

Notes

Google’s World: The Impact of “Agnostic Cartographers” on the State-Dominated International Legal System

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While Google’s cartographic platforms, Maps and Earth, are the most widely used mapping services in the world, their methodology for affixing borders and naming key features is completely unregulated and deviates from traditional mapping doctrine. Google customizes its maps to adhere to each individual country’s beliefs and laws, so that its maps do not show a single and objective reality, but rather affirm existing perspectives of the world. This Note seeks to explore the legal implications of customized cartography as it pertains to relations between states, the role of non-governmental and supranational organizations as governing bodies for geopolitics, and the shift toward both private entities and the general public as significant actors in the future development of public international law.

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INTRODUCTION

In October of 2010, Nicaraguan military forces led by Commander Edén Pastora crossed into Costa Rican territory and seized the long-disputed region near Isla Calero.¹ When pressed by journalists for a justification for the military encroachment, Pastora told one Costa Rican newspaper, “see the satellite photo on Google and there you see the border,”² noting Google’s placement of the disputed area on its popular cartographic platform, Google Maps, within the state lines of Nicaragua. Over the next few days, world news outlets re-

1. Frank Jacobs, *The First Google Maps War*, N.Y. TIMES: OPINIONATOR (Feb. 28, 2012, 12:30 PM), <http://opinionator.blogs.nytimes.com/2012/02/28/the-first-google-maps-war/>.

2. Jon Swaine, *Google Maps Error Sparks Invasion of Costa Rica by Nicaragua*, TELEGRAPH (Nov. 8, 2010), <http://www.telegraph.co.uk/news/worldnews/centralamericaandthecaribbean/nicaragua/8117902/Google-maps-error-sparks-invasion-of-Costa-Rica-by-Nicaragua.html>.

sponded to Pastora's quote with sensationalized headlines such as "The First Google Maps War"³ and "Google Maps Error Sparks South American Invasion."⁴ The possibility that Google, a privately owned corporation with no formal role in the state-dominated international legal system, either catalyzed or justified a military encounter between two countries, threatened the understanding of how power is distributed in the modern international legal framework of state-based actors. As one news provider framed the potentially revolutionary development, "First, Google Search. Then, Google News. Now . . . Google Wars?"⁵

In the aftermath of the invasion, Google voluntarily rectified its error, changing the border's location to return the area to Costa Rican control, and publicly denounced its role as a proper source of information on which state actors ought to rely for international disputes.⁶ Nevertheless, this particular scenario "was not merely the result of a simple Google glitch. Rather . . . Google Maps' imprecision reignited a long-standing border dispute that, with a few miscalculations, could have led to a real war."⁷ More important than the invasion itself, the border dispute between Nicaragua and Costa Rica marked a new reality for how twenty-first century technology has altered the role of one of the most defining tools used by states to maintain their international dominance—maps.

This Note will explore the role that cartography plays in both reifying the legal authority of states and further developing international law, looking at the rise of independent, "agnostic cartographers" in particular.⁸ Part I of this Note dissects the traditional art of cartography and clarifies the interconnected nature of map making with the rise and solidification of state power for much of modern history. Part II then explains the shift toward and methodology of agnostic cartographers, namely Google as the world's most prolific map maker, before analyzing four cases in which Google's maps have either created or inflamed geopolitical controversies. Finally, Part III digests this foundational shift in the field of cartography and

3. Jacobs, *supra* note 1.

4. *Oops! Google Maps Error Sparks South American Invasion*, FOX NEWS (Nov. 8, 2010), <http://www.foxnews.com/tech/2010/11/08/oops-google-sparks-invasion/>.

5. *Id.*

6. Peter Walker, *Nicaragua to Keep Troops in Disputed Territory After Google Maps Error*, GUARDIAN (Nov. 11, 2010), <http://www.theguardian.com/world/2010/nov/11/nicaragua-troops-calero-island-google-maps>.

7. Jacobs, *supra* note 1.

8. See John Gravois, *The Agnostic Cartographer*, WASH. MONTHLY (July 2010), <http://www.washingtonmonthly.com/features/2010/1007.gravois.html>.

articulates its future implications. As it is not evident that the witnessed transition constitutes a problem requiring a remedy, Part III does not offer solutions, *per se*. Instead, it focuses on both the potential function of supranational organizations in disseminating information for contemporary cartography as well as the increasing prominence of private entities as significant actors in the continued development of international law.

I. BACKGROUND & ROLE OF CARTOGRAPHY

A. *Traditional Cartography*

Cartography, the art of map making, has long resided at the crux of scientific precision, political strategy, and the codification of legal reality: “From at least the seventeenth century onward, European mapmakers . . . [held that] the objects in the world to be mapped are real and objective.”⁹ Such a position adopts as true the purely scientific perspective of the cartographic trade. From a scientifically-oriented view, “observation and measurement offer the only route to cartographic truth; and that . . . truth can be independently verified.”¹⁰ A scientifically sterilized view of the complex world of map making stems from the origin of maps as a tool for purely geologic—rather than political or legal—modeling. More so in the past than the present, maps served as an exploratory tool; they recorded travels for future recollection and were valued primarily for their reflection of the physical world. Under such traditional notions, “the first requisite of and the fundamental principle underlying all stages of map-making is the determination of the location of the explorer . . . to fix its position on the earth with reference to latitude and longitude.”¹¹ Whatever use or manipulation was potentially interjected by monarchs or rulers after the fact was secondary to the proffered purity of the source map.

Inspired by this idealized notion of how maps are created, “we often tend to work from the premise that mappers engage in an unquestionably scientific or objective form of knowledge.”¹² In furtherance of this belief, many cartographers still evaluate contemporary maps according to standards of objectivity, accuracy, and truth-

9. J. B. Harley, *Deconstructing the Map*, 26 *CARTOGRAPHICA* 1, 4 (1989).

10. *Id.*

11. John B. Torbert, *Maps and Map Making*, 34 *BULL. AM. GEOGRAPHICAL SOC'Y* 197, 199 (1902).

12. Harley, *supra* note 9, at 1.

fulness.¹³ This view has inspired a fallacy for all maps which depict legal borders—“the belief in progress: that, by the application of science ever more precise representations of reality can be produced.”¹⁴ While representative progress may exist for purely geologic maps, exact precision for political maps may actually confound accepted understandings of so-called reality; the belief in progress seeks to clarify exact delineations between states where the fog of imprecision was previously satisfactory.

Instead of analyzing the role of maps with blinding ideology, it is better to begin from the premise that cartography is rarely as cartographers describe it.¹⁵ Removing maps from the pedestal of infallible truth reveals that “maps, like statistics, can lie—or at least tell only one side of the story.”¹⁶ This principle is widely popularized in one episode of the television show *The West Wing*, when a group of cartographers visited the White House and attempted to explain why the vast majority of world maps, which use models such as the Mercator projection and other European inventions, represent but one geopolitically biased depiction of the world. The characters state, “When the top of the map is given to the ‘northern’ hemisphere and the bottom is given to the ‘southern,’ then people will tend to adopt top and bottom attitudes.”¹⁷ Such a cartographically instilled bias is commonly referred to as the “Rule of Ethnocentricity.”¹⁸ It “has led historical societies to place their own territories in the center of their cosmographies or world maps”¹⁹ without any required link to the purported objectivity of reality. Put simply, maps which depict legal borders are never objective, at least not in the independently verifiable, scientific use of the word.

Recognizing the subjectivity of all maps is a crucial prerequisite to understanding maps as mere tools to conceptualize legal delineations as reality. Maritime maps are particularly effective at embodying this principle. Often, maritime borders are marked based on inaccessible continental shelves and other geological markers.²⁰

13. *Id.* at 5.

14. *Id.* at 4.

15. *Id.*

16. Scott Neuman, *All Over the Map: Cartography and Conflict*, NPR (Nov. 28, 2012, 2:21 PM), <http://www.npr.org/2012/11/28/166079782/all-over-the-map-cartography-and-conflict>.

17. *The West Wing: Somebody's Going to Emergency, Somebody's Going to Jail* (NBC television broadcast Feb. 28, 2001).

18. Harley, *supra* note 9, at 6.

19. *Id.*

20. Jeppe Strandsbjerg, *Cartography and Territory in International Relations*, E-INT'L

However, “to become a reference point for boundaries such markers need to be made tangible through calculation and mapping. In consequence, maritime boundaries can only be defined with reference to a map; or more precisely a cartographically defined space.”²¹ Many maritime borders only exist in relation to our mapping of the corresponding area; if the practice of cartography never existed, then a precise surface maritime border could not be conceptualized. In short, traditional cartography itself serves as one of many layers of reality, which simultaneously creates and depicts information.

B. The Interconnected Nature of Cartography and the State-Dominated Legal Structure

While maps themselves are material tools for conceptualizing the world and are thus inherently morally neutral,²² cartography has rarely existed in a vacuum separate from the rise and consolidation of power by political entities. While for most individuals the primary purpose of any map is innocuous—a map is used for finding either objects or one’s way around—maps can do much more as projections which help shape our understanding of the world.²³ In other words, “cartography is that social activity that makes sense of people’s location on earth; defining both the world and a particular location in it.”²⁴

This latter power of maps has long been interconnected with the existence of legal-political entities, particularly nation-states, which “are, by definition, geographical solutions to political problems.”²⁵ Since the mapping of space is always interconnected with both territoriality and domination of one’s environment, states have always closely controlled the practice.²⁶ Once under a state’s influence, “cartography gains a performative character that construes different realities based on the choice of input and audience.”²⁷ Just as

REL. (Oct. 2, 2013), <http://www.e-ir.info/2013/10/02/cartography-and-territory-in-international-relations/>.

21. *Id.*

22. ROBERT D. KAPLAN, THE REVENGE OF GEOGRAPHY: WHAT THE MAP TELLS US ABOUT COMING CONFLICTS AND THE BATTLE AGAINST FATE 27 (2012).

23. Strandsbjerg, *supra* note 20.

24. *Id.*

25. Tayyab Mahmud, *Geography and International Law: Towards a Postcolonial Mapping*, 5 SANTA CLARA J. INT’L L. 525, 536 (2007).

26. *Id.*

27. Strandsbjerg, *supra* note 20.

authors, playwrights, or orators manipulate their art for the intended audience, so too do cartographers.

When funded by states and for state purposes, maps can confound the true extent of a government's actual control over local ethnic and social realities.²⁸ For example, European colonial maps—frequently studied as persuasive historical records—were useful “for colonial administration but less so for [the] native populations that typically employed different ways of navigating their material environment.”²⁹ During the colonization of North America, “it was easy for Europeans to draw lines across the territories of Indian nations without sensing the reality of their political identity.”³⁰ One of the most extreme occurrences of mapping tailored for the state-audience is the political mapping of Africa, which, when drawn at the 1884–1885 Berlin Conference, largely contained demarcations irrelevant to the actual residents of the continent.³¹ Nevertheless, many of the exact legal entities that the borders carved out at the Berlin Conference persist today, legitimized in the eyes of the international community of states by the perceived authority of the map.

1. Historical Role

The roots of state-controlled map making were laid long before the modern era. In Europe's history, cartography was nationalized early, and states have since remained the most prominent patrons of cartographic activity.³² This allowed the guardianship of cartographic knowledge by states, leaving many maps censored, secret, or false.³³ Starting with the transition from late medieval to modern systems of rule, cartography's importance ran along three dimensions: “The homogenization of territorial authority; [the] linearization of political boundaries; and [the] elimination of nonterritorial forms of organization.”³⁴ Continuing into modern Western society, maps were particularly critical to maintaining state power. Boundaries, commerce, internal administration, control of population, and exertion of military capacity were all tied to the control of

28. Neuman, *supra* note 16.

29. Strandsbjerg, *supra* note 20.

30. Harley, *supra* note 9, at 14.

31. Neuman, *supra* note 16.

32. J. Brian Harley, *Maps, Knowledge, and Power*, in *GEOGRAPHIC THOUGHT: A PRACTICE PERSPECTIVE* 129, 132 (George Henderson & Marvin Waterstone eds., 2009).

33. Harley, *supra* note 9, at 12.

34. Strandsbjerg, *supra* note 20.

cartographic knowledge.³⁵

Notably, for the vast majority of modern history, maps were used by states to control the people residing within their borders.³⁶ States used maps to facilitate “the geographical expansion of social systems”³⁷ in order to solidify the relationship between the individual and the state; to enable the collection of “information relevant to state control of the conduct of its population and the direct supervision of that conduct”,³⁸ and to engage in macro warfare and defense, which was “linked to the growth of centralized government.”³⁹ Maps were further used by states to tell a desirable narrative of the state’s standing in the world. In addition to facilitating government centralization and outward militarization, maps served as “territorial propaganda in the legitimation of national identities”⁴⁰ and were used “to legitimize the reality of conquest and empire . . . [by creating] myths which would assist in the maintenance of the territorial status quo.”⁴¹ Due to the prolific control that states exerted over cartographic information, maps served as an ideal mechanism for state propaganda as they were malleable enough to convey the state’s message without shedding the convincing façade of scientific objectivity.

2. Commoditization in Dispute Resolution

Due to the legally legitimizing power of cartography when wielded by the state, delineations on maps often replaced the need for actual ground control by central authorities. Instead of having to conquer and hold territory by force, which also required either beguiling or subduing local populations, maps permitted legal ownership of territory to serve as another commodity for bartering among the world’s ruling class. When leaders met for diplomatic purposes, “maps became the currency of political ‘bargains,’”⁴² where leases were traded and colonial territory redivided. Once a new political

35. Harley, *supra* note 9, at 12.

36. The reverse, wherein private individuals or entities use maps to influence states, has only become a significant reality within the last decade due to technological advancements, as is discussed *infra* Part II.

37. Harley, *supra* note 32, at 130.

38. *Id.* (quoting ANTHONY GIDDENS, A CONTEMPORARY CRITIQUE OF HISTORICAL MATERIALISM: POWER, PROPERTY, AND THE STATE 5 (1981)).

39. Harley, *supra* note 32, at 131.

40. *Id.*

41. *Id.* at 132.

42. *Id.*

map was drawn among elites, “these maps more than often acquired the force of law in the landscape.”⁴³

When diplomatic negotiations stumbled and disputes arose, maps also played pivotal roles in the ensuing resolutions of the conflicts. Maps allowed separation between the commanding powers and violent conflicts, thereby reducing the personal cost of military campaigns for the ruling class. In countless wars “since the sixteenth century[,] it has been equally easy for the generals to fight battles with colored pins and dividers rather than sensing the slaughter of the battlefield.”⁴⁴ Alternatively, when mediation or arbitration was used to settle disputes rather than outright war, the perceived legitimacy of cartography was invoked to strengthen claims. “Parties to a territory or boundary dispute often rel[ied] heavily on map evidence to prove their title over the disputed area or a particular line as the boundary,”⁴⁵ with each side calling upon its own maps to reveal their corresponding version of the truth.⁴⁶ Due to its multifaceted applicability, the art of cartography served as an indispensable element of geographically expanding states.

3. Reifying Legal Authority

As a result of the close relationship between states and the exploitation of cartography, which helped pave the way for their rise, the control of maps now equates to the partial control of the very legal authority that allows for state power.⁴⁷ “Outside the world of maps, states carry on a precarious existence; little of nature, they are much of maps, for to map a state is to assert its territorial expression, to leave it off to deny its existence.”⁴⁸ Once a state is mapped, it is

43. *Id.*

44. Harley, *supra* note 9, at 14.

45. Hyung K. Lee, *Mapping the Law of Legalizing Maps: The Implications of the Emerging Rule on Map Evidence in International Law*, 14 PAC. RIM L. & POL’Y J. 159, 159 (2005).

46. The rise of international courts and tribunals in the twentieth century left the evidentiary value of maps appropriately suspect. Nevertheless, recent decisions by the International Court of Justice have indicated the resurgence of maps as authoritative in select contexts. *See generally id.*; *infra* Part III.B.

47. *See* Strandsbjerg, *supra* note 20 (“As such, the notion of territorial sovereignty relies on a cartographic spatiality that allow the sovereign-territory nexus to be identified cartographically first and subsequently be implemented through various process and struggles on the ground subsequently.”).

48. Mahmud, *supra* note 25, at 536 (quoting Denis Wood and John Fels, *Designs on Signs: Myth and Meaning in Maps*, 23 CARTOGRAPHICA 54, 64 (1986)).

legitimized as real. Once a legal territorial entity is so enshrined, the lines on the map acquire an authority resistant to either calls to discredit or attempts to dislodge.⁴⁹ For this reason, while maps are occasionally “agents of change, they can equally become conservative documents”;⁵⁰ maps may act as “authoritarian images,”⁵¹ which could unintentionally strengthen and perpetuate the status quo.⁵²

Ultimately, this particularly potent power of maps stems from their absolute necessity for partitioning and legalizing what is otherwise only natural. That is because “law cannot refer directly to . . . geography. A spatial delimitation of authority will always have to be mediated through cartography.”⁵³ As a consequence, “a mapless society, though we may take the map for granted, would now be politically unimaginable.”⁵⁴ Rather, what contemporary technology may alter is not the necessity of maps, but the long-held implicit assumption that cartographic power to legalize space must remain bureaucratically exercised and imposed from above.⁵⁵

II. RECENT DEVELOPMENTS & INSTANT CONTROVERSIES

A. Rise of “Agnostic Cartographers”

1. The Shift

The original introduction of computerized mapping late in the twentieth century did not initially alter the belief that cartographic knowledge would always remain a top-down model of information distribution. In fact, it was reasonable to assume that advancements in computer science would increase the “concentration of media power,” thereby “reinforcing the status quo[] and freezing social interactions within charted lines.”⁵⁶ Similar to early industrialization, the computerization of cartography might have led to a normalization

49. Harley, *supra* note 9, at 14.

50. *Id.*

51. *Id.*

52. *Id.*

53. Strandsbjerg, *supra* note 20 (“[W]ithout the cartographic ability to portray geography in a manner that allows neat boundaries to be drawn on it, sovereignty could not primarily refer to territory.”).

54. Harley, *supra* note 9, at 12.

55. *Id.*

56. Harley, *supra* note 32, at 142.

process. Computer use could have fueled the doctrines of traditional cartography; just as “in factories we standardize our manufactured goods so in our cartographic workshops we [could] standardize our images of the world.”⁵⁷ The argument follows that before mass communication it was easier for different states to each produce their own potentially conflicting maps without serious challenges to perceived validity. However, the Internet and mass sharing of information globally requires a uniform description of the world’s legal borders and delineations, resulting in a single mass-produced master map uninfluenced by nation-state biases. One may expect that the rise of supranational governing organizations starting with the League of Nations in 1920 and continuing with the United Nations since 1945 would only further the need for such standardization.

Nevertheless, the opposite of the traditional notion of ever-increasing map standardization has occurred in recent decades. According to Michael Goodchild, “who is widely regarded as a founding father of geographic information science,”⁵⁸ traditional means of proliferating cartographic information have led to an information crisis, wherein U.S. topographical maps are now thirty-five years out of date on average.⁵⁹ Additionally, Goodchild states that “modernist government data collection efforts like the census are in decline all over the world,”⁶⁰ so much so that for much of Africa, colonial maps of the former British Empire remain the best information available.⁶¹

Such widespread failure has created historically unparalleled demand for private, non-state-generated maps.⁶² The most prolific private cartographer is Google.⁶³ Less than a decade since the release

57. Harley, *supra* note 9, at 13.

58. Gravois, *supra* note 8.

59. *Id.* This deficit has led some U.S. agencies to adopt Google Earth for official state purposes, further evincing the switch from state to private cartographic prominence. See, e.g., *National Wetlands Inventory*, U.S. FISH & WILDLIFE SERVICE, <http://www.fws.gov/wetlands/data/google-earth.html> (last visited Nov. 25, 2015); *Google Earth SNOTEL Data Layer*, U.S. DEP’T OF AGRIC., <http://www.wcc.nrcs.usda.gov/snotel/earth/> (last visited Nov. 25, 2015).

60. Gravois, *supra* note 8 (quoting Michael Goodchild).

61. *Id.*; see also Michael F. Goodchild, *Citizens as Sensors: Web 2.0 and the Volunteering of Geographical Information*, 7 GEOFOCUS 8, 10 (2007).

62. Such private maps include not only those of a topographical nature, but also maps showing borders between countries, which are comparable to the maps previously drafted among state leaders. As briefly explored *infra*, those maps occasionally were created as representations of binding legal agreements or were used after-the-fact in binding judicial proceedings. See *infra* Part III.B.

63. While other Internet-based companies have comparable mapping services, Google is selected as the focus of this Note as it operates the most widely used services. Further,

of Google Maps and Google Earth, the combination of the two services might very well make the corporation “the world’s most important mapmaker.”⁶⁴ The numbers for Google Maps are staggering. Measured next to any competitor, state-run or private, “Google Maps has the most comprehensive map set and the largest readership in the world—with a billion users each month.”⁶⁵ As for Google Earth, the corporation’s second cartographic service, “well over 600 million people globally have already downloaded” the program.⁶⁶

However, rather than achieving widespread use through standardization, Google’s global success is achieved by shedding the long-held façade of an objective reality and adopting what journalist John Gravois has dubbed “agnostic cartography.”⁶⁷ Google’s global audience has led it to redefine the requisite characteristics of a map, prompting Google to create localized versions for the 200 countries it covers.⁶⁸ Instead of producing “one definitive map of the world, Google offers multiple interpretations of the earth’s geography. Sometimes, this takes the form of customized maps that cater to the beliefs of one nation or another.”⁶⁹ For example, if a border is disputed by two or more states, the border as seen on Google’s services will adhere to the beliefs of Country A when accessed from within that country, while simultaneously adhering to the beliefs of Country B when accessed on its local servers.⁷⁰ By so doing, Google positions itself as not taking a stance on the geopolitical legal realities of border placement or topographical naming; Google presents information as fact while remaining *agnostic* on the question of legal ac-

because its services are used to a far greater extent than its competitors, most of the issues stemming from the shift toward “agnostic cartography” specifically relate to Google platforms.

64. Gravois, *supra* note 8.

65. *How Google Represents Disputed Borders Between Countries*, ECONOMIST (Sept. 3, 2014), <http://www.economist.com/blogs/economist-explains/2014/09/economist-explains-1>.

66. *Id.*

67. *Id.* This Note will continue to refer to Google and other global Internet map makers as agnostic cartographers.

68. *How Google Represents Disputed Borders Between Countries*, *supra* note 65.

69. Gravois, *supra* note 8.

70. See *How Google Represents Disputed Borders Between Countries*, *supra* note 65 (“Disputed Territories, a website created by wonks at the Massachusetts Institute of Technology, identifies 12 regions where Google presents different borders to different audiences depending on where they are in the world.”); see also *Disputed Territories*, OPENNEWS, http://opennews.kzhu.io/map-disputes/?_ga=1.48243875.420098949.1397702661 (last visited Jan. 25, 2015).

ceptance under international law. In response to Google's policy, critics have accused Google of "not adhering to the standards of [nineteenth century] cartography" and of "not obeying international standards,"⁷¹ but such claims appear to be of little concern to the company. Despite such criticism, the overwhelming usage statistics for Google's maps indicate that the transitional wave from traditional to agnostic cartography is unlikely to recede anytime soon.

2. The Methodology

In response to substantial scrutiny and criticism of Google's adoption of "agnostic cartography" for its mapping platforms, the company has increasingly released information clarifying its mapping methodology from 2010 onward. In a series of releases on its Public Policy Blog, Google outlines some of its new-age cartographic doctrines, conspicuously making no mention of either the history of cartography or the history of geography as academic fields, as well as abstaining from mentioning the role of any applicable international norms or standards.⁷² Instead, Google identifies three factors as most important when deciding what content to convey through its mapping services: (1) the view of geographically relevant states; (2) the view of internationally authoritative bodies; and (3) the creation of the Primary Local Usage rule.⁷³

First, Google concedes that the very "first sources" it turns to when deciding legal mapping content, such as border placement or the names of topographical features, are the "nations themselves."⁷⁴ As a result, Google has openly relegated what has previously served as the whole of cartographic authority for centuries to merely a third of its contemporary factual determination. Google turns to the view of states first, in part, to determine if any conflict of beliefs exists over a particular feature. If no dispute exists among the relevant, local countries to a particular border or feature, it appears that the other factors are still considered, even though it seems unlikely that any controversy would arise. Additionally, Google investigates local state views in order to compensate for domestic information censor-

71. Interview with Brooke Gladstone & John Gravois, *On the Media* (July 23, 2010), <http://www.onthemedial.org/story/132853-making-maps-the-google-way/transcript/>.

72. *Id.*

73. See Bob Boorstin, *When Sources Disagree: Borders and Place Names in Google Earth and Maps*, GOOGLE PUB. POL'Y BLOG (Dec. 4, 2009), <http://googlepublicpolicy.blogspot.com/2009/12/when-sources-disagree-borders-and-place.html>.

74. *Id.*

ship; “when neighboring countries claim overlapping territories and conflicting place names, even showing the dispute on a map may be prohibited by local law.”⁷⁵ This factor in Google’s analysis is more practical than ideological in nature. Even if Google’s methodology would otherwise compel it to take one view on a border or feature, or alternatively show that an irreconcilable dispute exists, domestic laws of censoring states may ban the use of Google’s maps unless the company yields to the state-mandated position.⁷⁶ In an effort to cooperate with state demands when necessary, the customized effect of Google’s maps is created; the maps depict a different view of the world entirely based on the country from which a user accesses the platform.

Second, without accepting the antiquated view of objectivity inherent in traditional cartography doctrine, Google still turns toward a range of international organizations to gather the wide portfolio of information which contributes to the creation of its maps. Google consults what it describes as the “data providers that most accurately describe borders in treaties” as well as “other authoritative standards bodies like the United Nations, ISO [International Organization for Standardization] and the FIPS [Federal Information Processing Standards].”⁷⁷ However, it is important to note that Google merely uses such sources as “guidance”⁷⁸ for its final determinations, not as the final answers themselves.⁷⁹ Nevertheless, the company has revealed few specifics regarding how much decisional weight is actually carried by the views of such international organizations.

Lastly, the most important and novel element of Google’s cartography method is what the corporation refers to as the Primary Local Usage rule. Under this guiding principle, Google attempts to dis-

75. *Id.*

76. See, e.g., Stefan Geens, *Is Google Showing India’s Assam State As Part of China?* (No.), OGLE EARTH (Mar. 13, 2012), <http://ogleearth.com/2012/03/is-google-showing-indias-assam-state-as-part-of-china-no>.

77. Boorstin, *supra* note 73.

78. *Id.*

79. Interestingly, Google states that it did consider “using the publications and documents of the United Nations Cartographic Section as the authoritative references for naming bodies of water,” but that it is unable to do so because of systemic deficiencies in that particular source material. Andrew McLaughlin, *How Google Determines the Names for Bodies of Water in Google Earth*, GOOGLE PUB. POL’Y BLOG (Apr. 8, 2008), <http://googlepublicpolicy.blogspot.com/2008/04/how-google-determines-names-for-bodies.html>. Issues associated with adopting the United Nations’ cartographic materials include the fact that the “publications do not provide the level of coverage and detail that we hope to achieve for Google Earth” and that “the United Nations as an institution does not take official positions on geographical names.” *Id.*

play only information that is “primary, common, [and] local.”⁸⁰ Andrew McLaughlin, Google’s former Director of Global Public Policy, explains that each of the adjectives in this phrase carries a significant and distinct meaning:

By saying “primary,” we aim to include names of dominant use, rather than having to add every conceivable local nickname or variation. By saying “common,” we mean to include names which are in widespread daily use, rather than giving immediate recognition to any arbitrary governmental re-naming. In other words, if a ruler announced that henceforth the Pacific Ocean would be named after her mother, we would not add that placemark unless and until the name came into common usage. Finally, by saying “local,” we aim to reflect the primary and common names used by countries that actually border the body of water, as they are the countries recognized under international law as having a special sovereign stake in it.⁸¹

While continuing to further develop its cartography platforms, Google perceives proper adherence to this standard as an effective win-win situation. On one hand, “the Primary Local Usage rule generates the optimal combination of neutrality, objectivity, and legitimacy”⁸² that users of maps still seek, if not idolize, from cartographers. Yet on the other hand, Google believes the rule “demonstrates the proper sensitivity to . . . important geopolitical disputes,”⁸³ and should thereby keep the company out of the fray of heated international controversies.⁸⁴

Particularly revolutionary, the Primary Local Usage rule is only possible in practice due to recent advancements in information-sharing technology. Google is able to learn what terminology residents of any given area use in their daily lives by taking advantage of its role as an Internet information giant. For example, “using a fairly straightforward editing tool called Google Map Maker, volunteers all over the world have been shaping, revising, and detailing maps of

80. *Id.*

81. *Id.*

82. *Id.*

83. *Id.*

84. The adoption of the Primary Local Usage rule has repeatedly failed to achieve this latter objective. *See infra* Part II.B.

their surroundings.”⁸⁵ While Google headquarters retains control over the core features of its maps, there is a local “community layer” of map information [where] users have an open canvas”⁸⁶ to input information from which Google can mine. By combining a myriad of popularly generated sources to make its localized cartographic conclusions, it is accurate to muse that “geography has been democratized.”⁸⁷

Although Google’s methodology is well-conceptualized, its actual application is not without challenges. While Google weighs the three independent factors of state views, international organizational views, and the results of the Primary Local Usage rule, information stemming from the three sources is not always compatible. As current Director of Google’s Public Policy Team, Bob Boorstin pondered, “What happens when an authoritative reference[] does not seem to represent the truth on the ground? What about when local user expectations don’t match international convention, or when local laws prohibit acknowledging regional conflicts?”⁸⁸ While Google appears to resolve conflicts within its methodology based on case-specific determinations, the intended outcome is always to “represent the ‘ground truth’ as accurately and neutrally”⁸⁹ as possible. A few of the potential options at Google’s disposal include providing multiple claim lines, multiple names, or clickable political annotations.⁹⁰ Despite these proffered remedies, Google admits that even when using a cognizable methodology, agnostic cartography has “no science, except for the science of just finding out what people say.”⁹¹

3. The Impact

The adoption of an agnostic-cartographic methodology has resulted in Google’s ascension to the level of a state actor in legal

85. Gravois, *supra* note 8.

86. *Id.*

87. *Id.*

88. Boorstin, *supra* note 73.

89. *Id.*

90. *See id.* For an example of multiple claim lines, see, for example, the Golan Heights area as claimed by Israel and Syria. For an example of multiple names, see, for example, “Londonderry/Derry” in Ireland. Clickable political annotations are a form of imbedded text in a digital map, so that when disputed name or border is selected, contextual information is provided to potentially explain the dispute in question or provide an explanation for the cartographic choice.

91. Gladstone & Gravois, *supra* note 71.

geography disputes. Since Google is now producing the world's most important maps, a task previously done by nation-states, the company is "getting confused with a nation-state, and not just any one, a really important one—a powerful one."⁹² At first, Google reaped the benefits of waning state control over the practice of map making, but more recently, Google has started to face the criticism and responsibilities which accompany such possession of power.⁹³ Today, it is not uncommon to see states that are parties to some of the most persistent transnational disputes "accuse Google of being [a] geopolitical conspirator,"⁹⁴ intentionally using its influence to favor one side or the other.

The actual impact of confounding Google with a state actor is that Google receives treatment formerly reserved for states. For example, "the ubiquitous use of Google Earth as a universal digital atlas has bequeathed it a popular authority" wherein "Google's choice regarding a border (or place name) constitutes a weighty endorsement in the court of global opinion . . . [resulting in] remarkable situations where states themselves have petitioned Google about perceived bias or errors in its maps."⁹⁵ Consequently, the international community of states has conferred on Google a seat at the proverbial diplomatic table, each seeking to sway Google's cartographic decisions, not dissimilar to the traditional process of courting allies. Beyond state-led diplomatic efforts, individual-led movements have also taken stock of Google's growing influence, leading to protests⁹⁶ as well as petitions, quite similar to how individuals seek redress from state governments. In fact, one of the largest ever online petitions demanded the "immediate and unconditional deletion" of the Arabian Gulf from Google Earth, supporting instead the body of water's alternative name—the Persian Gulf.⁹⁷ In light of such initiatives, Google's role in geopolitics is far more comparable to that of a state or an interna-

92. *Id.*

93. See Gravois, *supra* note 8 ("By filling the information vacuum left behind by the old state powers, Google has also made it inevitable that it will sometimes be confused for them.").

94. Gladstone & Gravois, *supra* note 71.

95. Stefan Geens, *Mapping South Sudan's Northern Border: Not So Fast!*, OGLE EARTH (July 22, 2011), <http://ogleearth.com/2011/07/mapping-south-sudans-northern-border-not-so-fast/>.

96. See *Arunachal Fumes Over Wrong Map on iPhone4*, DECCAN HERALD, <http://www.deccanherald.com/content/101784/arunachal-fumes-over-wrong-map.html> (last updated Oct. 4, 2010); Prabin Kalita, *Google Shows Parts of Arunachal in Chinese*, TIMES INDIA (Aug. 8, 2009), <http://timesofindia.indiatimes.com/india/Google-shows-parts-of-Arunachal-in-Chinese/articleshow/4869777.cms>.

97. See Gladstone & Gravois, *supra* note 71.

tional adjudicator than its corporate counterparts.

Not only does the mass petitioning of Google to alter the content of its maps symbolize the immense power Google now controls over the dissemination of cartographic information, but it also indicates a potentially novel democratization of maps, including the legal conclusions they convey. When cartography is fully controlled by state actors, only state actors possess the ability to not simply arrive at a legal agreement through international diplomacy, but to also cement that accord as a reality for the population at large by controlling all accessible depictions of the legal-political world. However, due to the shift toward agnostic cartography, if a state actor elects, for instance, to “legally” rename a geological feature, the people near that feature now also have some say before Google changes the content of its maps, which as previously discussed,⁹⁸ are presently the most viewed maps in the world. Acknowledging this populist element of Google’s methodology, Google’s Andrew McLaughlin announced, “perhaps most importantly, we . . . recognize that we have no monopoly on geographic truth.”⁹⁹ Assumedly as an unintentional incident to achieving global mapping dominance, Google may very well have increased the role that popular opinion plays in the acceptance and solidification of future developments in international law, so far as they regard the geographic world.

B. Controversies Surrounding Google Maps

One of Google’s self-proclaimed objectives of adopting the Primary Local Usage rule is to stay out of heated international controversies—an objective that has repeatedly failed.¹⁰⁰ Contrary to the company’s original intent, and due in large part to the authority their maps now command, Google’s services “have occasionally been drawn into diplomatic squabbles between testy neighbors.”¹⁰¹ Perhaps counterintuitive at first, the shift toward agnostic cartography may actually lead to an increase in border controversies; disputes which would not have persisted under the traditional, top-down model of decisional control are now allowed to thrive.

To elucidate this point, compare how agnostic cartography and traditional cartographers might handle the same hypothetical scenario. In recent modernity, the British Empire was the most pow-

98. See *supra* Part II.A.1.

99. McLaughlin, *supra* note 79.

100. See Gravois, *supra* note 8.

101. *How Google Represents Disputed Borders Between Countries*, *supra* note 65.

erful actor on the planet and therefore also the most powerful map maker.¹⁰² As such, the British Empire “would come in and kind of settle disputes by saying, the name of that lake is X, what you people on the eastern shore of the lake call it. And so sorry, you people on the western shore of the lake” will just have to adopt the new name.¹⁰³ Although not a beacon of fairness, precision, or supposed objectivity, such a top-down approach often created certainty and quashed long-lasting disputes. Today, “Google doesn’t have to settle those disputes because they can just represent way more information than a traditional paper map,”¹⁰⁴ and thus disputes are occasionally left unresolved. Quite ironically, it is Google’s agnostic approach to mapping, an approach designed in part to avoid controversy by opting for a methodology that “is indecisive rather than domineering, that has embroiled Google in some of the globe’s hottest geopolitical conflicts.”¹⁰⁵

This section seeks to draw attention to many of these heated geopolitical conflicts and focus on Google’s substantial role in their ongoing management. While the vast majority of world boundaries are uncontested and even fewer experience direct military confrontation,¹⁰⁶ a small selection maintain highly tenuous levels of stability and draws significant attention from the global community of states. Although many additional border and toponymic disputes exist, this Note focuses on three cases, which beyond their own specific facts also serve as indicators of broader types of geopolitical controversies witnessed elsewhere: (1) the militarized border between Nicaragua and Costa Rica, (2) the disputed Arunachal Pradesh region between China and India, and (3) the challenges associated with emerging borders, namely the secession of Crimea from Ukraine and the creation of South Sudan.

1. Case Study #1: Militarized Border (Nicaragua & Costa Rica)

The history of the border dispute between Nicaragua and Cos-

102. Tess Vigeland, *With Crimean Borders In Dispute, Google Maps Has It Both Ways*, NPR (Apr. 12, 2014), <http://www.npr.org/2014/04/12/301795703/with-crimean-borders-in-dispute-google-maps-has-it-both-ways>.

103. *Id.*

104. *Id.*

105. Gravois, *supra* note 8.

106. J.W. House, *A Local Perspective on Boundaries and the Frontier Zone: Two Examples in the European Economic Community*, in *ESSAYS IN POLITICAL GEOGRAPHY* 327, 330 (Charles A. Fisher ed., 1968).

ta Rica is storied, dating back centuries to the region's decolonization. For hundreds of years following the discovery of the American continents, the Central American region containing both modern Nicaragua and Costa Rica was controlled by the Spanish Empire. Following their independence in 1821, both entities were originally part of an umbrella jurisdiction, called the Federal Republic of Central America.¹⁰⁷ By 1824, civil war in Nicaragua and the local influence of Costa Rican coffee planters led large swaths of Nicaraguan territory to secede and become annexed by Costa Rica.¹⁰⁸ Altogether, "Nicaragua lost about 11,000 square miles to Costa Rica before gaining its full independence in 1841."¹⁰⁹ Even with such losses, the border along the right bank of the San Juan River was not solidified until the signing of the 1858 Cañas-Jerez Treaty and the subsequent 1888 arbitration by then-U.S. president Grover Cleveland.¹¹⁰ However, due to the river slowly shifting over the course of decades, "a few years ago, Nicaragua's president, Daniel Ortega, accused Costa Rica of surreptitiously stealing Nicaraguan land as the river moved steadily north, justifying [Nicaraguan Commander Edén] Pastora's dredging a silted-up waterway as 'restoring' the original channel, and the original border."¹¹¹ With the two states again arguing over the proper placement of the border, the dispute was revived.

On October 8, 2010, Commander Pastora led Nicaraguan forces into Costa Rica and seized the long-disputed region, justifying the move based on Google's placement of the border, which concurred with Nicaragua's stance.¹¹² Once the troops crossed the border, they lowered a nearby Costa Rican flag and boldly replaced it with a Nicaraguan one, signaling their claimed control over the area.¹¹³ Some media outlets went so far as to dub the ensuing conflict

107. Jacobs, *supra* note 1.

108. *Id.*

109. *Id.*

110. *Costa Rica Institutes Proceedings in ICJ Against Nicaragua Over Río San Juan Conflict*, INT'L WATER L. PROJECT BLOG (Nov. 21, 2010, 12:25 AM), <http://www.internationalwaterlaw.org/blog/2010/11/21/costa-rica-institutes-proceedings-in-icj-against-nicaragua-over-rio-san-juan-conflict>.

111. Jacobs, *supra* note 1.

112. Walker, *supra* note 6 ("[T]he Nicaraguan official in charge of the dredging project told a Costa Rican newspaper he used Google Maps to decide where the work should be done.").

113. Mark Brown, *Nicaraguan Invasion? Blame Google Maps*, WIRED (Nov. 8, 2010, 9:45 AM), <http://www.wired.com/2010/11/google-maps-error-blamed-for-nicaraguan-invasion>.

“The First Google Maps War.”¹¹⁴ According to Commander Pastora, the authoritative determination of Google as a non-state cartographer effectively represented an independent assessment of the dispute.¹¹⁵ As articulated by the Nicaraguan embassy in London through a public statement following the movement by military forces, “the Government of Nicaragua has formally requested to Google not to accept the petition of Costa Rica to modify the border demarcation . . . [as the line] presented by Google corresponds to the various treaties that define the Nicaragua-Costa Rica border.”¹¹⁶ Through the petitioning of Google by both Nicaraguan and Costa Rican state officials,¹¹⁷ a narrative was created among the involved parties that the cartographic delineations as mapped by Google equate to the views of either an adjudicatory body or a third party to the conflict.

Following the initial invasion, Nicaragua refused to withdraw its troops. Such prolonged occupation is atypical today for while accidental invasions still occur, territorial mistakes are most commonly rectified in a matter of minutes or hours.¹¹⁸ Unfortunately for Nicaragua, while Google’s popular influence is on the rise, such “popularity does not [yet] bestow authority. The lines that Google draws on maps have no government’s imprimatur.”¹¹⁹ Regardless, Google voluntarily changed its maps following the invasion to concur with the Costa Rican position on the border, thereby negating Nicaragua’s stance moving forward.¹²⁰ Still seeking more formal recourse, Costa Rica brought the dispute before the International Court of Justice

114. Jacobs, *supra* note 1.

115. There is substantial commentary as to whether the Google Maps border placement was merely a pretext for the invasion by Pastora or whether it legitimately emboldened the Nicaraguan regime’s assessment of their own border claims. The alternative view contends that “Nicaragua did not mistakenly enter Costa Rican territory because it relied on Google Maps. Ortega’s justification for Nicaragua’s actions appeal to documents from the 19th century; Pastora’s mention of Google Maps is just a taunt.” Robert Mackey, *The Google Maps War That Wasn’t*, N.Y. TIMES: LEDE (Nov. 19, 2010, 8:40 AM), <http://thelede.blogs.nytimes.com/2010/11/19/the-google-maps-war-that-wasnt>. Even if this position is considered correct, Google’s role in the dispute is still significant. The proffered influence of Google swallowed much of the early journalistic coverage of the story and even countries petitioned Google, either requesting the map be changed or that it remain in support of the Nicaraguan position. Therefore, if the Google justification was only pretext, the conflict still speaks to the perceived legitimacy and international influence Google Maps carries over otherwise state-dominated international systems.

116. Jacobs, *supra* note 1.

117. *Id.*

118. Mackey, *supra* note 115.

119. Jacobs, *supra* note 1.

120. Walker, *supra* note 6.

(ICJ), which in November 2013 ruled in Costa Rica's favor, ordering Nicaragua to remove "from the disputed territory . . . any personnel"¹²¹ and that "Nicaragua shall refrain from any dredging and other activities in the disputed territory."¹²² Ultimately, while Google Maps was not the origin of this centuries-long dispute, the detachment of Google's cartography from the dictates of either state positions or international legal conclusions facilitated a militarized episode and risked potential war.

2. Case Study #2: Disputed Territory (Arunachal Pradesh Region)

Another long-standing border dispute inflamed by Google involves the Arunachal Pradesh region, a province claimed by China but currently governed by, and located on the northeast corner of, India.¹²³ Although contested, the history of the controversy is straightforward. In 1962, China and India "fought a short-lived, intense and ultimately inconclusive border war over the area."¹²⁴ The weeklong conflict resulted in China temporarily seizing much of the region, as well as killing 3,000 Indian officers.¹²⁵ Today, the precise border may remain unresolved, but India has stationed approximately 100,000 troops in the region to solidify its effective control over the territory.¹²⁶

Since control over Arunachal Pradesh rests heavily on the perceived relative legitimacy of each country's claim, "both China and India prohibit the publication of maps that do not draw their respective official claim lines as the ground truth."¹²⁷ While state-generated maps will unquestionably adhere to such domestic laws, the real concern for these states is the depictions of agnostic cartographers such as Google; "by virtue of its ubiquity, Google is often the arbiter of first recourse for borders and toponyms. So where Google's maps show borders or place names that deviate from official usage or stray into international disputes, they may cause confu-

121. *Certain Activities Carried out by Nicaragua in the Border Area (Costa Rica v. Nicar.)*, Provisional Measures, 2013 I.C.J. Rep. 354, 369 (Nov. 22).

122. *Id.*

123. See Subir Bhaumik, *India Climbdown May Help China Border Dispute*, BBC NEWS (Apr. 17, 2012), <http://www.bbc.com/news/world-asia-india-17738147>.

124. Neuman, *supra* note 16.

125. *A Himalayan Rivalry*, ECONOMIST (Aug. 19, 2010), <http://www.economist.com/node/16843717>.

126. *Id.*

127. Geens, *supra* note 76.

sion, offense or worse.”¹²⁸ Without publicly announcing its choice, “Google addresses the Indo-Sino border problem by generating different maps for different audiences. So if you accessed Google in China, you’d see a map showing the disputed areas under Beijing’s control. In India, it’s just the opposite.”¹²⁹ In fact, there are actually three distinct Google Maps datasets: one for the Chinese users, one for Indian users, and one for the rest of the world—the third showing the area as disputed, with dotted lines as its border.¹³⁰

This creative response to the conflict has only recently come under the eye of public scrutiny as a consequence of errors on Google’s cartographic platforms. On two separate occasions in 2007 and 2009, Google’s maps erred, depicting the incorrect content to each country.¹³¹ In the latter instance, “it happened without warning. One minute, the mountainous border state adjacent to Tibet was labeled with its usual complement of Indian place-names; the next it was sprinkled with Mandarin characters, like a virtual annex of the People’s Republic [of China].”¹³² Although the sanctity of the two distinct maps was quickly reinstated, some Indian officials spoke publicly of outright collusion between China and the search engine, as the changes were first noticed just hours before a crucial China-India summit over border disputes.¹³³ One member of the Indian Parliament, Takam Sanjoy, went as far as to angrily state on record, “How could Google change the names of places of a sovereign country without the country’s knowledge?” and “Google must explain under what authority did they include Chinese language in Arunachal Pradesh’s map.”¹³⁴

Even once the mistake was resolved, the error left a lasting impact for India. The glitch publicly revealed that for most of the world, and especially in China, the world’s largest map maker refuses to officially recognize and legitimize Indian ownership of one of its provinces, an act that Indian media regards as a “nefarious conspira-

128. Jacobs, *supra* note 1.

129. Neuman, *supra* note 16; *see also* John Ribeiro, *Google Placates India, China With Different Map Versions*, PC WORLD (Oct. 22, 2009), <http://www.peworld.com/article/174205/article.html>.

130. Geens, *supra* note 76.

131. *Id.*

132. Gravois, *supra* note 8; *see also* Geens, *supra* note 76 (“Indian bloggers and media this past Thursday noticed that many place names in Arunachal Pradesh had turned Chinese in Google Maps, depicted both in Chinese characters.”).

133. Kalita, *supra* note 96.

134. *Id.*

cy to undermine Indian sovereignty.”¹³⁵ That Google’s mapping of the region disrupted a bilateral negotiation summit, instigated riots, and led government officials to openly condemn the depictions on the Parliament floor further reveals the influence Google Maps now holds over the relations between state actors.

3. Case Study #3: Emerging Borders (Crimea; South Sudan)

A third area of geographic disputes that reveals the growing role of Google’s cartography in geopolitics pertains to the process of recognizing emerging borders, either through potential secession and annexation (as with Crimea), or through new state creation (as with South Sudan). As for Crimea, the controversy represents Google’s most recent challenge in applying its agnostic methodology. On February 28, 2014, two thousand Russian troops arrived in Crimea, quickly gaining control of the peninsula.¹³⁶ Despite being controlled by Ukraine for over two decades dating back to its own independence,¹³⁷ the region has a Russian-majority population, as compared to ethnic Ukrainians who make up only twenty-four percent of the Crimean people.¹³⁸ The rapid, nearly bloodless, and semi-covert invasion¹³⁹ quickly resulted in a March 16 vote for Crimean secession, where more than ninety-three percent of voting Crimeans,¹⁴⁰ with an alleged eighty-three percent turnout rate,¹⁴¹ favored independence. Despite international condemnation of the referendum as improper, the Russian Federation moved to formally annex the region on March

135. Geens, *supra* note 76.

136. Shaun Walker, Harriet Salem & Ewen MacAskill, *Russian “Invasion” of Crimea Fuels Fear of Ukraine Conflict*, *GUARDIAN* (Feb. 28, 2014), <http://www.theguardian.com/world/2014/feb/28/russia-crimea-white-house>.

137. *Id.*

138. Simon Shuster, *A Russian Invasion of East Ukraine Would Make Crimea Seem Like a Cinch*, *TIME* (Apr. 8, 2014), <http://time.com/52189/russian-invasion-east-ukraine-crimea/>.

139. John Simpson, *Russia’s Crimea Plan Detailed, Secret and Successful*, *BBC NEWS* (Mar. 19, 2014), <http://www.bbc.com/news/world-europe-26644082> (One reporter remarked, “It was only when one of them, wearing a [Ukrainian] police uniform, called out ‘Welcome to Russia!’ that I understood.”).

140. David M. Heszenhorn, *Crimea Votes to Secede From Ukraine as Russian Troops Keep Watch*, *N.Y. TIMES* (Mar. 16, 2014), <http://www.nytimes.com/2014/03/17/world/europe/crimea-ukraine-secession-vote-referendum.html>.

141. Ilya Somin, *The Dubious Crimean Referendum on Annexation by Russia*, *WASH. POST* (Mar. 17, 2014), <http://www.washingtonpost.com/news/volokh-conspiracy/wp/2014/03/17/the-dubious-crimean-referendum-on-annexation-by-russia/>.

21, 2014, with the measure passing 443 to 1.¹⁴² In response to the annexation vote, the U.N. General Assembly (UNGA) overwhelmingly approved a resolution “[a]ffirm[ing] its commitment to the sovereignty, political independence, unity and territorial integrity of Ukraine” and “[c]all[ing] upon all States . . . not to recognize any alteration of the status of . . . Crimea.”¹⁴³

In order to cope with these purported changes to Crimea’s legal status, Google again employed its differing depictions technique, creating on April 11, 2014, a unique world map only accessible from within Russia.¹⁴⁴ In so doing, when a Russian viewer looks at Google Maps they see “a solid line dividing Ukraine from Crimea and no line between Crimea and Russia,”¹⁴⁵ signifying undisputed Russian control. This contrasts with the view from a Ukrainian browser, where the lack of any national border north of Crimea stands for the continued inclusion of the region within Ukraine’s sovereign territory.¹⁴⁶

The Crimean case is particularly noteworthy for two key reasons: speed and defiance. First, in terms of speed, Google was able to quickly adapt its cartographic depictions in less than a month from the original secession vote, while also compensating for both the Russian annexation and the UNGA resolution of condemnation. Unlike most of the prior controversies that Google has managed, which often date back centuries, the handling of this dispute has required a level of agility that most traditional cartographers do not possess. Second, the case of Crimea reveals Google’s willingness to defy and compete with traditional state-based bodies’ interpretation of international law, such as the UNGA. Unlike the aforementioned controversies where reasonable disputes among states exist, the UNGA has taken a position on Crimea, which Google Maps openly contradicts. Such defiance underscores that the immense influence Google’s depictions wield is unbound from any conclusion reached through the traditional state-dominated system. Further, the significance of Google’s willingness to minimize and even delegitimize the will of the UNGA is far from trivial.

142. Marie-Louise Gumuchian, Victoria Butenko & Laura Smith-Spark, *Russia Lawmakers Vote to Annex Crimea; U.S. Steps up Sanctions*, CNN (Mar. 21, 2014), <http://www.cnn.com/2014/03/20/world/europe/ukraine-crisis/>.

143. G.A. Res. 68-262 (Apr. 1, 2014).

144. *Google Maps Marks Crimea as Russia . . . But Only in Russia*, RT (Apr. 11, 2014), <http://rt.com/news/google-maps-crimea-russian-924/>.

145. Vigeland, *supra* note 102.

146. *How Google Represents Disputed Borders Between Countries*, *supra* note 65.

Comparatively, the mapping of South Sudan reveals equally significant yet quite different ways in which Google, as a cartographer, has altered the process of securing legal recognition of an emerging state. South Sudan, the world's 193rd state, was admitted to the organization by the UNGA on July 14, 2011.¹⁴⁷ After the decades-long civil war between the northern and southern parts of Sudan was mediated under the 2005 Comprehensive Peace Agreement, a popular referendum for independence was eventually held in January of 2011.¹⁴⁸ Following the popular referendum, and more than two months after receiving U.N. recognition, Google officially recognized an independent South Sudan by including the country on both of its mapping platforms, Google Maps and Google Earth.¹⁴⁹

However, since Google was able to adapt faster to far more rapid political changes in the case of Crimea, updating its maps three weeks after Russia's vote to annex, the fact that Google required over two months to review its maps of South Sudan raises questions regarding the delay. For South Sudan, the updates to Google Maps and Google Earth were only implemented after the completion of a massive crowd-sourcing mapping initiative, organized by Google on behalf of the new state.¹⁵⁰ To apply Google's cartographic methodology in largely rural South Sudan, more information was needed. In the fledgling state, "[official maps] are hard to come by: The only map available on the government's official website omits" two towns locally recognized as part of the country.¹⁵¹ Although the general placement of South Sudan was known when the United Nations voted, the vote did not specify the exact delineation between states, leaving unclear the legal extent of South Sudan's territory and the status of many border-region towns.¹⁵² Therefore, "Google organized a [series of] South Sudan Community Mapping event[s] in Nairobi . . . intended to encourage local people to create accurate and detailed maps

147. *UN Welcomes 193rd Member State*, UNRIC (July 14, 2011), <http://www.unric.org/en/latest-un-buzz/26841-un-welcomes-193rd-member-state>.

148. *Id.*

149. Piers Dillon Scott, *Google Maps Officially Recognizes South Sudan As an Independent Country*, SOCIABLE (Sept. 18, 2011), <http://sociable.co/web/google-maps-officially-recognises-south-sudan-as-an-independent-country/>.

150. *Id.*

151. Geens, *supra* note 76.

152. Besides the ability to accurately map the region, "for the International Court of Justice or other arbitration courts . . . such omissions will over time come to undermine territorial claims." Geens, *supra* note 95. If a void of state-generated maps persist moving forward, it will be significant if international adjudicatory bodies further turn toward Google's crowd-sourced map as authoritative.

of South Sudan, to help them navigate their path to independence.”¹⁵³ Due to these democratized mapping events, Google may have furthered the objective of affixing South Sudan’s precise borders and solidifying its territorial integrity more than the United Nations or any other single state actor.

III. TAKEAWAYS & POTENTIAL FUTURE IMPLICATIONS

While the list of controversies surrounding Google’s mapping platforms helps reveal the company’s growing influence on the international stage, the broader methodological shift in the practice of cartography raises critical questions regarding the role of supranational organizations and the future development of international law.

A. *Supranational Organizations’ Role in Contemporary Cartography*

With neither states nor state-based organizations controlling cartographic-derived power, the proverbial ball is now in the court of supranational organizations, such as the United Nations, to decide if they desire to reclaim lost international authority. In the two most recent aforementioned controversies, Google outright ignored an overwhelming vote by the UNGA in the case of Crimea and it outmaneuvered the United Nations in ensuring emerging territorial integrity in the case of South Sudan. As any attempt to directly regulate the dissemination of mapping information by agnostic cartographers would be unavailing, the United Nations and others are now cornered into adopting more forceful stances in order to remain relevant in reference to geographic disputes. As previously analyzed, Google’s mapping methodology places an unspecified weight on the stances of international authorities. However, within agnostic cartography, the influence of organizations like the United Nations is self-diminished through a lack of leadership on taking definitive positions. For example, the U.N. Regional Cartographic Conferences (UNRCC) only convenes every three or four years,¹⁵⁴ too infrequently to quickly respond to geopolitical developments.

153. France Lamy, *South Sudanese Sing and Map Their Way to Independence*, GOOGLE AFR. BLOG (July 8, 2011, 10:28 AM), <http://google-africa.blogspot.com/2011/07/south-sudanese-sing-and-map-their-way.html>.

154. *Regional Cartographic Conferences*, U.N. REGIONAL CARTOGRAPHIC CONFERENCES, <http://unstats.un.org/unsd/geoinfo/RCC/default.html> (last visited Jan. 25, 2015).

Further, the U.N.-adopted mapping information that is available to private cartographers is insufficient. Google acknowledged that relying on U.N. information as authoritative is appealing, but that U.N. publications are both insufficiently detailed and often officially neutral on questions of toponymy.¹⁵⁵ As for insufficient detail, the United Nations is going to have to further develop and prioritize—through adequate funding—the quality of its mapping sources to exert any control over cartographic information moving forward. More challenging, the United Nations must consistently announce formal stances on geographic disputes, even if through non-binding resolutions. In the contemporary information age, the fog of imprecision previously viable as a status quo is no longer adequate, and if state-run organizations do not adopt positions, unregulated private actors such as Google will fill the void. Ultimately, the decision is left to traditional state-based actors to decide if the twenty-first century marks the era in which they willingly abdicate control over cartography, or if they will evolve to stay relevant.

B. Impact on the Development of International Law

The general movement away from state-drafted maps and toward popularly crowd-sourced, private maps also foretells of potential upcoming developments in the continued evolution of international law. One area where this change is particularly pronounced involves the evidentiary standard afforded maps by international adjudicatory tribunals, such as the ICJ. Traditionally, international courts “were more restrictive in evaluating maps than almost any other kind of evidence,” rendering the value of cartographic evidence as equal to that of hearsay.¹⁵⁶ However, recent decades have witnessed a reassessment of the traditional standard, wherein decisions by the ICJ have based verdicts partially upon the perceived authority of a map. *The Temple of Preah Vihear Case (Cambodia v. Thailand)* in 1962 is “often referred to as the turning point for evaluating map evidence in international tribunals,”¹⁵⁷ wherein the court ruled that a key map had its own “inherent technical authority.”¹⁵⁸ Since then, in cases such as the 1986 *Case Concerning the Frontier Dispute (Burkina Faso v. Mali)*,¹⁵⁹ the ICJ has repeatedly granted maps evi-

155. McLaughlin, *supra* note 79.

156. Lee, *supra* note 45, at 160.

157. *Id.* at 170.

158. Temple of Preah Vihear (Cambodia v. Thai.), Judgment, 1962 I.C.J. Rep. 6, 21 (June 15).

159. Frontier Dispute (Burk. Faso v. Mali), 1986 I.C.J. Rep. 554, ¶¶ 55–56 (Dec. 22)

dentiary weight in deciding the outcome of cases between states, even if doing so while still iterating their systematic flaws.¹⁶⁰

Currently unanswered is whether the shift toward agnostic cartography will assist or thwart the recent trend toward some evidentiary inclusion of maps under international law. From one perspective, Google's differing depictions technique, wherein multiple maps of the same territory are generated, greatly undermines the position that maps possess any factual legitimacy helpful for adjudicating a dispute. This concern will only continue to grow as independent cartographers dominate the information market for an extended period of time, leaving the available traditional maps ever more outdated or unreferenced.

Nevertheless, it seems more likely that the rise of independent cartographers like Google will actually further the evidentiary adoption of maps in certain contexts. In the *Frontier Dispute* case, the proffered justification by the ICJ for giving evidentiary weight to the map in question was that "it had been drawn up by a body neutral to the parties," using neutral sources of information.¹⁶¹ A key flaw of traditional maps is the highly interconnected relationship which has long existed between cartography and states, dating back centuries. Since states have historically acted as the primary patrons of map making, courts have recognized maps as reflecting one state's out-of-court view of the world, much like hearsay. Google Maps changes that reality. While Google may elect to display customized information in select countries, the underlying, democratically gathered content through its Primary Local Usage rule constitutes an ideal version of unbiased cartographic knowledge.¹⁶² Google has created the sufficient separation required between states and map making to classify its products as neutral, thereby altering the value assessment of

("The actual weight to be attributed to maps as evidence depends on a range of considerations . . . [including] the neutrality of their sources towards the dispute in question and the parties to that dispute. Since relatively distant times, judicial decisions have treated maps with a considerable degree of caution: less so in more recent decisions, at least as regards the technical reliability of maps.").

160. Lee, *supra* note 45, at 172–73.

161. *Id.* at 173; see *Frontier Dispute (Burk. Faso v. Mali)*, 1986 I.C.J. Rep. 554, ¶ 62 (Dec. 22).

162. The ICJ—long before the invention of Google Maps—alluded to the value of on-the-ground political information detached from state opinion. See *Frontier Dispute (Burk. Faso v. Mali)*, 1986 I.C.J. Rep. 554, ¶ 55 (Dec. 22) ("Information derived from human intervention, such as the names of places and of geographical features (the toponymy) and the depiction of frontiers and other political boundaries, does not thereby become more reliable. Of course, the reliability of the toponymic information has also increased, although to a lesser degree, owing to verification on the ground.").

maps under international common law. If the source content is made available for international courts and tribunals, significant concerns over accepting such maps are assuaged, opening the door for broader use.

CONCLUSION

The rise of “agnostic cartographers” and the detachment of map making from state patrons are technologically-catalyzed developments, spawning peripheral implication in the dual spheres of geopolitics and international law. This Note has explored the historical significance of traditional cartography in the consolidation of state-centric power, the shift toward customized cartography by private actors, and the effects of such a shift in an otherwise often overlooked area of legal authority. The numerous instances where Google has embroiled itself in international controversies due to its unique mapping methodology exemplify the immense power such private players now possess as popularly accepted adjudicators of geographic disputes. Each case study reveals that Google’s mapping choices now serve as increasingly influential exercises of soft law, empowered by long-standing tendencies to accept maps as authoritative instruments. Ultimately, it is too soon to tell if states and state-based organizations will tacitly accept this abdication of power, thereby cementing the shift, or if such actors will struggle to remain relevant in the technologically transformed cartographic field.

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