page definitions of geography.* Topical, technical, and integrative interests swamp applied geography or the geographic thought and education areas, though.

Classifying the Geographers

Table 3b classifies each geographer by his or her most frequently mentioned interests. The predominant interests fall into the same seven classes (physical, environmental, GIScience, applied/planning, human, regional, and geographic thought and education). An additional class was created for those geographers whose stated interests mix two or more co-dominant concerns.

Of the 202 California university geographers in full-time tenured or tenure-track positions, 69 (34%) are human geographers, 45 (22%) are physical geographers, 29 (14%) are GIScientists, 19 (9%) are environmental geographers, 6 (3%) identify themselves as regional geographers, and 1 each (0.5%) are predominantly applied geographers or planners and specialists in geographic thought and education. An additional 32 (16%) do not have a single dominant specialty and were classed as mixed in interests and expertise. They are really quite mixed: 32 mixtures occurred in 19 different combinations of 2, 3, or 4 specialties, with every co-occurrence of physical, environmental, GIScience, and human about equally likely, except for the human and physical combination, which was the least likely pairing of specialties. *Again, the distribution of geographers among the metaclasses reinforces the impression that we are dominated by topical and technical specialties, rather than integrative perspectives. Even more strongly, human geographers emerge as the modal type of geographer.*

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Table 8 lists the 60 topics by the seven divisions, and Figure 1 represents their distribution in a pie chart. Far and away the dominant concern of contemporary geography is human geography, with 27 topics and 2,929 sessions (43% of the 6,771). The topics ranged from 419 sessions listed under urban geography to 5 listed under Bible geography. A distant second is environmental geography, with 1,077 sessions (16%) distributed among 8 topics, ranging from 379 for environment to 43 for energy.

Regional geography comes in third, with 852 sessions (13%) and 11 regions or region-related topics. GIScience is close behind regional geography, with 786 sessions (12%) distributed among 4 topics, ranging from GIS with 317 sessions to cartography with 86. Planning/land use/applied geography claimed 524 sessions. The two most sparsely represented divisions were physical geography, with only 434 sessions or 6% (ranging from climatology with 128 down to cryosphere with 28), and geographic thought and education, with only 169 sessions (2%). *In short, at the AAG, human geography is "where it's at."*

Who Publishes Where?

So, there is quite a discrepancy among the way departments define geography to the world, the distribution of interests among individual faculty, and the (self-)selection of interests (re)presented at the Association of American Geographers. It is possible that this

may reflect regional disparities in interests, since the AAG program was compared only with the interests of the 23 geography programs in California.

On the off chance that California university geography departments are roughly representative of national trends, I explored whether different types of California geographers have different publication behaviors. I used the one snapshot sample of each individual's most recent journal publication to test the hypothesis that there is no significant difference in publication behavior among the various kinds of (California) geographers.

Geography and Non-Geography Journals...or No Journals at All

Table 4 shows the distribution of most-recent journal publication by venue (geography journal, non-geography journal, and no journal publication listed) and the eight types of geographer. As mentioned earlier, I collapsed the eight rows into four to get expected values to qualify for Chi-squared, after first doing pairwise Chi-squared tests to ensure that each row was made up of geographer types with similar publication behaviors.

Physical geographers are notable for publishing outside of geography journals (nearly 85%). Environmental and GIScience geographers, while dominated by non-geography journals (over 60%), direct a large minority (over 30%) of their publications to geography journals. Human geographers (including the one person who was predominantly concerned with geographic thought and education) put just over half their publications in geography outlets and a large minority of their publications (over 40%) in non-geography journals. Those with mixed interests or predominantly regional interests put just over half their publications in non-geography journals, but what sets them off as a separate category is the much larger percentage of such geographers (nearly 30%) compared with the other three groups, who either have no publications or whose publications are exclusively in book, chapter, or popular press outlets. That these are significant differences in publishing patterns is shown by the prob-value of the Chi-squared statistic, which was <0.001 (both in the preliminary 8×3 table and the final 4×3 table).

The differences in publishing patterns echo the disparity between the AAG session allocation and the distributions of interests among (California) geographers. Physical geographers focus on communicating their results to scientists in other disciplines rather than other

geographers. In choosing conferences to attend with the perennially inadequate travel budgets provided them, they may not consider the AAG a cost-effective way to find a critical audience that can help them improve their analyses before publication submission, which may be a red flag for the AAG.

Journal Impact Factors

By publishing in outside journals, physical geographers and, to a lesser extent, mixed and regional geographers may also be interested in increasing citations of their work. The mean Journal Impact Factors ranking for the non-geography journals in which California geographers most recently published is nearly twice as large as for geography journals used by the California geographers (Table 5), but these disparities are affected by the outlier cases of publications in *Science* or *Nature*. The disparities in *median* JIFs are not significant, whether a stricter or more inclusive definition of “geography journal” is used (Table 5c). The differences become significant, however, if the effect of non-tracked journals is allowed, since most of the non-tracked journals used by these California geographers are geography journals.

Comparing the four groups of geographers in terms of JIFs through Kruskal-Wallis, however, the mean rank of the 117 most-recent-publication JIFs is significantly different (Table 6), with physical geographers enjoying the highest-ranked JIFs and human geographers/thought and education geographers having the lowest-ranked JIFs, with environmental/GIScience/applied geographers and mixed/regional almost indistinguishable in the middle ranks. The effect is much stronger if all non-tracked journals are included after being given the arbitrarily assigned JIF of 0.05. The ranking remains the same, but this time the human/thought and education groups are nearly tied at the bottom.

It would seem that physical geographers have good reason to write for an outside audience: it is bigger and, while willing to read geographers' work when it appears in these more inclusive venues, this audience may not be willing to seek their work out in geography journals. That being the case, it is hard to understand why human geographers focus so much more on geography journals. Perhaps geography in our journals really is human geography, and geography journals are the place for human geographers to go for an understanding audience and helpful criticism?

Publishing in Smaller Non-Tracked Journals

A converse way of looking at this question is to count the numbers of each kind of geographer whose most recent publication is in a smaller journal not tracked in ISI Web of Science Journal Citation Reports. Table 7 presents these counts. Physical geographers largely avoid such journals, while environmental/GIScience/applied geographers disproportionately seek them out (prob < 0.01).

Publishing and the Missing Geographers at the AAG

Both the environmental/GIScience/applied geographers and the human geographers share a lot of their work with the general geography community, publishing in geography journals and in smaller, non-tracked journals, and attending the AAG. Indeed, the AAG seems to have become the haven of human geographers, particularly. It is possible that human geographers and, to a lesser extent, environmental/GIScience/applied geographers may be becoming too insular and self-referential for the good of the larger discipline. Alternatively, it is possible that scholars in cognate social sciences and humanities disciplines might seek out geography conferences and journals to a greater extent than those in cognate physical and biological sciences, thus obviating the need for human geographers to work as hard as physical geographers on outreach to people outside geography with similar interests.

Physical geographers are, apparently, not receiving the qualified professional criticism and sense of community they need at the AAG. They are disproportionately scarce there, but make up about 22% of the geography community, at least among California university tenured and probationary faculty. This impression is strengthened by the data on their proclivity to publish almost exclusively in non-geography journals and to seek out high-impact journals and eschew the smaller, non-tracked journals. This may be injurious to the discipline as a whole by not keeping other kinds of geographers abreast of work in physical geography that might inform other geographers' work as our discipline faces global environmental change and the political, economic, and social transformations and upheavals these imply.

Mixed and regional geographers publish predominantly in non-geography venues, perhaps for similar reasons as the physical geographers. I am not sure why such a relatively high percentage of them do not have journal publications. Possibly the kind of work they do does not lend itself to the shortness of the journal article

format (though several of these did have book chapters, which are similar in size), making books or more popular outlets more appealing to them.

Discussion

There are huge disparities among what we claim geography is in public, what we are actually interested in doing, and where we find community as individual geographers. Human geographers find kindred spirits at the AAG and are disproportionately likely to seek out geography journals and smaller journals overlooked by ISI Web of Knowledge. To a lesser extent, environmental geographers and GIScientists seem to find it professionally rewarding to publish in geography journals and invest their travel monies in the AAG. Physical geographers, apparently, are having trouble meeting their professional needs for useful criticism and audience in geography journals and conferences, and are voting with their feet.

We tell the public that we are all about the environment, an important message in an era of accelerated environmental change that we have tools to track and concepts to analyze. Our definitions of our field imply a rough parity among human geographers, physical geographers, GIScientists, environmental geographers, and regional specialists, and a tacit appreciation for synthesis along human-environmental or regional axes, no matter our specialties. The implied parity would attract those students with integrative mental habit and would prove of utility in a world requiring “integrated Earth system science” (Schaefer et al. 2008), exactly the kinds of natural and social synthesis that geography has always meant to many geographers.

When we look at who we are and how we describe our individual interests, however, the picture shifts: now, the dominant interest is human geography, and physical geography is a close second, not the integration of the two implied in environmental geography (indeed, in considering the geographers of “mixed” specialties, physical and human were the two least likely to be paired in one person). In the aggregate, too, we proclaim a fairly strong interest in GIScience and in the environment, though these are shown not really to be our dominant concerns as individuals (we are more likely to be the urban geographer who “does” GIS or the hydrologist who “does” environmental pollution monitoring for a watershed conservancy). Additionally, we all seem to mention one or two regional interests, often the settings in which we do topical or technical research proj-

ects, no doubt partly because geography departments frequently provide a strong area studies or global studies function on most campuses, but it is not as though most of us citing regional interests are regional geographers.

When our dominant interests can be grouped in a specialty, in other words, when we are classified rather than our interests, the focus sharpens yet again. More than a third of us are human geographers, and more than a fifth are physical geographers. These two are far and away our dominant personæ. Much farther down now are the geospatial techniques, and further yet the environment! It becomes harder to classify people than lists of keywords, however, and fully 16% of us are mixed in interests. Almost no one claims that applied geography, regional geography, or thought and education dominate our professional passions.

When we take our show on the road to the AAG, the picture morphs yet again. It is practically the Association of Human Geographers! Physical geographers are almost missing, less frequently seen than even the applied geographers in this venue. The other subfields (except thought and education) form sessions twice as often as either physical or applied geography.

Do these shifts in presence and focus align with geographers' self-perception as a discipline? Are we really about the environment, or is this just good marketing and campus politics? Are we really as much of an Earth science as a social science, as our Web pages state or imply and our interests and specialties suggest? If so, are the AAG and geography journals really welcoming to physical geographers and worth their while to attend/read/write for? Why or why not?

Conclusions

No wonder geography has given rise to so many self-definition schemes: we really do not know what on Earth we are. Maybe we are but one legacy of the 19th-century German university administrative structure widely copied here and the struggles to establish new departments and differentiate disciplines in the emergent American university system from the Civil War to the post-WWII boom (Smith 1990; Castree 2005). Have we reified someone's long-ago administrative convenience? Is that why we have such disparities between what we say we are and what we actually do? Is this why we've had such difficulty getting geography, as we understand it, into K-12 curriculum *as* geography? It is interesting in this regard

that so many attempts to codify the discipline grow out of struggles over the K–12 curriculum.

Pattison coded the disparate definitions of his day as human-environment, areal differentiation, spatial analysis, and Earth science. Designed to support geography in K–12 curriculum renovation, the 1984 *Guidelines for Geographic Education* came up with location, place, regions, movement, and human-environment interactions. *Geography for Life's* formulation of 18 national standards for a geographically informed person is grouped around spatial knowledge, places and regions, physical systems, human systems, environment and society, and geographical applications. We still remain out of synch and out of phase with our attempts at codifying what we are and what we do. This lack of clarity, our small size as a discipline, and possibly our political naïveté might be how geography, though formally called out as part of California's K–12 education standards, is actually dismembered there: some of its interests are actually named "geography" in the History and Social Science Standards, other parts we recognize as part of us lie buried in the Science Standards under Earth science (a small part of the Science Standards, and our colleagues in geology share our sense of invisibility there), and a few other bits are scattered here and there in the Technology Standards.

Each department has a critical need to define itself pretty crisply to weather interdepartmental and administrative encroachments, attract majors, and position itself with regard to the great issues of the day. Our Web statements are, in this sense, propaganda in a war of ideas and posters in its recruitment offices. If they are no more than propaganda, though, we will be "found out," and we may be doing our students a disservice by saying we are one thing and doing another, perhaps not preparing our students to do the best work in what it is we say we are all about and which may have attracted them in the first place.

This paper raises more questions than it set out to answer. Are the results skewed by my focus on California as I try to answer a question about our major national conference? Others more familiar with other regions could gather similar data from their areas or critically re-perform this California analysis. Results could make for engaging sessions at the CGS and AAG, whether they support this project in California or not.

Qualitative research to get at the attitudes and feelings generating the numbers analyzed here is certainly in order. Do physical geographers feel alienated and, thus, stay away from the AAG? Or do they simply not think in such terms and just go about their work and publish to reach friends and colleagues they have met in other fields, so that the AAG has just fallen off their radar? Are those physical geographers who attend the AAG happy with the quality and quantity of the sessions targeted to them? Are human geographers becoming too introspective? What do they think about the paucity of physical geographers at the conferences they obviously value so highly, or do they simply not notice the missing? Are there more non-geographers who seek out and come to the AAG human geography sessions than the physical geography sections? Are the GIScientists in evidence at the AAG becoming insular in the safe confines of the AAG, even as forces gather to wrest GIS through certification from geographers (e.g., GIS Certification Institute, Management Association for Private Photogrammetric Surveyors)?

What about the environment? Are we or are we not a leading discipline in the study of environmental change and adaptation, the quintessential “integrated Earth system science”? Are our departments appropriately balanced to make meaningful contributions to these discourses and practices? Are we training students with depth of competence in these areas who can do outstanding work in environmental careers and thereby build societal demand for more geography and more geographers? To a certain extent, our GIScientists are building such competence and reputation, ironically to the point that others want control of our technologies and are building demand for certification processes that foreground their takes on GIScience and de-emphasize geography. Qualitative research utilizing focus groups, interviews, and surveys could help us understand who we are, why we are the way we are, and how to formulate what we want to become as a community.

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End Notes

1 I also included the lone geographer left in the once-joint geology and geography program at UC Riverside, but I did not include the 76 people listed as affiliated with the UC Davis Geography Graduate Group, most of whom are not geographers but may serve on geography dissertation committees. The members of the former Department of Geography there were scattered into

several departments during the 1990s, and they are not identified as such on the GGG Web site.

2 For example, the *Journal of Geophysical Research* (in all its many variants) publishes work not only by physical geographers but by geologists, geophysicists, geochemists, astronomers, physicists, biogeographers, ecologists, oceanographers, soils scientists, environmental scientists, and many more, the American Geophysical Union being an umbrella organization for all physical sciences having to do with the Earth or planets. I classified such journals as non-geographic. On the other side, there is the *Journal of Economic Geography*, not to be confused with *Economic Geography*. I classified it, like *Economic Geography*, as a geography journal, though many of the papers in it are by economists newly discovering the spatiality of the economy and classic spatial location theory.