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Diagnosing the Third World: The "Map Doctor" and the Spatialized Discourses of Disease and Development in the Cold War

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ABSTRACT: *In the early 1950s, the American Geographical Society, in collaboration with the United States Armed Forces and international pharmaceutical corporations, instituted a Medical Geography program whose main initiative was the* Atlas of Disease, *a map series that documented the global spread of various afflictions such as polio, malaria, even starvation. The* Atlas of Disease, *through the stewardship of its director, Jacques May, a French-American physician trained in colonial Hanoi, evidenced the ways in which cartography was rhetorically appropriated in the Cold War as a powerful visual discourse of development and modernization, wherein both the data content of the maps and their stylistic forms collaborated to produce a compelling division between the so-called First and Third Worlds. In addition, the atlas' connections between the academic knowledge production of the AGS, the national security interests of the US government, and the market building of the medical industry displayed the ways in which development was a multi-layered and essentially spatialized discourse of American power and ideology.*

In May 1954, mere days after Vietnam officially ended its tenure as a French colony and two months before it was fatefully partitioned in half, *Newsweek* magazine ran a curious column in its "News in Medicine" section. The article was a brief profile of Dr. Jacques May, the head of the American Geographical Society's (AGS) Medical Geography department, featuring a headline proclaiming May as "The Map Doctor."[1] Next to a photograph of May with arms folded over a large globe centered on the Eastern hemisphere, and Southeast Asia in particular, the article detailed the native-French doctor's rise from a colonial post in Hanoi as a physician and educator to the prime surveyor of the geographical spread of disease across the earth. In particular, the piece commemorated May's completion of the twelfth volume of his *Atlas of Disease (AOD)*, an AGS project sponsored by the United States Office of Naval Research and touted by *Newsweek* as the "first comprehensive record, in maps and charts, of the world-wide distribution of human ailments."[2] Eventually the *Atlas of Disease* would include seventeen maps, from cholera and leprosy even to starvation, and by the end of the 1950s it would be put to use in scientific, military, commercial, and popular contexts.

During an era of rapid decolonization and the emergence of new self-determining nations across the so-called Third World, the United States found itself managing the frantic flow of new

information about these countries and having to produce knowledge about them at a torrid pace.[3] A three-tiered world of developed and developing nations provided the organizational structure for the Cold War of the late 1940s and 1950s, and the emerging nations were quickly categorized in this new system, particularly into a Third World that was conceived as a testing ground for democratic or communist ideologies.[4] America's national security apparatus, both in the military and the State department, was weighing how to negotiate America's Cold War role in the world, and it was clear that the "South" was going to be a prime determinant of that role. It went almost unquestioned that "modernization" would be the best method by which to "help" self-determining nations reach political, social, and economic stability at the standards of the United States and Europe (preferably *before* the Soviet Union could wield its persuasive influence over the same nations). This ideology of development was inherently spatial. In geographer David Slater's terms, "the geography of modernization was presented as an exercise in establishing the means for spatially integrating the traditional zones of the developing countries into the national and international circuits of the modernizing world."[5]

Beyond a mere *Newsweek* curiosity, May's project articulates the collaborative nexus of US military, foreign policy institutions, and the scientific community's interests in surveying and classifying Third World nations. The seventeen maps of May's *Atlas of Disease* circulated into conferences for the influential Council on Foreign Relations, into boardroom pitch sessions at corporations like Pfizer, into Congressional reports on the viability of the Mutual Security Act, and into the hands of military advisers in areas like Vietnam. Thus, the *AOD*'s maps lived eventful lives as what Bruno Latour once called "immutable mobiles"; these maps of disease inscribed complex scientific information, ideologies, and values into a seemingly finished and unchangeable cartographic visualization, even as they *moved* fluidly through the complex contexts of Cold War culture.[6] As David Campbell writes, "foreign policy might be likened to an 'ethical power of segregation,' whereby moral distinctions can be made through spatial and

temporal delineations, constituting a 'geography of evil' that allows dangers to be understood as originating from distinct and distant places."[7] By filling the abstract cartographic spaces of the world with a swathe of colors and dots representing both past, present, and impending disease, the *Atlas of Disease* segregates the so-called "Third World" into a distinct place of sickness. The Northern nations are by no means free of sickness on these maps, but the contrast in scale and scope between the appearance of disease above and below the equator is stark. Therefore, disease and pestilence serve as markers of both temporal and spatial boundaries between the North and South of the Cold War. And with eventful circulation of the *Atlas of Disease* maps into institutional and popular spaces of the Cold War, illness becomes a cultural, economic, and political contagion that blots areas of strategic interest all over the world, at a period when more and more remote areas were seen as strategic ground.

Of course, the fact that cartography became a central medium for this kind of valuable data was not incidental or random. Post-WWII, maps were emerging as prime articulators of American international power. Serving the interests of the state was not, obviously, a new role for them. But what *was* new was the scale at which maps could encompass global data, fitting to match the entirely global stakes of the Cold War. As the scope of American commitments broadened all over the world, from a rhetorical standpoint cartographers had to adapt and broaden maps to encompass such commitments. What Cold War cartography communicated was that *all* areas of the earth might be potentially strategic. To see the world in one glance from the standpoint of one's interests allowed for a powerful political perspective. In the particular case of the *Atlas of Disease,* the modern cartographic style of the American Geographical Society, which was built on innovative projections and a technical but accessible approach to data visualization on a global scale, tended to match its message—an important demonstration of the fusion of form and content. At the same time, the *AOD* project, underwritten by different institutions of the American government, reproduced and recirculated this perspective into the discourse of the

Cold War. Certainly, the production of knowledge by the *AOD* was central to its purpose, but so was its function as a vehicle for communicating a cohesive view of the world for strategic American interests and the values of modernization to a diversity of audiences. For Michael Shapiro,

> [M]odern "security" represents the ultimate in leaving nothing to chance. The number and intensity of interests congregated in modern super powers, for example, has resulted in a comprehensive level of surveillance and intervention all over the globe. Within this intensification of the security-oriented gaze, the meanings of landscapes and people everywhere are subjected to an intensified form of objectification.[8]

A map, then, provided a fitting medium for a logic of intervention and the objectification of world space, as it abstracts borders, shapes, and area into one readable, intensely concentrated, and sanitized image that can be reproduced and reappropriated.

It is at this tense meeting, then, between the function of maps as powerful partitioners of North/South identity and perspective, and the context of America's shift to a fully global and interdependent sense of security, where this essay resides. May's project did not simply advance a scientifically viable collaboration between medicine and cartography. His work also evidenced complex contradictions and interests that were indicative of an anxiety in America's Cold War discourse about the role of developing nations. Therefore, I argue in this essay that May's maps perpetuate an ideology of modernization and progressive development that accompanied America's rise to international power in the Cold War through a visual rhetoric that legitimizes a fear of illness and contamination in America's construction of the Third World. At the same time, the actual circulation of these maps and the discourse *around* them both complicated and intensified that power. As various institutions appropriated the maps for humanitarian development, medical innovation, military maneuvers, and pharmaceutical profit, the case of the

AOD evidences the range and compatibility of a host of Cold War discourses. These functions are consonant with Kirsten Ostherr's claim that

> the aim of global health surveillance is to trace visually the spread of contagious disease, thereby sustaining the imaginary geopolitical map that establishes a spatial and temporal evolutionary gap between the scientifically advanced "modern" world (of the West), and the disease-ridden "premodern" world (the rest of the globe). Such maps reify the literal and figurative relationship between these two worlds as that of scientific investigator and lab specimen.[9]

These arguments engage especially with two important conversations in rhetorical studies: scholarship advancing cartography's role in the rhetorical construction of political space, and the rich tradition of critical Cold War studies. First, this essay builds on Lawrence Prelli's conception of maps as "rhetorics of display" that operate through a tension between "revealing" and "concealing."[10] The immense amount of medical data on display in *AOD* maps mostly conceals the bodies of the diseased, as the ideological borders between North and South go unseen for the sake of promoting a clean science of modernization on the flat page. Thus, according to this essay, maps have unique inventional resources in projection, iconography, color etc. that "naturalize" their political claims. At the same time, while the map's "display" should remain in focus, so equally should its circulation. Amy Propen has argued how maps serve as powerful material documents that perpetuate specific perspectives of the world as they are passed around, debated, and revised.[11] In the case of the *Atlas of Disease* maps, then, their production processes and circulation show that the control and surveillance of the Third World in the decolonizing era was an active process that required rhetorical labor.

This kind of labor also speaks to an important implication of this essay for Cold War rhetoric scholars. Much has been said about the rhetorical presidency and its role in articulating American power in the second half of the twentieth century, and this work remains vital and

relevant. However, the *AOD* case reveals that the constitution of the Third World as a particular set of power relations instituted by First World elites was also a consequence of the more mid-level work of both public and private academic and government collaborators. Since the Cold War was waged not only through the executive branch but through fruitful (official and unofficial) connections between academic science, defense organizations, and private corporations, this essay suggests that Cold War scholars benefit from tracing the kinds of artifacts, like maps, that lived "rhetorical lives" across all of these complex institutions. Thus, these cross-circulations exemplify rhetorics of foreign policy, development, and national security as *practices*. Relatedly, an important implication for rhetorical scholars is that the strategic, realist approach to the Cold War is best seen as intertwined with (and complicated by) the ideological approach.[12] While the *AOD*, for example, can be well understood through Francis Beer and Robert Hariman's critique of strategic realism, in that the maps were used to manage some resolutely American Cold War concerns, the project should also be approached from a broader ideological perspective around postwar liberal and technocratic values.[13] AGS representatives arguably conceived the *AOD* project just as much as an initiative to protect American interests as they did a sophisticated scientific innovation that could raise the standards of the developing world. And for historian Odd Arne Westad**,** since Washington's objectives to modernize the Third World "were not exploitation or subjection, but control and improvement," American Cold War elites exhibited a "genuine and deeply held ideological" social consciousness.[14] Thus, the integration of social science into the waging of the Cold War, of which the intersection of global health and cartography represents an important example, promotes a liberal modernism that could develop the world to both further American strategic interests *and* idealistically improve the lives of the great masses of the globe.

To advance these contributions, I will detail the rhetorical history by which medical geography came to fruition in postwar culture, from its origins during WWII as part of the US

program to increasingly *know* the world, and into May's hands as a global archive for documenting sickness as a threat to international power and security. I will then engage in a visual analysis of the rhetorical features of some of the maps themselves, while tracing out the maps' various appropriations in surrounding Cold War-era military, government, scientific, and popular contexts. The analysis recognizes three particular themes that emerge from this relationship between the *AOD* texts and their surrounding contexts: 1) the ability of *AOD* maps to draw distinct boundaries between "developed" and "developing" ideologies, 2) the ways in which the maps define disease as a cultural phenomenon and constrain a sense of Third World identity, and 3) the relationship of markets to medicine in May's and the AGS' discourse that links disease to the economics of Cold War development. Important at each of these stages is to keep the maps in conversation with archival documents from Jacques May's collection in the American Geographical Society's library at the University of Wisconsin-Milwaukee. Such documents suggest productive links between the finished and circulating maps with May's own conceptions of his work and the contribution of medical geography to a fraught international landscape divided by binaries between East/West, and North/South. Overall, Jacques May's maps remind us that modernization and its role in development discourses of the Cold War did *not* rest on a simple dichotomy of altruism and self-interest. Instead, the *AOD* upheld and circulated the Cold War ideological tenet that American's own self-interests could be equated with the interests of the rest of the world. In this way, we can—and should—situate cartography as a complex rhetorical practice vital to the discourses of American power.

The Rhetorical Construction of Third World Disease in the Early Cold War

At even the earliest stages of the Cold War, the highest halls of American leadership were formulating a spatially-conscious global push to modernize the Third World.[15] As a new corollary to the European Marshall Plan, President Harry S. Truman outlined what came to be known as the "Point Four Program" (so named because it was the fourth plank in his inaugural

address on January 20, 1949), which set out to bring "scientific advances and industrial progress" to the world's underdeveloped areas.[16] As Truman offered:

> More than half the people of the world are living in conditions approaching misery. Their food is inadequate. They are victims of disease. Their economic life is primitive and stagnant. Their poverty is a handicap and a threat both to them and to more prosperous areas. For the first time in history, humanity possesses the knowledge and skill to relieve the suffering of these people. The United States is pre-eminent among nations in the development of industrial and scientific techniques. The material resources which we can afford to use for the assistance of other peoples are limited. But our imponderable resources in technical knowledge are constantly growing and are inexhaustible.[17]

Truman's Point Four Program, which morphed into the State Department's Technical Cooperation Administration, was concerned with an interventionism of ideas and knowledge production.[18] Its establishment also demonstrated that from a point early in the Cold War, the stark East/West binaries were filled out and re-colored by the complex, multilayered South—of which the *Atlas of Disease* would no doubt become a part.

Truman's push for a program to spread US knowledge across the globe was linked with the rise of modernization theory, which became a major part of the collaboration between the US government and the social sciences in the Cold War. For example, "area studies" programs were a large collaborative focus between government/military interests and academic institutions, think-tanks, and commercial research foundations, designed to create massive interdisciplinary knowledge (especially in the social sciences) of particular regions—specifically as catalysts for development projects in strategic spaces.[19] Out of collaborations like these came works such as Walt Rostow's *Stages of Economic Growth*, which was the Cold War hallmark "non-communist manifesto" for modernization.[20] To respond to the Soviet's own brand of modernization, social scientists like Rostow were looking for a logic and a lexicon that expressed US plans for the

increasingly Southern focus of the Cold War—the push to standardize technical knowledge *of* and *for* the spaces of US influence around the world became the answer.[21]

Of course, this move toward abstract knowledge necessarily involved a denial of individual Third World nations' pasts and differences.[22] As Kimber Charles Pearce has concluded, theories like Rostow's made development a progressive, linear process with an anti-Communist pretext whose "argument that all nations pass naturally through the same phases of development convinced US policy makers to homogenize their methods of economic interventionism in the Third World, although that view of the evolution of liberal democratic capitalism tended to mask conflict and emphasize the continuities of the development process."[23] Critical geographers like Simon Dalby have similarly characterized this argument as a Cold War narrative that reduced contentious political and social issues to technical considerations, ones that could be improved by better knowledge and instruments.[24] In this way, Western elites could construct, according to Arturo Escobar, "a regime of truth through which the Third World is inevitably known, intervened on, and managed."[25] Developing nations thus quickly became defined in terms of their perceived deficits in capital, political viability, even health.[26] In the process, as Westad says, "[t]he methods of the superpowers and of their local allies were remarkably similar to those honed during the last phase of European colonialism: giant social and economic projects, bringing promises of modernity" to their areas of influence.[27]

The rhetorical construction of "disease" was one such prominent project of modernization. The label of disease itself is an important rhetorical choice, as used by Truman and the purveyors of the projects that began under his administration.[28] According to Paul Chilton, in his investigation of early Cold War security discourse, "[s]tereotypically at least, the body is conceptualized as having an inside, an outside, and a surface boundary. . . . Diseases are typically imagined as *invading* the body *from outside*[.]"[29] That early Cold War master trope of "containment," then, could easily serve the emerging ideological practices of global three-world

partitioning through its distinctions between sick and healthy, and by extension, developing and developed. In Ostherr's terms, medical, academic, and popular institutions in the postwar period

> are linked in their preoccupation with visuality, and, indeed, the "invisibility" attributed to the postwar invaders is belied by the omnipresent representations of unsanctioned national and bodily border crossings in this period. . . . [T]he imagined invaders announced their presence everywhere, across a wide range of audiovisual modes of representation and, crucially, through the discourse of world health.[30]

Through such modes, for Ostherr, "bodily invasion is collapsed with geopolitical invasion, and both are treated as processes of contagion."[31] Mary Manjikian similarly emphasizes how the visual conflation of the diseased individual with the national "body politic" reinforced important hierarchies: "[i]n establishing one state as the default or normal state and the other as the deviant state, both types of discourse (medical and political) set up a power differential in which those in the normal state are both higher than and responsible for those in the deviant state."[32] Maps like those in the *Atlas of* Disease, therefore, reinforce this figuration by conflating abstract national bodies with afflicted human bodies, and by "containing" certain spaces through a kind of visual quarantine imposed by "healthy" states.

Thus, the fear of the political spread of militancy in the new nations was accompanied, not coincidentally, by a fear of the spread of infectious disease. For Donna Haraway, the "residue of the history of colonial tropical medicine" continued to follow public discourse, even in this unprecedented era of national independence; in her words, "[e]xpansionist western medical discourse…involved a stunning reversal: the colonized was perceived as the invader. In the face of the disease genocides accompanying European 'penetration' of the globe, the 'colored' body of the colonized was constructed as the dark source of infection, pollution, disorder, etc. that threatened to overwhelm white manhood[.]"[33] However, the difference now was that the purveyors of postwar quantitative science at institutions like the AGS could dispassionately use

world disease statistics to help advance economic development and modernization as a new kind of colonizing control under a more progressive "liberatory" narrative. Such a concept dovetails with what Ned O'Gorman has called "political-economic adventurism" in the development culture within the US government, wherein key leaders and bureaucrats saw that "with creative world political and economic action, the United States could restore its ideological hegemony over the free world and 'expand the area of freedom.'"[34] Failure to take bold, global actions would be seen not only as a strategic problem, but also an *aesthetic* one—in other words, to not seize the opportunity for the United States to perform on the world stage was a failure to uphold a particular image that was seen as necessary. An ambitious global project like the *Atlas of Disease*, then, was not simply a question of promoting scientific progress and knowledge-building on a grand scale, but also an important aesthetic performance of what the United States had the capability of projecting.

The Origins of the *Atlas of Disease* and the
Role of Medical Cartography in US Rhetorics of Development

Within these contexts, then, maps uniquely reflected new US roles in the developing world by shaping and constraining the very ways the developing world was becoming a Cold War space. Not coincidentally, the discipline of geography rose to prominence at this time as a more quantitative social science, which was particularly important as Third World nations decolonized in large numbers and information about them became rapidly available.[35] Thematic maps, covering a rapidly expanding diversity of topics about social problems in far-flung areas of the world, circulated especially widely. And, yet, the political implications of these displays were often concealed because maps were still typically seen as technical, scientific documents that could survey the globe with objectivity.[36]

The specific project of medical geography arose first, though, around the concerns of contamination among World War II soldiers traversing all parts of the earth during their tours of

duty. The relationship of disease to physical location and region was not a new line of inquiry, of course: the writings of Hippocrates in *On Airs, Waters, and Places* established this connection.[37] But the systematic study of disease from a geographic point of view did not become prominent until the 19th century, when Prussian medical officers introduced the term "medical geography" and "sought to demonstrate a connection between the geographical location of disease and the prevailing physical, social, and cultural features of the surrounding environment."[38] In America, studies of disease (particularly alcoholism) and geography in the early frontier West appeared in public discourse, US census data was used to produce "Sanitary Maps" of preventable diseases in areas such as Louisiana and Texas, and some Civil War-era research related disease and race to geographic location.[39]

Still, US efforts at an international program of study in medical geography and cartography did not really take place until the push toward globalism in the 1940s. Indeed, the Department of Medical Geography archive for the AGS teems with WWII-era news clippings affirming the new concerns about the internationalization of disease.[40] The rise of the airplane, for example, was a frequent topic, with 1943 NY *Herald-Tribune* articles such as "World Health Vital With Plane as Germ 'Carrier'," including Undersecretary of State Sumner Welles pronouncing that "There are no more disruptive forces than starvation and pestilence."[41] A *New York Times* piece reported on a 1943 physicians conference, which featured prominent members of the American medical community drafting a resolution with the prescient pronouncement that "the post-war era will see another global war of gigantic dimensions against an invisible army of countless billions of disease carriers against which defense measures must be undertaken immediately."[42] From an early point, then, the discourses of disease, defense, and foreign policy intertwined and fused together.

The official AGS initiative began in 1944 with a conference convened by Dr. Richard Light and the directors of the AGS, endorsed by Isaiah Bowman, the prominent geographic

consultant for President Roosevelt (and early AGS president), and held in concert with Col. Gaylord Anderson, the head of the Division of Medical Intelligence for the United States Army.[43] The conference, comprising geographers, medical scientists, military medical officers, and influential government public health officials, outlined the specifications for a comprehensive *Atlas of Disease*, with the agreement that "the atlas is to be designed primarily as a tool of research rather than as a textbook or for popular use. Certain parts of the atlas, however, might well be adapted to the practical needs of persons coping with the control of diseases under special conditions (e.g. those of air transport)."[44] There was a sense at the conference, though, that the project could prove innovative *and* popular. As then-AGS president Roland Redmond noted, "We want the atlas to be a pathfinder, an instrument that will develop techniques…and yet one that ought to be sufficient in scope to show other people how valuable the type of information would be."[45]

The debate around the project's political implications was also present at this early stage, which was seemingly resolved by an institutional commitment to a rhetoric of scientific objectivity, fitting to the early Cold War era. The Rockefeller Foundation's W.A. Sawyer, for example, expressed at the conference that "I think you can give any facts that are essential to our epidemiological argument or available for epidemiological use without offense as long as the person who writes the description does not make invidious comparisons favoring his own country."[46] The question of ethnicity and culture in mapping disease was subordinated and disciplined in service of the so-called scientific message. The notion of "self-evidence" was inextricable, then, from cartographic visualizations, in that the appearance of a network of "facts" on a spatial grid assumes the appearance of commonsense, universal knowledge. In fact, much of the early discourse within the AGS around the *Atlas of Disease* cautiously debated how to sufficiently control audience interpretation of the maps in order to maximize and promote such common sense and knowledge production.

Still, despite its founders' emphasis on scientific utility, the economic foundation of the Department of Medical Geography at the AGS, and its flagship *Atlas of Disease* project, was based in the contributions of two institutions: the US government (originally through the Office of Naval Research and later through the Army's Office of the Surgeon General) and the pharmaceutical industry (first through a grant from Upjohn and later through connections to firms like Pfizer and Lilly). Right from the start, then, the *AOD*'s cartographic discourse on disease was integrated into both the discourses of international capital development and national security. AGS' grant application to the Navy, for example, stated the purposes clearly, noting that "the development of backward areas on which so much depends, economically and politically, is conditioned by the study of man against the land which he is to develop," while at the same time, "we have to sum up our knowledge of the distribution of diseases, existing or potential, throughout the world to protect our men who may be called upon to establish themselves in any of the infected areas."[47] For example, one of May's major projects in a later edition of the *Atlas of Disease* was mapping the various forms of viral encephalitis, particularly in response to the hemorrhagic encephalitis epidemic that ravaged US troops in the Korean War.[48] At the same time, the maps would later be sent to firms like Pfizer, intended to be included with literature that would be sent out to medical professionals (and Pfizer clients) and to help provide data on diseases that were specifically treatable by Pfizer medicines.[49] In this way, the *Atlas of Disease* maps proved a fluid, often dual-voiced set of discourses that held various political and economic interests in tension with one another.

The founding committee waited until the end of the war to get the *Atlas* off the ground, and it wasn't until 1948 that it decided on Jacques May as its first official director.[50] May was a prized find for being a truly internationally-experienced physician with his renowned work in colonial-era Hanoi. While May's background and credentials gave the project an international flair, the *Atlas* was clear about its chiefly American concerns about security and economic

modernization, with altruism as a desirable, but not always necessary, byproduct. In a 1954 report to the Council on Foreign Relations for example, May noted that, "No ethical considerations have their place here. The problem is to discover how a condition which is detrimental to the well-being of the United States can be remedied. It is hoped that the solution found will be profitable also to the populations and to the territories to which it will be applied."[51] Here, the strategic realism of the *Atlas of Disease* project comes to the forefront, and rests uneasily alongside the initiative's liberal ideology of modernization. The protection of US interests is made paramount, with the hope (but not guarantee) that indigenous "benefactors" of American development would see those interests as commensurate with their own.

This uneasy tension is addressed by historical geographers Tim Brown and Graham Moon, who use May's background as a physician during Indochina's last vestiges of colonialism to show his approach to medical geography as a benevolent, triumphalist spin on an "imperial history that views the unfolding of events from the perspective of the dominant culture."[52] At the same time, though, this brand of imperialism was marked by a more "rational, scientific view of disease causality."[53] At a conference in 1954, May himself reflected on the striking similarities to his previous work in a colonial outpost with the more global aspirations of the *Atlas of Disease*, offering that in Indochina,

> We were confronted with the same problems. We had the tools of the colonial system at our disposal but we wanted to improve on what we had brought about hitherto. We knew that too much technology would create unemployment in the Red River Delta. What this group wants to do now is similar to what the colonial powers tried to do in their empires: namely, capital investment, technological guidance, and presumably protection of the funds and the experts. We want to do it now without the tools of the colonial system.[54]

Certainly, this shift out of colonialism toward capital development and technocratic expertise paralleled the evolution of cartography in the postwar era toward a more scientific, quantitative

foundation. In the process, American elites could increasingly use maps as strategic instruments to assess truly global problems.

The Civilizational Borders in the Cartographic Style of the Atlas of Disease

This fraught colonial lineage also leads to the first of the *AOD*'s major rhetorical implications: the ways in which the maps visually instantiate the contrast between the developed or "civilized" and the developing world, and thus complicate the relationship between both East/West and North/South. A 1950 article in AGS' flagship journal *The Geographical Review*, written by May, serves as a kind of introductory manifesto for the entire *AOD* initiative, as the text explicitly links the map to the conception of development in stark civilizational terms that the highest halls of executive leadership had outlined months before:

> The President of the United States has declared his intention to lead the country into a new program for the advancement of backward areas of the world. When the time comes to enforce this policy, there will be a demand for facts about these backward areas. The question will be asked, what makes people backward? What causes countries to be underdeveloped?.... [Tropical populations] cannot develop their intelligence and culture, cannot organize agriculture profitably or develop commerce and industry or the arts of social living. They are, consequently, in no position to establish institutions by which they could raise their standard of living, organize sanitary campaigns, and achieve public health. Since they cannot get rid of their most despotic tyrants and oppressors, the intestinal worms and blood parasites, they are tied down by their physical condition to their backward status. Medical geography could become a preliminary step to the redemption of backward countries throughout the world; for, in our final definition, it is the systematic study of the correlations that exist between the diseases of the land and the diseases of the people.[55]

No less than a moral appeal to "redemption" is made by May here—a way into modernity for the peoples below the equator. And in a speech given later that year to the American Public Health Association about the polio map, May spoke directly to why maps were chosen as the medium to represent such redemption:

> The representation of results of public health investigations can be made in different
> ways, of which cartographic methods are, perhaps, the most effective. There are several
> reasons for this. A map has a visual appeal that charts and diagrams do not have to the
> same degree. It establishes immediate correlation between the occurrence of the
> phenomena and the terrain, and it can go as far as one wishes in the description of
> environmental correlations.[56]

This is perhaps one of May's clearest expressions of the rhetorical power of cartography: the immediacy and simultaneity of having layers of information available in one glance for the suggestive power of mapping global relationships.

The actual *Atlas of Disease* was officially inaugurated with the publication and distribution of the "Map of the World Distribution of Poliomyelitis" in the *Geographical Review* at the end of 1950.[57] The polio map also established some of the features of the distinct cartographic style of the *Atlas of Disease*: beautiful color plates covering a wide swathe of time (1900-1950) in the rises and falls of polio over the world's seven major regions. However, it was not until the second map of the series, "The Distribution of Cholera 1816-1950" (Figure 1) from 1951, that the *Atlas of Disease* landed on the cartographic formula that would sustain its innovation and circulatory success.[58] While the polio map had seven different insets of the world regions, "Cholera" invites the viewer into an odd, egg-shaped full-world view, connecting the various areas of the globe with colorful lines indicating the historical routes of major pandemics. The marginalia of the cholera map includes a host of smaller maps, some of specific regions such as Egypt, India, and Southeast Asia, others of the entire world showing the changes in where

cholera has moved over the preceding two centuries. Before looking at each inset and box, the effect is one of awe at the overwhelming cornucopia of disease data and expertise on display; knowledge itself is in some respects the main subject of the map, and the general presentation connotes the authority of scientific investigation.
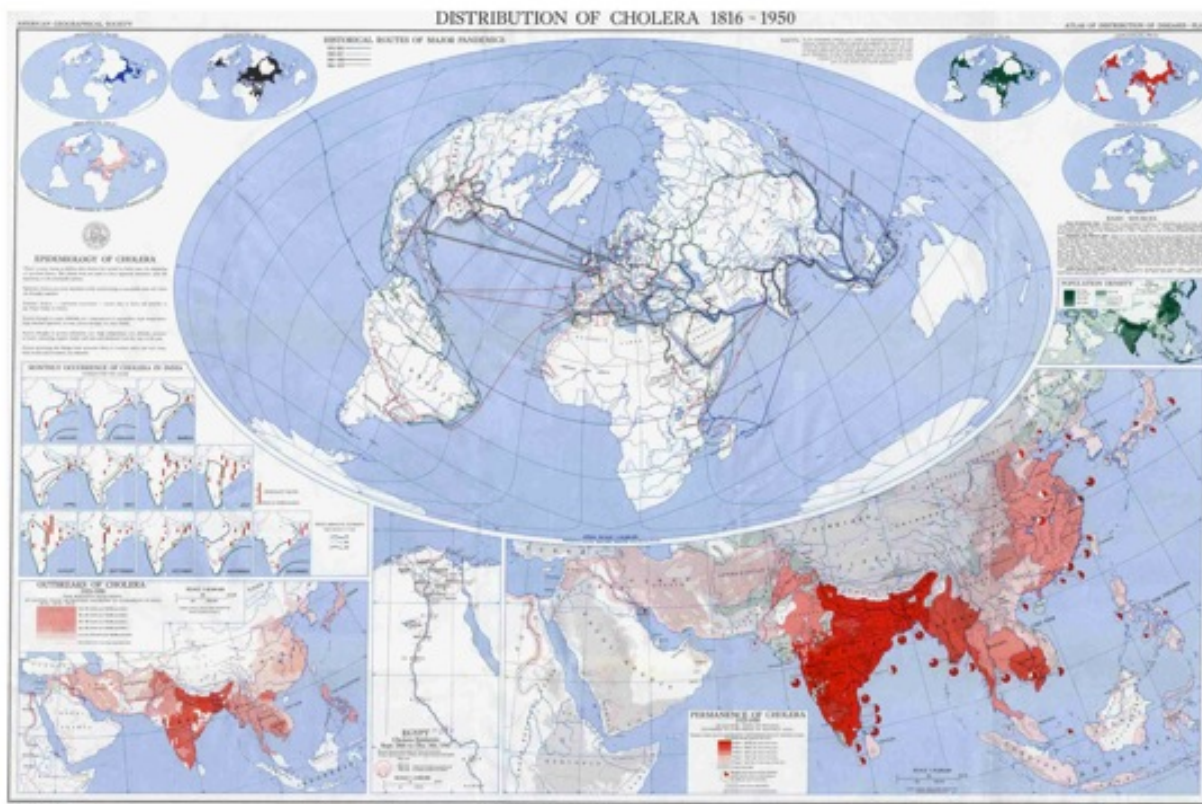

Figure 1: American Geographical Society, "Distribution of Cholera, 1816-1950," 1951 (From the American Geographical Society Library, University of Wisconsin-Milwaukee Libraries).

The various pieces synthesized into the map also work to collapse time and space and create a notion of *progression*. The story of cholera in this map is one in which the Northern areas have largely purged themselves of the disease, and cholera now exclusively infects the subequatorial areas. Right beneath the centered, main world map, for example, is a large inset with the title "The Permanence of Cholera," which focuses on Southern Asia and a blood-red India (the intensity of color matching the intensity of disease). Color and density are, obviously, common tools for cartographers—and here the rhetorical choice of red and pink hues offer a

sense of urgency, alarm, and infection.[59] The presentation of progression in the map supports the seemingly "self-evident" ideology of an almost natural division between the so-called North and South. The disease has somehow been conquered by the developed world and now inflicts those areas that are in the perpetual process of "becoming." The overall effect of these displays is the empowerment of America's medical expertise. Cartography's historical power of linking entire territories with particular traits and relating them *in total* to other territories with those same traits is especially powerful when the subject is sickness.[60] The map's ability to partition world spaces creates a quarantine effect, seeking to isolate these problem areas.

The egg-shaped innovation of the Briesemeister projection, seen in the center of the cholera map, was in large part responsible for this suggestive framing of the *Atlas of Disease* and its ideological representation of the world.[61] May's maps were drawn by the American Geographical Society's senior cartographer, William Briesemeister, who invented a special projection specifically for the *Disease* maps.[62] The Briesemeister projection was a notably prominent representation of the increasingly popular use of equal-area on world maps in the postwar era, and one especially well-matched to the complications of a Cold War. Briesemeister himself billed it as the "most suitable equal-area projection for the purpose of plotting world wide statistics in this present day of super speed, jet planes and intercontinental missiles."[63] Equal-area maps essentially sacrificed recognizable shape for a greater accuracy in terms of world area, and this trade-off is clearly seen in the *AOD* maps. The Briesemeister projection uses an odd and compelling elliptical shape, and in the top center of the map, the entire North Pole can be seen, with Alaska and the Bering Strait region of the Soviet Union forming the northern-most point. Importantly, except for Antarctica, the continents are grouped without being cut; thus, the map has a fluidity and "one-world" quality.[64] Most striking is the prominence of Africa and South America, and the two continents' large area in comparison to North America, Europe, and the Soviet Union.

Using the Briesemeister projection, *Atlas of Disease* maps like "Distribution of Helminthiases" make particularly prominent use of Africa as the focal point, where the comparatively few other instances of this parasitical disease stand in contrast to the deep colors and thick, bold crisscrossed lines plaguing the African landscape.[65] Africa's visualization as the least distorted of all continents in Briesemeister's projection creates the impression that Africa is a sick continent, as the landmass sits centered and accentuated in the visual field of the map. The eye lands squarely on Africa in Briesemeister's presentation, and the concentration of disease, thus, appears self-evident. For Cold War space, the new focus on comprehensive, global knowledge called for maps that lent themselves well to statistical distribution. While shapes may have been slightly distorted, cartographers and policymakers placed a higher premium on accuracy in area to pinpoint zones for economic and social development in emerging nations. In a decolonizing world, for example, a shift away from the perceived areal inaccuracies of colonial remnants like the Mercator was seen as important to scientific postwar cartographers sensitive to portraying what they saw as a more "objective" world. In an early 1951 AGS press release, May spoke to such benefits when he referred to how, on the Briesemeister projection, "the whole world is shown in a frontal view without any of the distortions which make other projections misleading."[66] Even small innovations like the Briesemeister show an increasing visual acceptance of North/South as a defining characteristic of world relationships in terms of bringing politics, the military, and academic social science together.

Two particularly provocative companion maps in the *AOD* series, the two studies on "Human Starvation," make especially noteworthy use of the kinds of heightened North/South contrasts that the Briesemeister draws upon. The first map, in fact, is unlike any of the maps in the series in that it shows no disease, affliction, or geographic obstacle; this map, conversely, shows abundance and opportunity in its depiction of all of the availability and plentiful sources of food across the world. The main centered Briesemeister map presents a world of animal

proteins, while two Briesemeister projections of equal size below show available cereal carbohydrates and tubers, vegetables etc. The muted, earthy colors connote a world where natural resources abound in all continents and areas.

However, this map only gains its full meaning through its relationship with its companion map, "Study of Human Starvation II," (Figure 2) which grossly contrasts this abundance with a study of nutritional-deficiency diseases and diet and vitamin problems in many of the same areas in which the first map showed arable land. Conspicuously, this map of starvation uses sharper and darker shades of deep purple, black, blue, and an almost neon pink—a marked contrast from the organic tones of the first map. The bright colors are noticeably dotted around a deficient "South" in the second map. In a draft of some explanatory text for the maps, May asks "Whence the starvation and illness? This can chiefly be explained by faulty distribution among the various groups of population of food theoretically available," with distribution as the central factor for "this picture of distress, scarcity, and misery as it contrasts with our previous show of plenty."[67] The heightened contrast of the two maps in availability and scarcity streamlines the difficulties and struggles of particular populations to access such "theoretically available" food, and potentially reduces such struggles to a simple have and have-not dichotomy, once again in civilizational terms. I.M. Young has offered a warning against a focus on "distribution" as the impetus for social justice, as such a paradigm "tends to ignore the social structure and institutional context that often help determine distributive patterns."[68] And here, the sense of either colonial or Cold War institutional constraints on the patterns of distribution go missing from the lines of the map.
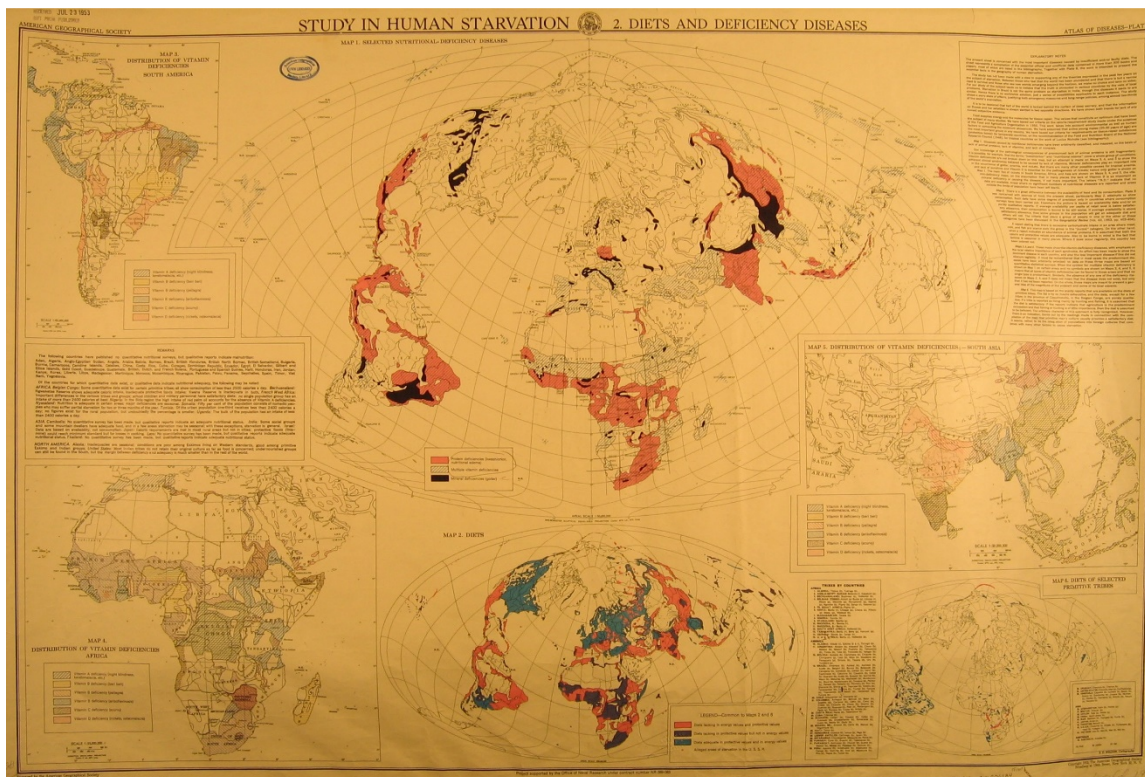
Figure 2: American Geographical Society, "Study in Human Starvation 2," 1953 (From the American Geographical Society Library, University of Wisconsin-Milwaukee Libraries).

The studies of human starvation, in fact, reinforce new Cold War exigencies by integrating the so-called "Second World" into the stark First and Third World comparisons. One of the most compelling visual features of the "Diets" inset on the second "Starvation" map shows the Soviet Union and its Eastern European satellites covered mostly in blue (at least the parts of the USSR that had available information), which indicates areas that have "adequate" diets (the same color that covers the United States and Western Europe). However, a rash of almost sickly pink dots cover the Central and Eastern landscape of Russia and bleed into Eastern Europe, with pink indicating those areas where diets are most deficient. While the map doesn't necessarily explain why this area is covered in dots, the research files for the map reveal correspondence between May and the Free Trade Union Committee of the American Federation of Labor, which had recently published an internationally-circulating map of all of the reported Gulag prison camps in the Soviet Union and Eastern Europe, a controversial map that was considered by some

to be "one of the most widely circulated piece of anti-Communist literature" in the Cold War.[69] In May's letter to the AFL, he requests to "use the material shown on this map as a contrast with official figures that indicate a satisfactory status of nutrition in Russia."[70] The rash of dots in the *Atlas of Disease* "Starvation" map thus indicates the placement of labor camps in the Soviet Union as sites not only of starvation and disease, but as a politicized challenge to the communist production of knowledge in the Cold War.[71] May's appropriation of such data is an instantiation of a division between the West and the East for ideological purposes, implying that the Third World is left at the hands of a "free" or "unfree" patron in the United States or Soviet Union.

Relatedly, a conspicuous contrast in the two starvation maps revolves around Communist China: in the first map, China is presented as one of the most fertile in terms of its abundance of foods and nutritional opportunities. The second map, however, bathes China in the blacks and pinks that indicate serious levels of protein and mineral deficiencies, and a small note in a side paragraph on the map marks the effects of the central planning of the 1949 Communist Revolution on the Chinese countryside. It is no wonder that soon after the *AOD* starvation maps were produced, the Voice of America station translated a story on the maps into Chinese for broadcast in the Far East, making explicit use of public health and development as a Cold War weapon.[72] Thus, the *Atlas of Disease* is not only situated as constraining East/West relationships with North/South ones, but the project also shows the political collaboration of academic societies, government propaganda organizations, and even labor unions in the production of Cold War discourse.

The Cultural Identity Politics of the Atlas of Disease

While the *Atlas of Disease* showcased an innovative visual style, May's work was even more noted for its emphasis on the cultural aspects of disease, particularly how "pathogens" like cholera and malaria are related to "geogens" such as religion, eating practices, marriage practices etc.[73] The 1954 *Newsweek* profile of May highlighted the ability of the *AOD* disease maps to

make connections between disease and "soil, air, water, foodstuffs, modes of living, and religious customs and habits that contribute to these ailments."[74] The specific examples used in the article establish direct connections between sickness and religious beliefs: "The daily ablutions of Moslem rites are usually performed in polluted water, causing infection. The common bowls for washing the hands in Buddhist temples are a prime source of eye and skin diseases. In Asia, pilgrims are frequently the carriers of cholera and plague."[75] And, for example, in the aforementioned starvation maps, May's accompanying text bears out how seemingly "backward" habits have a ripple effect on Third World societies, as he writes that

> The social structure of the society, chiefly exemplified in Egypt and China, is a serious cause of food shortage. In some places the customs governing inheritance divide the land to such a degree that it can no longer be worked profitably. Yet the people refuse to migrate because they have heard frightening tales about the places where they could migrate, or because there are no such places within their reach, or because they cannot afford transportation, or because they are bound by religious belief to stay near the place where their ancestors are buried.[76]

Indeed, in historian of medicine Felix Marti-Ibanez's 1958 introduction to May's AGS-sponsored book, *The Ecology of Human Disease*, culture is emphasized as a constraining factor: "culture could influence disease by uniting or separating, whichever the case may be, the 'challenges' of the environment, which would then change and so would the host population" with the solution being to "change the disease-producing environment in which man lives."[77] The *AOD* evidenced that one integral way to change "cultures" is through the accumulation of scientific knowledge on a global scale.

The focus on culture in May's work is telling because it parallels the Cold War discourses around foreign aid and development, as seen in Truman's Point Four initiatives, which often assume essential identities in the so-called developing peoples. As international

relations scholar Roxanne Doty notes, these foreign aid discourses "suggest that the danger was not in poverty itself, but in the identities of those who were impoverished, those who could not take a long-range view of their situations."[78] Similarly, in combating world health issues, sickness would be equated not only with particular world regions, but with the people who filled those regions. Cartography provided the means by which to visually edify these dangers—the way by which the "long-range view" could be taken. In other words, this approach implied not so much that the diseased are dangerous, but more that they are *behind* in terms of development, and *that* is dangerous.

This connection of the *AOD* to Third World identity-construction is evidenced in one of the most striking maps in the collection: the 1955 "World Distribution of Spirochetal Diseases: Yaws, Pinta, and Bejel" (Figure 3).[79] Unlike any of the other maps in the *Atlas*, "Yaws, Pinta, and Bejel" integrates photographic evidence of these diseases directly into the cartographic display. Above the *AOD*'s trademark Briesemeister projection, which in this instance displays through various color shades the intensity of infection rates, are four photographs: one shows what appears to be a young, naked child of African descent covered in lesions, a close-up of a brown arm disembodied from its human source and revealing the severe tissue erosion of Pinta, the revelation of an exposed backside of a black body spotted by lesions, and what appears to be the bottom of a child's foot disturbingly infected, raw, and scarred away by disease. The photographs are placed and centered prominently over the Northern hemisphere, reflecting May's and his cartographers' assumptions that there is no relevant information on these diseases in these areas. The telling placement of the photos speaks to a confidence that readers and users of the map would not be looking for incidences of these afflictions in the so-called North.
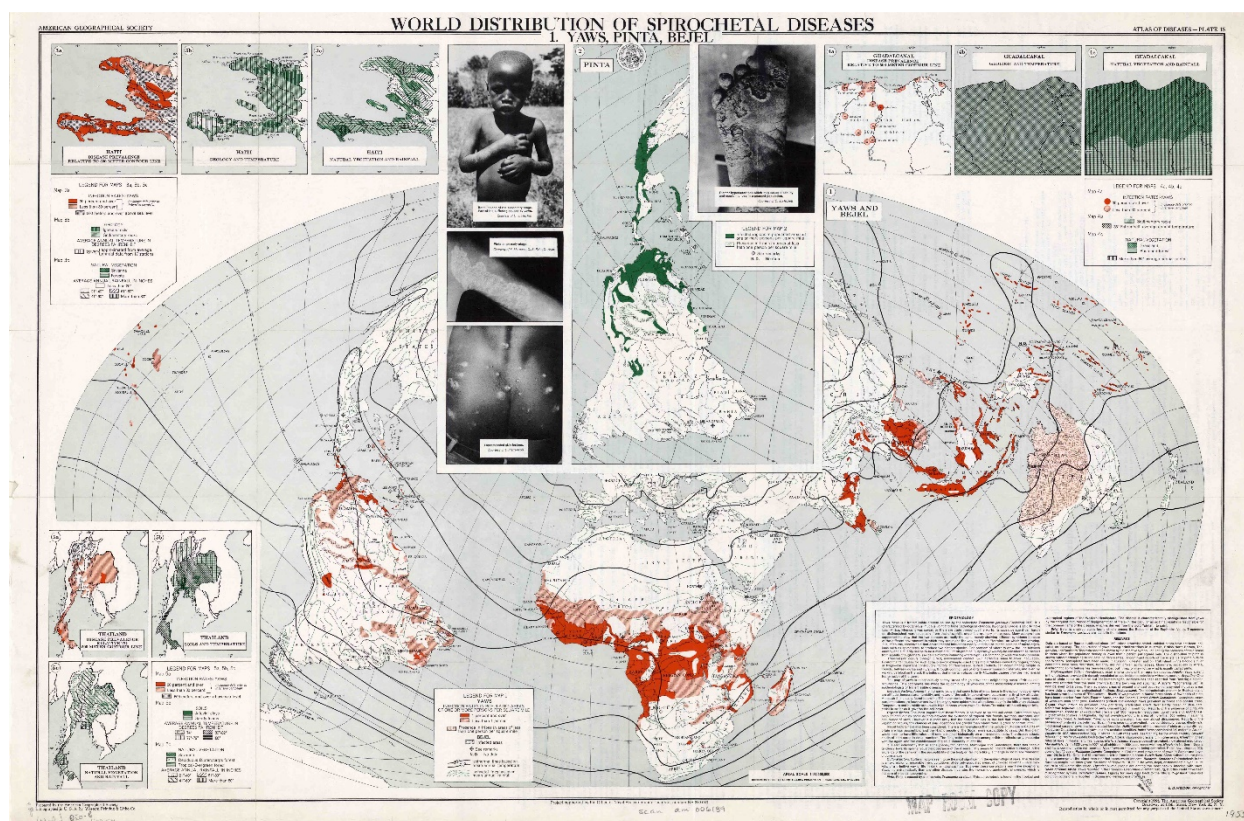
Figure 3: American Geographical Society, "World Distribution of Spirochetal Diseases: 1. Yaws, Pinta, Bejel," 1955 (From the American Geographical Society Library, University of Wisconsin-Milwaukee Libraries).

The overall effect of the photographs, on one hand, is clinical, tantamount to a lab specimen being objectively documented for the purposes of epidemiology. On the other hand, an unmistakable (and uncomfortable) voyeurism is ingrained into the display. While the other maps of the *AOD* dutifully conceal the visuality of infection, this map frames the bodies at an uncomfortably close distance and dramatizes them for what is likely a typically white and male gaze. The archive for the Yaws, Pinta, and Bejel map project, for example, also contains a folder stuffed with more horrifically detailed photographs of black bodies in various states of decay.[80] The bodies, in a sense, are made anonymous and universal by the photographs, and become fetishized as tokens of disease, and by extension, as markers of underdevelopment. What was once the paternalism of colonial power is now transferred into the "liberation" ideology of American modernization and development—paternalism of a different kind. And perhaps most

importantly, these photographs are in no way detachable from the map; the photographs work in tandem with the spatial ordering of May's cartography. The visceral, concrete images collaborate intertextually with the abstract spaces of the map to connote *difference*, as both blackness and sickness are "placed" simultaneously onto the Cold War grid. In Haraway's terms, "the body is conceived as a strategic system, highly militarized in key arenas of imagery and practice. . . . [T]he body ceases to be a stable spatial map of normalized functions and instead emerges as a highly mobile field of strategic differences."[81] Within this field of differences, "[t]he marked organic body has been a critical locus of cultural and political contestation, crucial both to the languages of liberatory politics of identity and to systems of domination drawing on widely shared languages of nature constructed as resource for the appropriations of culture."[82] In this way, the *Atlas of Disease*, through maps like "Yaws, Pinta, and Bejel," can be seen as both a benevolent *and* problematic visual projection of the fine line between Cold War liberation and domination, and its attendant identity politics.

While the photography of the "Yaws, Pinta, and Bejel" map reinforces a narrative of cultural difference as natural, the fact that only one of the maps chooses to focus on bodies reminds the viewer that the *AOD* narrative is also one of cleanliness and concealment. The other sixteen maps' lack of engagement with the human face of disease makes the contrast with the photography of "Yaws, Pinta, and Bejel" that much more stark. In the process, this contrast situates the *AOD*'s cartography as the ultimate "rhetoric of sanitization," wherein the immensely complex world of transnational disease, replete with sick and ravaged human bodies, can be cleansed and ordered into abstract visual fields, contained by clean lines, diagrams, and continental borders. The elite expertise of medical professionals and geographers, in this case, chooses the dynamics of revelation and concealment, thus exerting power over "Third World" bodies and their markers of identity.

What the *AOD* project also establishes, then, is that the *performance* and rhetorical display of expertise was a central function of disease mapping. For example, unlike previous national studies of geography and disease in different countries, May's methods were based on collection and synthesis, without the money or infrastructure to be able to conduct field work. What May and his team did (borne out in the archives by piles of returned surveys from health departments across the world) was rely on the expertise of doctors and public health professionals all over the world, some natives of the areas and some transplanted, to interpret local and national data and submit them to the interpretation of the AGS.[83] In an important sense, these methods matched the increasing detachment and distance of scientific study in the postwar era: the disappearance of the analytical field researcher and the rise of the master synthesizer of complex data. The finished maps, then, were patchworks of international collaborations and regimes of interpretation. The ordered and streamlined visual field concealed tensions around power and distance, while simultaneously revealing the premium on scientific expertise in the early Cold War. In David Campbell's words, this kind of dynamic "establishes a power relationship in which the authority making the diagnosis occupies the position of a doctor vis-à-vis the patient, thereby reproducing the notion that the health (or security) of the larger population is dependent on the specialized knowledge of an elite."[84] In this way, the *AOD* positioned May and his team to serve as the doctor diagnosing the world body, with the maps reinforcing May's (Western) medical expertise and his ability to interpret global sickness.

Of Medicine and Markets: The Worth of "Data" in the Atlas of Disease

Much has been said here on the interests of the academic, government, and defense communities in the role of modernization and development during the Cold War. The *AOD* project, however, also highlights how American private industry projected itself onto the world map. In the era of postwar development, the idea of capital was spatialized on a global scale at the same time that disease and starvation were. Thus, it is no surprise that US medicine and

markets aided each other's growth in this period. The *Atlas of Disease*, thus, serves as a representative project in which such interests found the blight of Third World populations to be an opportunity for both material and ideological expansion.

By the height of the *AOD*'s activity in 1952 and 1953, May and the AGS were receiving a surplus of correspondence and inquiries from drug companies: Lederle Laboratories (eventually Wyeth) requested copies of the starvation maps, while Pfizer was granted permission to create a bound set of the maps as Christmas presents for their physician clients.[85] As the project grew in scope, the amassed data began to be seen as especially valuable to these companies and others. For one, the *Atlas of Disease* was used frequently by the influential Council on Foreign Relations, whose mission was to serve as a non-partisan organization committed to influencing the public and the executive branch on foreign policy.[86] At the same time, the Council also self-identified as "the ideal catalytic agency to bring together the government, international agency, business, foundation, and university or other research groups here and abroad."[87] At a 1954 conference of the CFR on Climates and Economic Development in the Tropics, the AGS distributed *AOD* maps to each of the participants, which included public health professionals, academic social scientists, and notably, executives from corporations such as Standard Oil and United Fruit Company.[88] At the conference, May's presentation reflected the Cold War implications of capital development, once again, in civilizational terms, as he noted that "it is significant that the 'revolution of expectations' that has taken place in many countries is usually stated in terms of the values and material goods of [American] civilization. US government policy must take this into account because, if we fail to give them what they want, someone else will."[89] May was arguing that one of the main "cures" for the sicknesses dotting his maps was an infusion of American cash and ideas, taking a concrete problem of ailing bodies and answering it with the principles of marketing and the promotion of American values. May, in a sense, then, was accentuating cartography's ability to abstract real experiences on the ground.

In a related application of the *Atlas of Disease*, Jacques May was corresponding around the same time with chemist Erwin Di Cyan on a consulting project technically outside of May's capacity as Director of AGS' Medical Geography Department. Di Cyan proposed that, using May's expertise on medicine and geography, the two could create an "International Survey for Pharmaceutical Development" in which they would charge corporations for advice on where a particular drug company's products might be best marketed.[90] In a 1955 letter of solicitation from Di Cyan to the Schering Corporation (which would later merge into Merck & Co.), the chemist notes that "personal consultation or correspondence may well specifically 'pinpoint' a firm's product for a market. Either or both Dr. May or I are available for that purpose. . . . The special ISPD reports which are to be requested by a firm whose interest may reside in a given area or a given therapy are tailor made to fit the specific need of the firm."[91] The Mead Johnson corporation became May and Di Cyan's first client, and the Lilly Co. also signed on, particularly to help with the pharmaceutical company's planned expansion into Argentina.[92]

In a set of letters between Di Cyan and May, Di Cyan encouraged May to do a special study on the viability of Vietnam for the pharmaceutical industry. May demurred by saying that, "I am not too hot about the diseases of Vietnam because the whole country is going to be gobbled up by the Communists before 1956 is over and there won't be any markets left. Otherwise it would be one of my favorite subjects, as I could almost write the article in my sleep."[93] The ensuing response by Di Cyan further encourages May to write about Vietnam, and is worth quoting at length, as it offers a candid reflection on the ways in which markets, culture, and medicine are bound up in rhetorical tensions between North and South:

> You can touch upon the ethnic phase, the superstitions, the customs of the people, which will be valuable. . . . It is not impossible that some firms would wish to venture as a trial into a country which, if they make an error they will not vitiate a good potential market. . . . they may want to use the country as a "trial dog" as long as it lasts. . . . I do

expect, with your help, to be able to give such data as size of packages sold in India, where as you know, the coolie who makes 3 rupees daily will spend 2 annas for a dose of two tablets, and he will do so twice a day if necessary, but he will not buy a larger quantity. The reason is economic indeed, but also is rooted in superstitions as the purchase of large quantities of drugs is believed to presage a long illness. The coolie wants to fool the spirits. . . . Actually, pharmacology is not entirely divorced from ethnology and the ethnic religious and superstitious prejudices, of the "backward" people. But, isn't it presumptuous of me to tell you those things, you who can teach me?[94]

Di Cyan's offhand remarks about the connection between pharmaceutical goods, profits, and ethnicity reflect the residues of colonization that carried forward into the decolonized Cold War landscape. Di Cyan's telling scare quotes around "backward" suggest an implicit admission that he knows such a term is inappropriate. His self-identified status as a progressive scientist allows him a sense of detachment from the fading colonial divisions between civilizer and uncivilized. At the same time, it is arguably the very objectivity and sophistication of postwar science that allows Di Cyan to callously label all of Vietnam as a "trial dog," a label that in an important sense *reproduces* those old colonial definitions. Such a quote, then, speaks to the complexities of self-interest and altruism in the establishment of American power. Men like May and Di Cyan would hardly identify as "colonizers," but in their acceptance of Third World spaces as testing grounds for both medicine and capital, they subtly engage in a new recolonization.

Overall, these revelations about the corporate connections in the *AOD* project are not presented here as a kind of "smoking gun," or necessarily as damning evidence about the paternalistic and often racist discourses underlying the rhetoric of development, although they can certainly be read that way. And May's relationships with pharmaceutical corporations do not necessarily demonstrate a conflict of interest with his scientific work for the AGS. On the contrary, these relationships acknowledge that markets, medicine, and national security are all

part of the same ideology of progress in the Cold War. In May's vision, to improve the world according to modern definitions of development is not only strategically sound, but morally correct as well. The choice to treat sick bodies as no different than selling a consumer product is reconciled through the rhetoric of development that was at the heart of a project like the *Atlas of Disease*. For example, at a speech to the Triple E Club in 1955 called appropriately "American Stake in Foreign Diseases," May reconciled the profit-making aspect of medical-geographic data with its humanitarian side: "No doubt, legitimate financial profit is part of the picture I propose to sketch out, but still more important are the returns that can be expected in the form of good will, relief of human misery, and political security."[95] At the same time, May recognized the value of communication in the fostering of development in Third World nations, as he noted that,

> We are quite convinced of the superiority of our science, technology, and methods of education, which is justifiable, but frequently we do not bother to devise means for reaching the people of these underdeveloped countries and to persuade them of our superiority *in a way they can understand*. Like our foreign aid, our good products reach a few but seldom trickle down to the mass of people in a country.[96]

Thus, May emphasized the need to adapt the message to the culture of afflicted populations in order for the material benefits of American industry to also become part of the receiving population's values.

What becomes important to remember, however, is that the agency of the peoples living in these now self-determining nations is still noticeably absent from both the maps and the accompanying discourse by May and the AGS.[97] The audience for the *Atlas of Disease* is never seriously constituted as native policymakers or doctors, much less the afflicted who live in the diseased regions marked on the maps, at least not directly. Rather, the *AOD* maps present the immense scope of a Third World problem that requires planning and large-scale attention by Western elites. Thus, those absences are essentially filled in by the voices of American experts.

In the end, this collaboration of medicine and markets could serve the ideology of modernization that conflated America's interests with those of the rest of the world. And a map's inherent ability to synthesize abstract ideas made it the right form for framing these discourses together.

The Rhetorical Legacy of the *Atlas of Disease*

The ensuing appropriation and adaptation of the *Atlas of Disease* reveals that the US government's interest in this global mapping project was inseparable from its interests in world economic development. The Mutual Security Act of 1958, originally enacted in 1948, set forth a new policy plank stating:

> The Congress of the United States, recognizing that the diseases of mankind, because of their widespread prevalence, debilitating effects, and heavy toll in human life, constitute a major deterrent to the efforts of many peoples to develop their economic resources and productive capacities, and to improve their living conditions, declares it to be the policy of the United States to continue and strengthen mutual efforts among the nations for research against diseases[.][98]

To supplement this policy, in 1959 the Committee on Government Operations in the Senate, headed by Senator Hubert Humphrey, produced a report called *The Status of World Health*, which included more than 30 maps and charts, most of which were adapted versions of the AGS's *Atlas of Disease*. Humphrey's introduction to the report makes special reference to the need for a "big picture" approach to medicine "rather than piecemeal views of world health, such as may have been seen in times past" and "requires a total, not a segmented view," as "U.S. responsibilities under world health programs continue to mount."[99]

Maps, appropriately, served as the main instruments of vision for Humphrey's proposed big-picture approach. Using world regions as the basis of study, world maps of issues such as life expectancy at birth and the ratio of population to physicians sketched the stark contours of an

unequal world.[100] These adaptations of the AGS maps are made much simpler than their referents. The layers of colors and shades that distinguished the *AOD* maps are replaced by the simple black, white, and gray dots of the typical Congressional report. A black area on the landscape fills in the lines of an entire nation, and in this way the diseases stand in for the regions on these maps (India equals smallpox, Egypt equals low life expectancy).[101] *The Status of World Health* also foregoes the innovative, Third World–centric projections like the Briesemeister projection for the more conventional Mercator projection. With the audience for this report limited to other US lawmakers and health officials, the maps eschewed statistical depth and innovation in favor of a more East/West bipolar superpower perspective. Thus, *The Status of World Health* situates world health from the viewpoint of American security interests, and showcases that the ability to map world health is only as good as the availability of data. As Humphrey points out, the report's main conclusion is that "more statistics are needed. . . . Regrettably, an analysis of the world health situation is difficult due to the lack of accurate, current statistical data, particularly from the less developed countries."[102] Instead of specific conclusions as to what can be done to improve world health, the implied argument is that the "full and accurate" documentation of world health is enough, that *knowledge* of these problems is the real goal—a goal that the rhetoric of the *Atlas of Disease* began fulfilling in earnest a decade before.

By the end of the 1950s, the AGS was unable to sustain funding for its Medical Geography program, and the final two *AOD* maps, interestingly about world incidences of cancer and drug addiction, were never produced. May found some notable success moving his increasingly complex analyses of the "ecology" of diseases into the realm of the book-length work, away from the kind of one-glance mapping that synthesized his medical/geographic data together. By the time the AGS officially dissolved the program in 1961, the AGS directors were already forwarding correspondence and final letters to May in his new residence in Saigon,

having recently been appointed as the Chief Medical Education Adviser to the US Operations

Mission in Vietnam. For Jacques May, a career that began in Vietnam had now come full-circle,

except that the entire map of the world had dramatically changed by the time he joined the

fateful mission in Southeast Asia. By the time May was advising the United States Armed Forces

on how it could safely fight disease, the nation's soldiers were fighting for their lives in a conflict

already thick with the implications of the discourse of decolonization and development. There is

a certain irony, of course, that the *Atlas of Disease* was defunded just as Hubert Humphrey was

calling for more data on Third World disease in Congress. It may have been that the work of the

independent AGS on world disease was seen as a task better suited to the capabilities of defense

agencies, at a time when US management of Third World data became more militarized. In that

way, May's conscription into full-time military consulting may have been more than coincidental.

Either way, it is safe to say that the kinds of visual definitions perpetuated by the *Atlas of

Disease* were absorbed into the ideologies behind the continually escalating involvement in areas

such as Vietnam. The *AOD*'s "rhetorical life" was inextricable from the post-WWII global

spatialization of capital and the expansion of interventionist foreign policy in the Cold War. The

twin discourses of modernization and development were practices that required forms of visual

articulation to justify and synthesize such economic and political policies. In this case,

cartography proved able to draw world spaces as abstract containers, and with lines that can draw

the "over" and "under" distinctions and differences in identity that are needed to advance

arguments of development. In that way, disease was not the enemy. It was the lack of knowledge

about such diseases in foreign areas that became the enemy. Felix Marti-Ibanez's introduction to

May's 1958 book, comprising much of his *Atlas of Disease* work, comments on the perceived

value of medical cartography as a tool of development and knowledge production:

> Every human race, however, just like every human being, carries within its primitive soul
>
> an image of the ideal, which it endeavors to fit within the surrounding geographic

environment…Man throughout the centuries has fought against hunger, war, and disease,
the three great threats that incessantly tend to change the map of humanity, just as
medicine tends to shrink the empire of disease.[103]

Ibanez fittingly sums up here the crucial implications of the *Atlas of Disease*, specifically, and the discursive work of medical geography as a whole in this era. The formerly colonized landscapes were being re-colonized by the liberal modernization of development. There was an "empire of disease" to be liberated, but its absence would require a different type of empire.

In the end, the Cold War project to map the extent of human disease strove for an idealized image by pointedly taking a deliberately global approach. May's combination of the "pathogen" with the "geogen" was not just a scientifically significant connection, but a rhetorical one as well. The world on the flat page, through the bounded lines of the map, could now be "diagnosed" and its weak spots and sicknesses absorbed in one visual field. The visual charting of developing nations and their literal and figurative health became a vital representation of North/South relations in the expansion of the Cold War. Cartography provided the necessary abstraction of individual human suffering from disease, so that health could be aggregated as both a regional and global world problem to be solved through economic and cultural development by powerful, expert, intervening world actors.

To return to the broader implications of this study for rhetorical scholars, the contributions ultimately rest, perhaps, on the central role of visuality in constructing and maintaining the spaces of power across the globe. This study contributes to both the scholarly conversations in the areas of visual rhetoric and interdisciplinary Cold War rhetoric, history, and geography by tracing the spatial logics, assumptions, and ideologies behind the powerful partitioning of a decolonizing world. Scholars critiquing the rhetoric of maps can trace in this study the naturalization of cartographic claims as scientific managers for so-called "big data" around an expanding array of social, economic, and political issues, particularly at a pivotal time

when cartography and geography were being hailed into the powerful spaces of international development by US American elites. Similarly, Cold War rhetoric scholars can see cartography as a productive entry point into tracing how strategic and ideological approaches work together in practice. The realist goals of protecting American national interests always existed alongside a liberal belief that scientific management could develop an unequal world, and this productive tension could be seen right on the flat pages of the era's maps.

Perhaps most importantly though, this essay unites these two conversations in rhetorical studies to make the point that cartography, from its production processes to its symbolic conventions to its circulation, underwrote the construction of a Cold War world of which we still feel the effects. Maps were not simply a byproduct of, or an ancillary to, the Cold War. The conflict absolutely required the special inventional resources of maps and their abilities to simply, classify, and divide political space. Put simply, cartography actively shaped and bounded the abstract ground on which the Cold War was fought, drawing distinct visual boundaries between East/West and, increasingly throughout its duration, North/South. Therefore, the case of the *Atlas of Disease* remains vital because it represents a central rhetorical tension of the Cold War and beyond: how Americans navigate an immense fear of contamination (in both physical and ideological senses) against the idealistic hope that the United States can somehow cleanse the world with medicine, capital, and even cartography. Through complex, multi-institutional international initiatives like the *AOD*, we see how global data is a discourse of fluidity, shaped and politicized by a variety of powerful interests. It is in the overlap between these political interests where productive work on the evolution of American rhetoric is yet to be done, work that can often only trace out these entanglements through the careful mining of available archives (and the inevitable silences in those archives as well). The job of rhetorical critics will be to continue contextualizing these intersections for other ideologies in other cases. In many ways, figures like Jacques May become way stations for a host of such evolving, shifting discourses

and interests. Situating such figures and global projects in this way allows us to trace the latitudes and longitudes of American power through the complexities and anxieties of its global ascendance.

NOTES

[1] "The Map Doctor," *Newsweek*, May 3, 1954, 84–86.

[2] "The Map Doctor," 86.

[3] A good example of how the State Department synthesized and published facts about these "new" nations can be found in the Department's internal publication from that era called *Geographic Notes*, which published a new update on the demographics and political situation, as well as an official map, every time a new country declared independence. See Records of the Office of the Geographer, Department of State, RG59, Cartographic and Architectural Records Division, National Archives II, College Park, MD.

[4] For an excellent early critical study of the origins and implications of the "Third World" label, see Carl E. Pletsch, "The Three Worlds, or the Division of Social Scientific Labor, Circa 1950-1975," *Comparative Studies in Society and History* 23, no. 4 (1981): 565–90.

[5] David Slater, *Geopolitics and the Post-Colonial: Rethinking North-South Relations* (Malden, MA: Blackwell, 2004), 63.

[6] Bruno Latour, "Drawing Things Together," in *Representation in Scientific Practice*, eds. Michael Lynch and Steve Woolgar (Cambridge: MIT Press, 1990), 26.

[7] David Campbell, *Writing Security: United States Foreign Policy and the Politics of Identity*, Revised Edition (Minneapolis: University of Minnesota, 1998), 88.

[8] Michael Shapiro, *The Politics of Representation: Writing Practices in Biography, Photography and Policy Analysis* (Madison: University of Wisconsin Press, 1988), 106.

[9] Kirsten Ostherr, *Cinematic Prophylaxis: Globalization and Contagion in the Discourse of World Health* (Durham, NC: Duke University Press, 2005), 129.

[10] Lawrence J. Prelli, "Rhetorics of Display: An Introduction," in *Rhetorics of Display*, ed. Lawrence J. Prelli (Columbia: University of South Carolina Press, 2006), 1–38; Lawrence J. Prelli, "Visualizing a Bounded Sea: A Case Study in Rhetorical *Taxis*," in *Rhetorics of Display*, 90–120.

[11] See especially Amy D. Propen, *Locating Visual-Material Rhetorics: The Map, the Mill, and the GPS* (Anderson, SC: Parlor Press, 2012).

[12] These strategic and ideological approaches to the study of Cold War rhetoric are best outlined in the classic collection: Martin J. Medhurst, Robert L. Ivie, Philip Wander, and Robert L. Scott, eds., *Cold War Rhetoric: Strategy, Metaphor, and Ideology* (New York: Greenwood, 1990). Important to consider, though, is the expansion of this "genre" of Cold War rhetorical studies through engagement with work by scholars working at the intersection between rhetorical studies and "cultural studies"; see especially Bryan C. Taylor and Stephen J. Hartnett, "'National Security, and All That It Implies . . .': Communication and (Post-) Cold War Culture," *Quarterly Journal of Speech* 86, no. 4 (2000): 465–91.

[13] The best critical/rhetorical collection of essays on the discourses of foreign policy realism remains: Francis A. Beer and Robert Hariman, eds., *Post-Realism: The Rhetorical Turn in International Relations* (East Lansing: Michigan State University Press, 1996).

[14] Odd Arne Westad, *The Global Cold War: Third World Interventions and the Making of Our Times* (Cambridge, UK: Cambridge University Press, 2006), 5.

[15] For a collection of essays from a geographic standpoint exploring this sense of "mission" in American ideology, see David Slater and Peter J. Taylor, eds., *The American*

Century: Consensus and Coercion in the Projection of American Power (Oxford, UK: Blackwell, 1999).

[16] "Background of Point-4," *Congressional Digest*, January 1952, 4.

[17] Harry S. Truman, "Inaugural Address: January 20, 1949," *Public Papers of the President: Harry S. Truman, 1949* (Washington, DC: Government Printing Office, 1964), 114.

[18] The Technical Cooperation Administration also put out its own map series promoting its work; see Technical Cooperation Administration, United States Department of State, "Point 4 Around the World," Map, January 1953, World-International Relations Folder, Title Collection, Geography and Map Division, Library of Congress, Washington, DC.

[19] A comprehensive source on Cold War area studies can be found (particularly in Chapter 3) in Matthew Farish, *The Contours of America's Cold War* (Minneapolis: University of Minnesota Press, 2010). See also Immanuel Wallerstein, "The Unintended Consequences of Cold War Area Studies," in *The Cold War & The University: Toward an Intellectual History of the Postwar Years*, ed. Noam Chomsky (New York: W.W. Norton, 1997), 195–231.

[20] W.W. Rostow, *The Stages of Economic Growth: A Non-Communist Manifesto* (Cambridge, UK: Cambridge University Press, 1960).

[21] Kimber Charles Pearce, "Narrative Reason and Cold War Economic Diplomacy in W.W. Rostow's *Stages of Economic Growth*," *Rhetoric & Public Affairs* 2, no. 3 (1999): 399.

[22] An excellent source on this phenomenon can be found in David Slater, "Geopolitical Imaginations across the North-South Divide: Issues of Difference, Development and Power," *Political Geography* 16, no. 8 (1997): 631–53.

[23] Pearce, "Narrative Reason," 399.

[24] Simon Dalby, *Creating the Second Cold War: The Discourse of Politics* (London: Pinter, 1990), 10–11.

[25] Arturo Escobar, "Culture, Economics, and Politics in Latin American Social Movements Theory and Research," in *The Making of Social Movements in Latin America: Identity, Strategy, and Democracy*, eds. Arturo Escobar and Sonia E. Alvarez (Boulder, CO: Westview Press, 1992), 62.

[26] See especially Richard Saull, "Locating the Global South in the Theorisation of the Cold War: Capitalist Development, Social Revolution and Geopolitical Conflict," *Third World Quarterly* 26, no. 2 (2005): 253–80.

[27] Westad, *The Global Cold War*, 396.

[28] Bryan S. Turner, *The Body and Society: Explorations in Social Theory*, Third Edition (London: Sage, 2008), 174.

[29] Paul A. Chilton, "The Meaning of *Security*," in *Post-Realism: The Rhetorical Turn in International Relations*, edited by Francis A. Beer and Robert Hariman (East Lansing, MI: Michigan State University Press, 1996), 197.

[30] Ostherr, *Cinematic Prophylaxis*, 121.

[31] Ostherr, *Cinematic Prophylaxis*, 121.

[32] Mary Manjikian, "Diagnosis, Intervention, and Cure: The Illness Narrative in the Discourse of the Failed State," *Alternatives: Global, Local, Political* 33, no. 3 (2008): 341.

[33] Donna Haraway, "The Biopolitics of Postmodern Bodies," *differences* 1 (1989): 28–29.

[34] Ned O'Gorman, *Spirits of the Cold War: Contesting Worldviews in the Classical Age of American Security Strategy* (East Lansing: Michigan State University Press, 2012), 161.

[35] Robert McMaster and Susan McMaster, "A History of Twentieth-Century American Academic Cartography," *Cartography and Geographic Information Science* 29, no. 3 (2002): 305–21.

[36] Arthur H. Robinson, Joel L. Morrison, and Phillip C. Muehrcke, "Cartography 1950-2000," *Transactions of the Institute of British Geographers* 2, no. 1 (1977): 3–18.

[37] John K. Wright, *Geography in the Making: The American Geographical Society 1851-1951* (New York: American Geographical Society of New York, 1952), 265.

[38] Tim Brown and Graham Moon, "From Siam to New York: Jacques May and the 'Foundation' of Medical Geography," *Journal of Historical Geography* 30, no. 4 (2004): 747–8.

[39] See, for example, Michael L. Dorn, "(In)temperate Zones: Daniel Drake's Medico-moral Geographies of Urban Life in the Trans-Appalachian American West," *Journal of the History of Medicine and Allied Science* 55, no. 3 (2000): 256–91; Wright, *Geography in the Making*, 265. See also Melinda S. Meade and Michael Emch, *Medical Geography*, Third Edition (New York: Guilford, 2010).

[40] See Folder 10: Clippings 1937-44, Box 1 Medical Geography Department Archives, American Geographical Society Library, University of Wisconsin-Milwaukee. Hereafter, the Library will be referred to as AGSL.

[41] Hiram Blauvelt, "World Health Vital With Plane as Germ 'Carrier'," *New York Herald Tribune*, April 11, 1943.

[42] "Physicians Warn of Disease Spread: War is Creating Vast Health Problems That Must Be Met Now, Conference Agrees," *New York Times*, March 16, 1943.

[43] Folder 5: Atlas of Disease, Proposal, 1943-44, Box 1 Medical Geography Department Archives, AGSL. See also Wright, *Geography in the Making*, 267.

[44] Conference Minutes, 20 May 1944, p. 2, Folder 6: Atlas of Disease, Report on Proposal, 1944, Box 1 Medical Geography Department Archives, AGSL.

[45] Conference Minutes, 20 May 1944, New York City, p. 2, Folder 6: Atlas of Disease, Report on Proposal, 1944, Box 1 Medical Geography Department Archives, AGSL.

[46] Conference Minutes, 20 May 1944, New York City, p. 3, Folder 6: Atlas of Disease, Report on Proposal, 1944, Box 1 Medical Geography Department Archives, AGSL.

[47] Grant Application to Office of Naval Research, 2 April 1952, Folder 1: Atlas of Disease Correspondence, Box 1 Medical Geography Department Archives, AGSL.

[48] "Map Doctor," 86.

[49] Memorandum, Charles B. Hitchcock to Jacques May, 30 Sep 1953, Folder 1: Atlas of Disease Correspondence, Box 1 Medical Geography Department Archives, AGSL.

[50] Minutes, 10 May 1946, Folder 9: Atlas of Disease Steering Committee Minutes, Box 1; Grant Application, Federal Security Agency, 26 February 1952, Folder 1: Atlas of Disease Correspondence, 1948-54, Box 1, Medical Geography Department Archives, AGSL.

[51] "The Health Problem," Report by Jacques May to the Council on Foreign Relations, Study Group on Climate and Economic Development in the Tropics, 18 March 1954, Folder 8: Council on Foreign Relations Study Group, Box 5, Series 1: Professional Records, 1943-1960, Jacques May Papers, AGSL.

[52] Brown and Moon, "From Siam to New York," 752.

[53] Brown and Moon, "From Siam to New York," 752.

[54] See especially Minutes of 10 May 1946, Atlas of Disease Steering Committee, Folder 9: Atlas of Disease Steering Committee Minutes 1944-46, Box 1 Medical Geography Department Archives, AGSL.

[55] Jacques M. May, "Medical Geography: Its Methods and Objectives," *Geographical Review* 40, no. 1 (1950): 40–1.

[56] Speech Notes, "A Map of the World Distribution of Poliomyelitis," 31 Oct 1950, Folder 12: Atlas of Disease, Plate 1, Reports, 1950, Box 1, Series 1: Professional Records, 1943-1960, Jacques May Papers, AGSL.

[57] Jacques M. May, "Map of the World Distribution of Poliomyelitis, 1900-50," *Geographical Review* 40, no. 4 (1950): 646–8.

[58] Jacques M. May, "Map of the World Distribution of Cholera," *Geographical Review* 41, no. 2 (1951): 272–73.

[59] For more on color conventions in mapping, see Mark Monmonier, *How to Lie with Maps*, Second Edition (Chicago: University of Chicago Press, 1996), 170–1.

[60] The best source on the visual codes of maps in terms of their persuasive and ideological functions is arguably, Denis Wood, *The Power of Maps* (New York: The Guilford Press, 1992). For a handy historical resource on the history, specifically, of disease mapping, see Tom Koch, *Cartographies of Disease: Maps, Mapping, and Medicine* (Redlands, CA: ESRI Press, 2005).

[61] For a good concise look at the political implications of map projections, see Alan K. Henrikson, "The Power and Politics of Maps," in *Reordering the World: Geopolitical Perspectives in the 21st Century*, ed. George J. Demko and William B. Wood, Second Edition (Boulder, CO: Westview Press, 1994), 94–116.

[62] Wright, *Geography in the Making*, 268. See also William Briesemeister, "A New Oblique Equal-Area Projection," *Geographical Review* 43, no. 2 (1953): 260–1.

[63] William Briesemeister, "A World Equal-Area Projection for the Future: The Selection of the Most Suitable Equal-Area Projection for the Purposes of Plotting World Wide Statistics in This Present Day of Super Speed, Jet Planes and Intercontinental Missiles," *Nachrichten aus dem Karten-und Vermessungswesen* 2 (1959): 60–3.

[64] See Snyder's discussion of the Briesemeister in John P. Snyder, *Flattening the Earth: Two Thousand Years of Map Projections* (Chicago: University of Chicago Press, 1993), 239.

[65] Jacques M. May, "Map of the World Distribution of Helminthiases," *Geographical Review* 42, no. 1 (1952): 98–101.

[66] Press Release, 1 April 1951, American Geographical Society, Folder 18: Plate 2 Reports, 1949-51, Box 1, Series 1: Professional Records, 1943-1960, Jacques May Papers, AGSL.

[67] Draft Text 1953, Folder 6: Plate 9, Information and Mapping Instructions, 1953, Box 3, Series 1: Professional Records, 1943-1960, Jacques May Papers, AGSL.

[68] I.M. Young, *Justice and the Politics of Difference* (Princeton: Princeton University Press, 1990), 15.

[69] William R. Young, "Gulag—Slavery, Inc.: The Use of an Illustrated Map in Printed Propaganda," in *Psychological Warfare Casebook*, ed. William E. Daugherty (Baltimore, MD: Johns Hopkins University Press, 1958), 601.

[70] Letter From Jacques May to A. Larkin of the American Federation of Labor, 15 June 1953, Folder 1: Plates 8 and 9, Correspondence 1952-54, Box 3, Series 1: Professional Records, 1943-1960, Jacques May Papers, AGSL.

[71] See also Timothy Barney, "'Gulag'—Slavery, Inc.: The Power of Place and the Rhetorical Life of a Cold War Map," *Rhetoric & Public Affairs* 16, no. 2 (2013): 317–54.

[72] See Folder 2: Reviews, Plate 1, Box 1, Series 1: Professional Records, 1943-1960, Jacques May Papers, AGSL.

[73] The pathogen and geogen concept is most explicitly discussed in May, "Medical Geography," 9–10.

[74] "Map Doctor," 86.

[75] "Map Doctor," 86. See also May's own descriptions of cultural factors in his articles accompanying the *Atlas of Disease* plates especially Jacques M. May, "Map of the World

Distribution of Malaria Vectors," *Geographical Review* 41 (1951): 638–39. See also Jacques M. May, *The Ecology of Human Disease* (New York: MD Publications, 1958), 29–35.

[76] "The Health Problem," Report by Jacques May to the Council on Foreign Relations, Study Group on Climate and Economic Development in the Tropics, 18 March 1954, Folder 8: Council on Foreign Relations Study Group, Box 5, Series 1: Professional Records, 1943-1960, Jacques May Papers, AGSL.

[77] Felix Marti-Ibanez, "Foreword: Medical Geography and History," in *The Ecology of Human Disease* by Jacques M. May (New York: MD Publications, 1958), xviii.

[78] Roxanne Lynn Doty, *Imperial Encounters: The Politics of Representation in North-South Relations* (Minneapolis: University of Minnesota Press, 1996), 131.

[79] American Geographical Society, "World Distribution of Spirochetal Diseases: 1. Yaws, Pinta, Bejel," Map (New York: AGS, 1955), Geography and Map Division, Library of Congress, Washington, DC.

[80] Folder 14: Professional, Photographs for Disease Studies, undated, Box 5, Series 1: Professional Records, 1943-1960, Jacques May Papers, AGSL.

[81] Haraway, "Postmodern Bodies," 15.

[82] Haraway, "Postmodern Bodies," 13.

[83] In particular, see Folders 3 through 10, which contain compilations of the data and statistics that fed the production of the maps, in Box 1, Series 1: Professional Records, 1943-1960, Jacques May Papers, AGSL.

[84] Campbell, *Writing Security*, 84.

[85] Letter, Jacques May to Roger Varin, 11 June 1954, Folder 1, Box 1 Medical Geography Department Archives, AGSL.

[86] For a history of the CFR, see Michael Wala, *The Council on Foreign Relations and American Foreign Policy in the Early Cold War* (Providence, RI: Berghahn Books, 1994).

[87] Policy Committee Report, 6th Session, 4 June 1954, Conference on Climate and Economic Development in the Tropics, Folder 6, Box 5, Series 1: Professional Records, 1943-1960, Jacques May Papers, AGSL.

[88] Folder 6, Box 5, Series 1: Professional Records, 1943-1960, Jacques May Papers, AGSL.

[89] Digest, Study Group on Climate and Economic Development in the Topics, 18 March 1954, 8, Folder 8, Box 5, Series 1: Professional Records, 1943-1960, Jacques May Papers, AGSL.

[90] See Folder 5: Personal Correspondence with Erwin Di Cyan, 1954-56, Box 5, Series 1: Professional Records, 1943-1960, Jacques May Papers, AGSL.

[91] Letter, Erwin Di Cyan to John McDonnell, 12 July 1955, Folder 5, Box 5, Series 1: Professional Records, 1943-1960, Jacques May Papers, AGSL.

[92] See Folder 5, Box 5, Series 1: Professional Records, 1943-1960, Jacques May Papers, AGSL.

[93] Letter, May to Di Cyan, 17 August 1955, Folder 5, Box 5, Series 1: Professional Records, 1943-1960, Jacques May Papers, AGSL.

[94] Letter, Di Cyan to May, 18 August 1955, Folder 5, Box 5, Series 1: Professional Records, 1943-1960, Jacques May Papers, AGSL.

[95] Jacques M. May, "American Stake in Foreign Diseases," *MD: Medical Journal for Residents, Interns, and Medical Students* 11, no. 4 (1956): 75. Copy located in Folder 7: Related Articles and Publications, 1955-59, Box 2 Medical Geography Department Archives, AGSL.

[96] Emphasis in original. May, "American Stake in Foreign Diseases," 75.

[97] For the important conception of cartographic "silences," see J.B. Harley, *The New Nature of Maps* (Baltimore: Johns Hopkins University Press, 2001), 84–107.

[98] Committee on Foreign Relations, *The Mutual Security Act of 1958*: *Report of the Committee on Foreign Relations on H.R. 12181*, 85th Congress, 2nd sess., 1958, S. Rep. 1627, serial 12062, Chap. 3, Sec. 6, 67.

[99] United States Senate Committee on Government Operations, *The Status of World Health in Outline Text and Chart: Report of the Committee on Government Operations, United States Senate and Its Subcommittee on Reorganization and International Organizations*, 86th Congress, 1st sess., 1959, S. Rep. 161, serial 12149, v.

[100] "Life Expectancy at Birth: Map," in *Status of World Health*, btw. 18 and 19; "Ratio of Population to Physicians: Map," in *Status of World Health*, btw. 70 and 71.

[101] "Life Expectancy at Birth: Map"; "Smallpox Endemicity, 1954-1957," in *Status of World Health*, btw. 54 and 55.

[102] *Status of World Health*, viii.

[103] Ibanez, "Foreword," xix.