

FROM EXTRATERRITORIALITY TO ECO-TERRITORIALITY? HOW LEGAL ECOLOGY CONFRONTS THE SCIENCE OF SOVEREIGNTY'S INSCRIPTION

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"I thought I was deep in the forest, but the implication of this sign, '234,' is that we are in a laboratory, albeit a minimalist one, traced by the grid of coordinates. The forest, divided into squares, has already lent itself to the collection of information on paper that likewise takes a quadrilateral form. I rediscovered the tautology that I believed I was escaping by coming into the field."¹

INTRODUCTION

The International Map of World, or the IMW in its English acronym, amounted to one of the hallmarks of twentieth century cartography. First proposed in 1891² and later formalized in 1913, the IMW was launched with an ambition to assemble a universal and authoritative representation of planetary space.³ To do so, a revolving consortium of predominantly European and American cartographers sought to consolidate all geographic knowledge into one comprehensive, objective, and faithful picture of the physical landscape.⁴ In technical terms, they aimed for a universal "base map," which was a graphic artefact that reduced the layered complexity of Earth into a single authoritative image with a scale of 1:1,000,000 (or 16 miles to an inch).⁵

Yet, after decades of work, numerous international meetings, and over 800 submitted mappings, the United Nations (UN)

1. BRUNO LATOUR, *Circulating Reference: Sampling the Soil in the Amazon Forest*, in *PANDORA'S HOPE: ESSAYS ON THE REALITY OF SCIENCE STUDIES* 24, 32 (1999).

2. A. Penck, *The Construction of a Map of the World on a Scale 1:1,000,000*, 1 GEOGRAPHICAL J. 253, 254 (1893).

3. Alastair W. Pearson & Michael Heffernan, *Globalizing Cartography? The International Map of the World, the International Geographical Union, and the United Nations*, 67 IMAGO MUNDI: INT'L J. HIST. CARTOGRAPHY 58, 58–59, 61 (2014).

4. See Arthur R. Hinks, *The International One-in-a-Million Map of the World*, 17 ROYAL ENGINEERS J. 77, 77–78 (1913); William Rankin, *Zombie Projects, Negative Networks, and Multigenerational Science: The Temporality of the International Map of the World*, 47 SOC. STUD. SCIENCE 353, 356–57 (2017).

5. Rankin, *supra* note 4, at 356–57, 360, 366–67, 370.

dissolved the IMW project in 1986.⁶ What appeared most surprising is that the dissolution came when the master map was nearly complete, missing only Antarctica, Greenland and portions of southern Africa.⁷ However, the decline and formal ending of the IMW was not at all sudden. As William Rankin explains, the decline developed in the last decades of the mega-project as the disciplinary network behind the IMW became profoundly conflicted about “a strategy of spatial power . . . meant to reduce the messy complexity of the world to a single authoritative image.”⁸ Hence, the project’s downfall resided less in the UN’s determination and more from how cartographers broke with a modern mission to reduce all subjectivities of planetary existence into one single and homogenous picture.⁹

Today, this story of cartographic overreach has relevance and spillover as disciplinary international law confronts a similar question of rupture. International lawyers have come to see and know the earth’s physical landscape via the legacy of state-centric cartography.¹⁰ This cartographic tradition has reduced the earth’s complexity to a jigsaw map of state units, producing a map-mindedness that has dominated modern geopolitical awareness. The problem, however, is this pictorial legacy imposed not simply a Eurocentric, but, crucially, an anthropocentric worldview over physical geography. Anthropocentrism, in particular, has assimilated the earth into a global taxonomy, governed by mapped projections, regulated by geometric science, and divided into technical grids of appropriation, e.g., longitude and latitude. This objectification of the earth has defined statist cartography,

6. Rep. of the Meeting of the United Nations Ad Hoc Grp. of Experts on the Int’l Map of the World on the Millionth Scale, U.N. Doc. E/CONF.81/L.10 (Dec. 9–11, 1986), reprinted in 2 Fourth United Nations Regional Cartographic Conference for the Americas, U.N. Doc. E/CONF.81/3/Add.1 (Vol. II), at 42 (Jan. 23–27, 1989); Rankin, *supra* note 4, at 356.

7. Rankin, *supra* note 4, at 354, 356–57.

8. *Id.* at 356–57.

9. *See id.* at 370–71.

10. *See* Karin Mickelson, *The Maps of International Law: Perceptions of Nature in the Classification of Territory*, LEIDEN J. INT’L L. 621, 621–22 (2014). *See generally* David Shim, *Remote Sensing Place: Satellite Images as Visual Spatial Imaginaries*, GEOFORUM, Jan. 2014 at 152, 152.

and, as Carl Schmitt notes, has been bequeathed to international lawyers in their endeavor to order a newly mapped globe as distinct from the pre-geography earth:

No sooner had the contours of the earth emerged as a real globe—not just sensed as myth, but apprehensible as a fact and measurable as space—than there arose a wholly new and hitherto unimaginable problem: the spatial ordering of the earth in terms of international law. The new global image, resulting from the circumnavigation of the earth and the great discoveries of the 15th and 16th centuries, required a new spatial order.¹¹

Yet, this assemblage of cartography and international law has produced a visual and doctrinal mapping with deep material implications for the natural world. Foremost, there is the violence of nature's translation using the concept of territory. Territory's geographic and legal meaning grafts anthropocentric purpose onto primordial nature, thus licensing access to a geometrically-mapped and anthropically-inscribed "globe." As exemplified via the doctrine of *terra nullius*, nature comes to acquire its "territorial" footprint only when harnessed by some degree of human subjugation, which flows from European preconceptions of land mastery through control, cultivation, and productivity.¹²

More pronounced, however, are systemic consequences deriving from nature's historic externalization as a geopolitical and juridical subject. The anthropocentrism behind statist cartography and international law has crafted a graphic and normative infrastructure, which has driven the planet's geological and climatic re-materialization.¹³ In fact, a trajectory

11. CARL SCHMITT, *THE NOMOS OF THE EARTH IN THE INTERNATIONAL LAW OF THE JUS PUBLICUM EUROPAEUM* 86 (G.L. Ulmen trans., Telos Press Publishing 2006) (1950).

12. Mickelson, *supra* note 10, at 623, 626.

13. See generally BRUNO LATOUR, *POLITICS OF NATURE: HOW TO BRING THE SCIENCES INTO DEMOCRACY* 58 (Catherine Porter trans., 2004) (discussing the impact of ecological crises on humans and nonhumans); Mickelson, *supra* note 10, at 621–24, 626, 637, 639 (discussing the need for change in international law's understanding of the

is apparent where the earth is increasingly made to resemble an anthropic image *as nature*. Geological transformations and ecological extinctions herald a degraded natural world, unrecognizable vis-à-vis the earth's pre-Copernican, pre-discovery, and pre-national biospheres.

The observed reaction to these stark developments by many national and international lawyers has been a rush to counter the excesses of anthropic rule via ecocentrism and what can be called *legal ecology*.¹⁴ This is exemplified by a vanguard of legislative and judicial developments across national and international jurisdictions that aim to establish a *rights-of-nature* approach and, in the words of the Colombian Supreme Court, a new "world ecological public order."¹⁵ The strategy of these developments is to enrich law's "World Map" by enacting laws and undertaking litigation that leverages greater *internalization* of nature within domestic, regional, or international doctrinal structures.¹⁶

This article engages that turn to ecocentrism and legal ecology, and its campaign to internalize nature and produce novel kinds of *eco-territorialization* that green the earth's spatial ordering. Within that varied campaign, international law and, specifically, extraterritoriality have been perceived as doctrinal assets useful for demarcating an emergent form of *eco-territoriality*.¹⁷ The key issues pressed here, however, are: whether this internalization campaign overlooks the rooted

environment).

14. See Mickelson, *supra* note 10, at 623, 639. See generally Daniel J. Rohlf & David S. Dobkin, *Legal Ecology: Ecosystem Function and the Law*, 19 CONSERVATION BIOLOGY 1344, 1344–45 (2005) (explaining the goals of a teaching legal ecology to law students); Frank J. Tipler, *The Anthropic Principle: A Primer for Philosophers*, PSA: PROC. BIENNIAL MEETING PHIL. SCI. ASS'N, vol. 2, 1988, at 27, 27 (defining the "anthropic principle").

15. Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ. abril 5, 2018, M.P.: L. Villabona, Radicación 11001-22-03-000-2018-00319-01 (p. 22, 38) (Colom.) [hereinafter Colombian Supreme Court Case] (author translated "En vista de lo antelado, en el ámbito internacional ha surgido numerosa normatividad, *hard y soft law*, que constituye un orden público ecológico mundial. . .").

16. See LATOUR, *supra* note 13, at 58; see, e.g., Jane Gleeson-White, *It's Only Natural: The Push to Give Rivers, Mountains and Forests Legal Rights*, GUARDIAN (Mar. 31, 2018, 10:33 PM), <https://www.theguardian.com/australia-news/2018/apr/01/its-only-natural-the-push-to-give-rivers-mountains-and-forests-legal-rights>.

17. Mickelson, *supra* note 10, at 622–23, 638–39.

nature of anthropocentrism across geopolitical and legal knowledge, and how that potentially undermines law's structural capacity for ecocentric reform. In this light, the recent turn to legal ecology could merely epitomize—to use Bruno Latour's metaphor—how the “boa constrictor” of statist cartography has developed yet another way of swallowing “the elephant of nature”?¹⁸ This metaphor is salient because the state system is implicated historically in the conquest of the natural world, which begs a further question: to what extent can such an imperial worldview and logic be reformed within established institutions?

Accordingly, my aim is to examine how the campaign of legal ecology interacts with an anthropocentric legal order, recognizing that order as having dominated the natural world much like master-slave relations. Thus, this article discusses legal ecology relative to its dual—institutional and structural—challenges. First, institutional progress is surveyed across national and international jurisdictions, specifically observing when extraterritoriality became deployed to internalize nature and produce, potentially, novel forms of *eco-territoriality*. Yet, in doing that survey, what becomes curious is international law's lasting compliance whereby extraterritoriality is restrained and not used to override established cartography and the supremacy of anthropic boundaries. Second, to better grasp such institutional restraint, we dig into anthropocentrism's deeper structural legacy and governing system of visualization. Specifically, we relate legal ecology's push for a “world ecological public order” to epistemic and graphic legacies that have encoded a reigning world *anthropic* public order. The ultimate goal is to expose international lawyers, and ecocentric lawyering, to the structural power and visual implications of the scientific revolution and, specifically, to the earth's translation into a planimetric object and, in other words, a gridded laboratory.¹⁹

By examining legal ecology in this manner, I argue that we

18. LATOUR, *supra* note 13, at 58.

19. See Nikolas M. Rajkovic, *The Visual Conquest of International Law: Brute Boundaries, the Map, and the Legacy of Cartogenesis*, 31 LEIDEN J. INT'L L. 267, 267–68 (2018).

bring into focus ecocentrism's struggle with a deeper *graphic politics*: a politics concerned with the earth's inherent ordering and how international lawyers and their institutions operate within such politics as agents and executors of the earth's euro-scientific appropriation. This perspective helps to reveal how doctrinal concepts that mediate jurisdiction and responsibility, notably as extraterritoriality, are never merely doing law but, more acutely, are extending the insidious rule of cartographic and, ultimately, anthropic violence. Or, coming back to Latour's metaphor: furthering extraterritoriality in faithful service of the boa constrictor!

I. THE CONSTRICTOR *IN MOVIMENTO*: LEGAL ECOLOGY AND ITS SPECTER OF INVOLUTION

The first task before us now is to take stock of the turn to legal ecology, in particular, providing scrutiny of major legislative and judicial moves that legal ecology to-date encompasses. At present, this internalization movement consists of two prongs of inscription and reterritorialization: (1) the legal personification of "natural" entities, such as iconic forests or rivers; and (2) international protection of transborder ecosystems through an expansion of obligations for states under extraterritorial jurisdiction.²⁰ However, before doing that survey, we need to amplify our binoculars to penetrate what are key strategic layers within which legislative and judicial changes are actually embedded. To do that amplifying, I mobilize Bruno Latour's concept of "circulating reference" to make visible legal ecology's inevitable link to, and guardianship of, science's gridded mapping of the earth.²¹

Latour developed the concept of "circulating reference" during

20. See generally Alain Pottage, *Introduction: The Fabrication of Persons and Things*, in *LAW, ANTHROPOLOGY, AND THE CONSTITUTION OF THE SOCIAL: MAKING PERSONS AND THINGS 1* (Alain Pottage & Martha Mundy eds., 2004) (discussing personification of objects and concepts); Mickelson, *supra* note 10, at 623, 639 (addressing attempts to regulate ecosystems that span international borders); Dinah Shelton, *Nature As a Legal Person*, *VERTIGO—LA REVUE ÉLECTRONIQUE EN SCIENCES DE L'ENVIRONNEMENT*, Sept. 2015, ¶ 1, ¶ 18, <https://vertigo.revues.org/16188>.

21. LATOUR, *supra* note 1, at 24.

his field study of soil collection at the edge of the Amazon forest.²² In that study, Latour observed how this iconic forest underwent a process of transportation and virtual displacement via a chain of scientific inscriptions.²³ Notably, the physical forest became reconstituted and relocated into a visual phenomenon of scientific mapping, and thus world-making,²⁴ where the Amazon was both a non-human ecosystem and a human (graphic) laboratory.²⁵ By observing this conversion where the forest became transposed into a gridded reference, Latour came to see something powerful and imperial about graphic phenomena in their scientific personification of the world:

Our philosophical tradition has been mistaken in wanting to make phenomena[] the meeting point between things-in-themselves and categories of human understanding. . . . Phenomena . . . are not found at the *meeting point* between things and the forms of the human mind; phenomena are what *circulates* all along the reversible chain of transformations, at each step losing some properties to gain others that render them compatible with already-established centers of calculation. Instead of growing from two fixed extremities toward a stable meeting point in the middle, the unstable reference *grows from the middle toward the ends*, which are continually pushed further away.²⁶

How does Latour's notion of "circulating reference" amplify

22. *Id.* at 24, 26.

23. Pottage, *supra* note 20, at 1, 18–19.

24. See LATOUR, *supra* note 1, at 28–29.

25. "[A]s a result of the compass's measurements of angles and the pedofil's measurements of lines, the land has become a proto-laboratory—a Euclidean world where all phenomena can be registered by a collection of coordinates. . . . For the world to become knowable, it must become a laboratory. If virgin forest is to be transformed into a laboratory, the forest must be prepared to be rendered as a diagram." *Id.* at 43.

26. *Id.* at 71–72 (citation omitted).

our sight to better grasp the recent turn to legal ecology? In a nutshell, it raises attentiveness to “already-established centers of calculation” and a robust chain of inscriptive histories.²⁷ Put bluntly, law and—what many lawyers call—“the extra-legal” are very entangled, such that legal ecology represents perhaps the juridical mouth of science’s superseding grid and mass of earthly impersonations. This could strike many lawyers as counterintuitive because doctrinal synopses of recent legislation and cases emphasize a ground-breaking potential where law is speaking “nature” to anthropocentric power. However, what I want to underline is not paradigmatic revolution but, more aptly, structural *involution*.²⁸ Yes, the cartographic constrictor now inches back into view, because involution pertains to internalization processes that involve highly mobile jaws and social ingestion. Accordingly, what may appear like doctrinal law transforming itself to truly internalize the environment’s inherent integrity, could actually represent another iteration of nature’s involution by stretching laws to feed a ruling cartographic rationality, and thus anthropic dominion. As Latour emphasized: “If a picture is worth a thousand words, a map, as we shall see, can be worth a whole forest.”²⁹

Thus, “circulating reference,” and its appetite for involution, provides an important lens through which to read emergent legislative and case developments. This lens is particularly useful as international lawyers become increasingly confronted by a range of novel practices that are translated poorly onto a jigsaw map of state units, relating to such things as the rise of *Anthropocene*, global value chains, shadow warfare, and lethal surveillance systems. In other words, the messiness of these geographic practices defies ready reduction onto the two-dimensional graphics of a “World Map,” which extraterritoriality inherently relies upon through its referential medium of territorial jurisdiction.³⁰

27. See *id.* at 28–29, 68–69, 71–72; see also Pottage, *supra* note 20, at 18–19.

28. Pottage, *supra* note 20, at 14, 21–22.

29. LATOUR, *supra* note 1, at 24.

30. Rajkovic, *supra* note 19, at 267–69.

II. TRACKING *LEX NEO-NATURALIS*: TOWARD "A WORLD ECOLOGICAL PUBLIC ORDER"?

Now we will discuss recent doctrinal developments. What is there to suggest that international lawyers may be on the cusp of adopting new ways of seeing and knowing the earth's physical landscape? Where are the legal signs of a potential "world ecological public order" being inscribed? Could there be an analogous IMW moment in the re-making of international law's "World Map"?

My argument is that recent strides in legal ecology do break ground, but on a lesser scale of systemic change than moves that are actually ground-breaking for the international legal order. Indeed, nouns, word order, and hyphens do certainly matter when packaging "nature" into legal frameworks and narratives. The key distinction rests again in the juxtaposition of involution and revolution and how the layered science of "circulating reference" keeps doctrinal law squarely in the service of the former meaning.³¹

However, this is not to belittle how a series of recent legislative and judicial developments have made an impact vis-à-vis the environment's *institutional* position in the reign of anthropic legalism. That story of change and scope for optimism is best told starting with a vanguard of constitutional moves, and then followed by discussing how judicial developments are internalizing and metabolizing this legislative frontline. I claim it is this interplay between the legislative vanguard and a later judicial metabolism that becomes quite indicative of how science's "circulating reference" still rules the legal inscription of the earth, and how the cartographic constrictor stays resilient in this neo-nature of legal ecology.

Specifically, the turn to legal ecology pertains to a series of initiatives advanced by what grassroots activists broadly refer to as a rights-of-nature movement.³² However, closer inspection reveals three initiatives are different institutional cleavages at

31. Pottage, *supra* note 20, at 18, 21–22.

32. Gleeson-White, *supra* note 16.

work: rights-of-nature; *eco-territorialization*; and *eco-territoriality*. All together, these initiatives are unfolding across different states and continents, and developing diverse lines of construction with respect to legislative drafting and judicial interpretations. At its core, the overall campaign is concerned with reworking the anthropocentric *telos* of doctrinal law, which has transmuted “nature” into territory and, thus, externalized the environment from the international legal order.³³ The doctrinal remedy sought aims at making the environment more visible on the “World Map,” by freeing nature from its current cage of anthropocentric territory to become a distinct and living subject across local, national, and, eventually, international law.³⁴

Most notably, legal ecology has spread over the past decade, vertically and horizontally, to gain footholds across a number of national laws and, even, generating international spillover via two recent landmark cases involving Ecuador.³⁵ Tracking this trajectory is now our object of scrutiny going from local legislative movements to international litigation, where, in the latter instance, extraterritoriality offers seeming potential as a judicial tool for inscribing *eco-territorial* rights and obligations. However, the question remains: Does legal ecology amount to a revolution or involution for nature’s relationship with an anthropocentric legal order? Or, in other words, is the cartographic constrictor actually fading, or simply growing with greener skin for a changed socio-legal jungle?

A. *Rights-of-Nature: The Constitutional Emergence*

The Americas represent a key strategic theatre for the emergence of legal ecology, and specifically, rights-of-nature lawmaking. This follows in part from how two places, the U.S. state of Pennsylvania and the country of Ecuador, became forerunners for a later global movement. Each jurisdiction is a

33. Shelton, *supra* note 20, ¶¶ 4–6.

34. Mickelson, *supra* note 10, at 621.

35. Erin Daly, *The Ecuadorian Exemplar: The First Ever Vindications of Constitutional Rights of Nature*, 21 R. EUR. CMTY & INT’L ENVTL. L. 63, 63 n.1, 65 n.22 (2012).

unique contributor in terms of its timing and extent of doctrinal pioneering.

Pennsylvania was first out of the gate,³⁶ when, in 1971, a popular referendum approved an amendment to the state's constitution asserting: "[t]he people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come."³⁷ This legal watershed, however, left a modest normative footprint because its constitutional change did not actually inscribe rights-of-nature. Instead, the old doctrine of public trust was invoked to frame the environment as a "public natural resource[]," and thus common property for present and future generations.³⁸ Accordingly, while nature did make an important constitutional debut, it was a tame beginning packaged within the governing legal economics of Pennsylvania's constitutional order.

Nearly four decades later, in 2008, Ecuador became the first country to amend its constitution in decisive favor of environmental rights.³⁹ In contrast to Pennsylvania's 1971 amendment, rights-of-nature in Ecuador actually gained doctrinal inscription such that "ecosystems" obtained legal personification, which thus signaled a displacement of the "public natural resource" paradigm.⁴⁰ Further, the temporal lag seemed to benefit Ecuador's Constitutional Assembly in how it consulted with a Pennsylvania-based non-governmental organization, the Community Environmental Legal Defense Fund, that provided assistance to governments and community groups seeking a new rights-of-nature doctrine for the country's legal order.⁴¹ As Dinah Shelton explains, Ecuador's revised constitution took a decisive and more radical approach to legally inscribe "the inalienable

36. Matthew Thor Kirsch, *Upholding the Public Trust in State Constitutions*, 46 DUKE L. J. 1169, 1169 (1997).

37. PA. CONST. art. 1, § 27.

38. Kirsch, *supra* note 36, at 1172–1174.

39. Daly, *supra* note 35, at 63.

40. *Id.* at 66.

41. Shelton, *supra* note 20, ¶ 24.

rights of ecosystems, give individuals the authority to petition on the behalf of ecosystems, and require the government to remedy violations of nature's rights, including 'the right to exist, persist, maintain and regenerate its vital cycles, structure, functions and its processes in evolution.'"⁴²

Pennsylvania and Ecuador subsequently became frontline sites as well for rights-of-nature litigation. Both jurisdictions experienced major constitutional cases within the same time period, i.e. 2011 to 2012, regarding the teleological meaning and implementation of their respective constitutional amendments. What emerged as notable across these cases was the coherence of judicial conclusions, notwithstanding how relevant constitutional provisions were not similar on the standing of rights-of-nature. For instance, Ecuador's first test case was predictably straightforward in its implementation of nature's personified rights under the amended constitution. In *Wheeler c. Director de la Procuraduria General Del Estado de Loja*, the court found the local Vilcabamba government responsible for illegal alterations to the flow of the region's river, and thus imposed an onus on the government to prove no environmental damage and no violation of the river's rights.⁴³ More remarkable, however, is the fact that the Pennsylvania Supreme Court managed to arrive at a similar outcome in *Robinson Township et al. v. Commonwealth of Pennsylvania*,⁴⁴ but without nature's personification in the state's constitution. What bridged the gap was judicial willingness to read and apply the constitution in a way that would not block municipal governments from inscribing rights-of-nature within their local laws to ban "fracking."⁴⁵

B. Eco-Territorialization: Inscribing Ecosystems with Personality and Proto-Sovereignty

Such institutional drive defines a second wave of legal ecology

42. *Id.* (footnotes omitted).

43. Daly, *supra* note 35, at 1–2.

44. *Robinson Twp. v. Commonwealth*, 52 A.3d 463, 488 (Pa. Commw. Ct. 2012), *aff'd in part, rev'd in part* 83 A.3d 901 (Pa. 2013).

45. Shelton, *supra* note 20, ¶ 28.

involving New Zealand, Australia, India, and Colombia. What is distinct about these newer frontiers is the bolder and more heterodox character of both legislative and judicial interventions. In this section, we focus on legislative activism in New Zealand owing to the comprehensive way that state has inscribed not just legal personality but, further, an avant-garde territoriality for its iconic waterway. In the ensuing section, we focus on judicial interventions in India and Colombia regarding the contrast between national and international adjudication on the permissible scope of nature's internalization.

At first glance, New Zealand seems to be an elaborate exemplar of rights-of-nature lawmaking, but closer scrutiny reveals a more profound institutional shift from a rights-of-nature approach to a politics of nature's *eco-territorialization* or, even, proto-sovereignty.⁴⁶ This characterization flows from landmark agreements in New Zealand on the legal status of the country's longest navigable waterway, the Whanganui River.⁴⁷ The whole river system has been at the center of a longstanding title claim by the Maori Iwi people ("Iwi").⁴⁸ However, the Iwi's claim revolved around more than just intent to possess title over the river and its resources. The Iwi sought legal inscription of their sacral view that the wider ecosystem was a physical and metaphysical "living being."⁴⁹

This legalization agenda received considerable attention when, in 2011, the New Zealand government announced a non-binding agreement to negotiate a final settlement with the Iwi, with the aim to "promote and protect the *Te Awa Tupua* status and the health and wellbeing of the Whanganui River."⁵⁰ In 2012,

46. Mihnea Tanasescu, *Rivers Get Human Rights: They Can Sue to Protect Themselves*, SCI. AM. (June 19, 2017), <https://www.scientificamerican.com/article/rivers-get-human-rights-they-can-sue-to-protect-themselves/>.

47. *Record of Understanding in Relation to Whanganui River Settlement—Whanganui Iwi and the Crown*, NGĀ TĀNGATA TIĀKI O WHANGANUI ¶ 1.5 (Oct. 13, 2011), https://www.ngatangatatiaki.co.nz/assets/Uploads/Important-Documents/DocumentLibrary_WhanganuiRiverROU.pdf [hereinafter *Whanganui River Settlement*].

48. Shelton, *supra* note 20, ¶ 31.

49. *Whanganui River Settlement*, *supra* note 47, ¶ 1.2.

50. *Id.* ¶ 3.12.

that promise took shape with a preliminary agreement where the river system underwent a process of *eco-territorialization* via formal recognition as “a living entity in its own right . . . incapable of being ‘owned’ in an absolute sense.”⁵¹

However, this reterritorialization process came with added institutional features that extended a kind of proto-sovereignty for the *Te Awa Tupua* vis-à-vis New Zealand’s legal order. Specifically, the agreement (*Tūtohu Whakatupua*), which became law in 2017,⁵² displaced the language of public trusts and common trusteeship by creating two river guardians with a mission to provide “the human face of *Te Awa Tupua*” and “owe [their] responsibilities to *Te Awa Tupua*, not the appointors.”⁵³ Further, the 2012 agreement produced a novel jurisdictional landscape by mapping the *Te Awa Tupua* with a heterodox and non-geometric declaration of its boundaries: “the Whanganui River [is] an indivisible and living whole, from the mountains to the sea, incorporating and all its physical and metaphysical elements.”⁵⁴ As such, the river system gained more than simply rights-of-nature, it obtained jurisdictional spacing that was uniquely both inside and outside the territorial, as well as Anglo-linguistic, ordering of New Zealand’s traditional legal map.⁵⁵ This geographic move disrupting a deep anthropocentrism, as well as imperial ethos, resident within the cardinal principle that state sovereignty possesses “one voice [that] speaks for all . . . in the state.”⁵⁶

51. *Tūtohu Whakatupua*, N.Z. GOV’T § 2.7 (August 30, 2012), <https://www.govt.nz/assets/Documents/OTS/Whanganui-Iwi/Whanganui-Iwi-Agreement-re-Whanganui-River-claims-Tutohu-Whakatupua-30-Aug-2012.pdf>.

52. See *Te Awa Tupua (Whanganui River Claims Settlement) Bill*, N.Z. PARLIAMENT, https://www.parliament.nz/en/pb/bills-and-laws/bills-proposed-laws/document/00DBHOH_BILL68939_1/te-awa-tupua-whanganui-river-claims-settlement-bill (last visited May 8, 2020).

53. *Tūtohu Whakatupua*, *supra* note 51, §§ 2.18, 2.20.2–2.20.3 (emphasis added).

54. *Id.* § 2.4.

55. Anna M. Gade, *Managing the Rights of Nature for Te Awa Tupua*, EDGE EFFECTS (Oct. 12, 2019), <https://edgeeffects.net/te-awa-tupua/>.

56. Robert McCorquodale & Raul Pangalangan, *Pushing Back the Limitations of Territorial Boundaries*, 12 EUR. J. INT’L L. 867, 873 (2001).

C. *Eco-Territoriality: Nature's Judicialization in the Shadow of the Constrictor*

It remains to be seen whether this *eco-territorialization* of the *Te Awa Tupua* represents a doctrinal tipping point for ecosystems gaining legal personification, or even proto-sovereignty, within the international legal system. For instance, in neighboring Australia, the state of Victoria worked with the Wurundjeri people to enact the *Yarra River Protection (Wilip-gin Birrarung murron) Act of 2017*.⁵⁷ Yet, in contrast to New Zealand's *Tutohu Whakatupua*, the Yarra ecosystem was only recognized as "one living and integrated natural entity" without legal personification.⁵⁸ Similarly, recent litigation involving India and Colombia reveals how vanguard national courts in both countries have used varied sources and readings of law to enact rights-of-nature and, arguably, *eco-territorialization*. However, international adjudication concerning Columbia seems to advance lawmaking in the opposite direction to buttress state-centric and, thus, anthropocentric legalism.

For example, India's Uttarakhand High Court, in *Salim v. State of Uttarakhand et al.*, drew extensively and exclusively from domestic case law to justify recognizing the Ganga and Yamuna rivers as distinct "physical" and "spiritual" beings.⁵⁹ Echoing New Zealand's legislative watershed, the High Court declared the Ganga and Yamuna as essential to the material and metaphysical welfare of the country, and, consequently, bound a trio of state authorities as *persons in loco parentis* for the rivers.⁶⁰ Likewise, the Colombian Supreme Court held the Amazon to be a vital

57. *Developing the Yarra Strategic Plan*, MELB. WATER (July 11, 2019), <https://www.melbournewater.com.au/about-us/publications-and-policies/developing-yarra-strategic-plan>.

58. *Yarra River Protection (Wilip-gin Birrarung murron) Act 2017* (VIC) pt 1 s 1 (Austl.), [http://www.legislation.vic.gov.au/Domino/Web_Notes/LDMS/PubStatbook.nsf/51dea49770555ea6ca256da4001b90cd/DD1ED871D7DF8661CA2581A700103BF0/\\$FILE/17-049aa%20authorised.pdf](http://www.legislation.vic.gov.au/Domino/Web_Notes/LDMS/PubStatbook.nsf/51dea49770555ea6ca256da4001b90cd/DD1ED871D7DF8661CA2581A700103BF0/$FILE/17-049aa%20authorised.pdf).

59. Mohd. Salim v. State of Uttarakhand et al, Writ Petition (PIL) No. 126, 11 (March 20, 2017), https://www.elaw.org/system/files/attachments/publicresource/in_Salim_riverpersonhood_2017.pdf.

60. *Id.* at 12.

ecosystem, and recognized the forest as “a ‘subject of rights’, holder of protection, conservation, maintenance and restoration by the State and the territorial agencies that comprise it.”⁶¹ The case deriving from a suit by 25 plaintiffs challenging a 44% increase (178, 597 acres) in deforestation of the Colombian Amazon between 2015 and 2016.⁶² The Colombian Supreme Court assessed that level of deforestation, and its future implications for climate change, to be in violation of numerous “hard and soft law” regulations under international law, and especially the “supralegal” right to enjoy “a healthy environment.”⁶³ In addition, the court used the occasion to advocate displacing, what it called, the “anthropocentric and egoistic model” of lawmaking with “‘ecocentric-anthropic’ criteria, which places the human being on a par with the ecosystem environment, the purpose of which is to avoid arrogant, dismissive, and irresponsible treatment of the environmental resource, and of its entire context, to satisfy materialistic ends, without any protectionist or conservationist.”⁶⁴

However, the Inter-American Court of Human Rights (IACtHR) performed a subtle inversion of that hyphen—between

61. Colombian Supreme Court Case, *supra* note 15, at 45 (author translated “*sujeto de derechos*”, titular de la protección, de la conservación, mantenimiento y restauración a cargo del Estado y las entidades territoriales que la integran.”).

62. Anastasia Moloney, *Colombia’s Top Court Orders Government to Protect Amazon Forest in Landmark Case*, REUTERS (April 6, 2019, 9:46 AM), <https://www.reuters.com/article/us-colombia-deforestation-amazon/colombias-top-court-orders-government-to-protect-amazon-forest-in-landmark-case-idUSKCN1HD21Y>; Uclia Wang, *Colombian Court Orders Government to Stop Deforestation, Protect Climate*, CLIMATE LIABILITY NEWS (April 5, 2018), <https://www.climateliabilitynews.org/2018/04/05/colombia-amazon-climate-change-deforestation/> (“The country lost 178,597 acres of forests in 2016, a 44 percent jump from the year before, Dejusticia said in the court filing”).

63. Colombian Supreme Court Case, *supra* note 15, at 1–2, 22 (author translated “Los promotores suplican la protección de derechos ‘*supralegales*’, destacándose los de ‘*gozar de un ambiente sano*’, vida y salud, presuntamente vulnerados por los acusados” and “En vista de lo antelado, en el ámbito internacional ha surgido numerosa normatividad, *hard y soft law* . . .”).

64. *Id.* at 20–21 (author translated “*ecocéntrico—antrópico*”, el cual sitúa al ser humano a la par del entorno *ecosistémico*, cuyo finalidad es evitar el trato prepotente, displicente e irresponsable del recurso ambiental, y de todo su contexto, para satisfacer fines materialistas, sin ningún respeto proteccionista o conservacionista”).

ecocentric and anthropic—in its 2017 *Advisory Opinion on the Environment and Human Rights*.⁶⁵ The judicial opportunity came with Colombia's petition to the IACtHR on Caribbean states' environmental responsibilities vis-à-vis a planned trans-isthmus canal affecting the Caribbean Sea.⁶⁶ The *Advisory Opinion* was exemplary for its three-pronged position that, in effect, contrasted its jurisprudence from the earlier-discussed Indian and Colombian decisions. First, this international court affirmed the right to a healthy environment as being integral to the rubric of fundamental rights.⁶⁷ Second, it raised the possibility of using extraterritoriality to enact a sort of *eco-territoriality*, where jurisdictional responsibility for environmental damage could extend beyond the territorial limits of a state when states become aware that an activity planned under their jurisdiction could generate a risk of significant transboundary damage.⁶⁸ Third, and remarkably, the IACtHR also moved to restrain those same affirmations by insisting they were “exceptional” possibilities, such that jurisdictional responsibility for environmental damage remained subject to the gridded parameters of (extra)territorial geography.⁶⁹ In other words, the international court's validation of the rights-of-nature did appear to resemble more avant-garde jurisprudence—like in India's and Colombia's national courts—but, in actuality, the IACtHR kept its lawmaking embedded within the anthropocentric order and mapping of extraterritorial jurisdiction. The outcome was a remarkable instance where institutional change became absorbed by structural involution: an ecocentric variant of extraterritoriality emerged, while, at the same time, there was judicial insistence that extraterritorial obligations for transboundary harms were governed by international adjudication's state-centric, and thus anthropic, cartography.⁷⁰

65. See *Environment and Human Rights*, Advisory Opinion OC-23/17, Inter-Am. Ct. H.R. (ser. A) No. 23, ¶ 23 (Nov. 15, 2017) [hereinafter *Advisory Opinion OC-23/17*].

66. *Id.* ¶ 2.

67. *Id.* ¶¶ 56–60, 242.

68. *Id.* ¶ 104(h).

69. *Id.* ¶ 104(d).

70. See *id.* ¶¶ 187, 242.

What this brings into view is how judicialization vaults into a strategic position and frontline now within legal ecology, such that national and international courts are advancing contending priorities—or hyphens—on the balance between ecocentric and anthropic legalism. It's a dynamic visible when one observes how the natural world has assumed different kinds of subjectivities across India's Uttarakhand High Court and the Colombian Supreme Court versus the IACtHR. Yet, what is behind these contending strands of judicialization vis-à-vis their differing hyphens of ecocentric and anthropic lawmaking? What explains the restraint and hesitation by international adjudication, in the instance of the IACtHR, to follow the Colombian Supreme Court and decisively challenge boundaries of the anthropocentric legal order? In the forthcoming section, I argue that these discrepancies may be less about the clash of differing judicial preferences and more about international law and adjudication acting, less consciously, to sustain the "circulating reference" of anthropic rule, geometric science, and the cartographic constrictor.

III. *UTI POSSIDETIS JURIS*: WHAT LAW SCHOOL DOES NOT TEACH ABOUT THE SCIENCE BEHIND SOVEREIGNTY

Indeed, the boa is back, and with its mass of scientific legacy that even environmental lawyers and activists may not fully grasp. What needs to be made visible, therefore, is the scale of what legal ecology confronts, in epistemic and visual terms, with its ambition to instill an ecocentric teleology for national and international lawmaking: a deep graphic infrastructure that has constructed an anthropic worldview of what the earth is and should look like, irrespective of newfound convictions to make nature *great again*—i.e. legally visible. This legacy likely sits behind the restraint shown by the IACtHR when it confronted "transboundary" environmental harms, and the problem of how to distribute extraterritorial responsibility across a state-centric grid that has subjugated nature. Therefore, a proposed shift toward "ecocentric-anthropic criteria" or a "world ecological public order," as the Colombian Supreme Court has heralded, means confronting the grand design and "circulating reference" of

anthropocentric mapping, which has mimicked the earth and dominated nature's subjectivity.

My distinction between an anthropic globe and the earth might seem puzzling at first, since an iconic "World Map" conditions most of us from the moment we arrive in formal education.⁷¹ This extends forcefully into international legal education, where canonical textbooks (i.e. Brierly⁷² or Oppenheim)⁷³ and cases (i.e. *Island of Palmas*,⁷⁴ *Frontier Dispute (Burkina Faso/Republic of Mali)*,⁷⁵ and *Pedra Branca*),⁷⁶ unequivocally relate international law to "the surface of the earth" and the need to occupy a "definite portion of the surface of the globe."⁷⁷ As Carl Schmitt has noted, seeing that physical-political image as the basis of international law grew from a cartographic way of thinking and acting, which drove a linear scheme of spatial ordering:

[T]he struggle among European powers for land-appropriations made necessary certain divisions and distributions. These sprang from what I call *global linear thinking*, which represents a chapter in the historical development of spatial consciousness. It began with the discovery of a

71. Rob Kitchin & Martin Dodge, *Rethinking Maps*, 31 PROGRESS HUM. GEOGRAPHY 331, 331 (2007).

72. ANDREW CLAPHAM, BRIERLY'S LAW OF NATIONS: AN INTRODUCTION TO THE ROLE OF INTERNATIONAL LAW IN INTERNATIONAL RELATIONS (7th ed. 2012). "At the basis of international law lies the notion that a state occupies a definite part of the surface of the earth . . ." *Id.* at 168.

73. L. OPPENHEIM, INTERNATIONAL LAW: A TREATISE 368 (Ronald F. Roxburgh ed., 3rd ed. 2005).

74. *Island of Palmas Case (Neth./U.S.)*, 2 R.I.A.A. 829, 838 (1928) ("Sovereignty in the relations between States signifies independence. Independence in regard to a portion of the globe is the right to exercise therein, to the exclusion of any other State, the functions of a State").

75. Gino J. Naldi, *The Case Concerning the Frontier Dispute (Burk. Faso, Republic of Mali): Uti Possidetis in an African Perspective*, 36 INT'L & COMP. L. Q. 894, 902 (1987).

76. *Pedra Branca: Beginnings of the Dispute*, MINISTRY OF FOREIGN AFF. SING., <https://www.mfa.gov.sg/SINGAPORES-FOREIGN-POLICY/Key-Issues/Pedra-Branca> (last visited May 9, 2020).

77. OPPENHEIM, *supra* note 73, at 305, 360.

“new world” and the start of the “modern age,” and kept pace with the development of geographical maps and of the globe itself. . . .

The question was political from the start; it could not be dismissed as “purely geographical.” . . .

No sooner had the first maps and globes been produced, and the first scientific concept of the true form of our planet and of the New World in the West been established, than the first global lines of division and distribution were drawn.⁷⁸

Accordingly, a particular teleology of the earth’s spatial character has stood behind international law, with its imperative of translating all political and legal projects onto a flat geometric grid,⁷⁹ and with cartographic visualization shaping what the legal world is and should “look like” as a universal form. Connecting this insight back to the IMW, the impetus to reduce the international legal order to one graphic model, and powerfully lay out the world in a single authoritative image, reflects formidable interplay between the cartographic “eye” and legal vision. However, as Christian Jacob explains, that interplay has always come with a key epistemological hazard: “[m]aps suggest ways of thinking as well as seeing. They materialize a view of the mind more than of external reality. They project an order of reason onto the world and force it to conform to a graphic rationale, a cultural grid, a conceptual geometry.”⁸⁰

Therefore, a pivotal question emerges on how such an influential medium eludes more conceptual and doctrinal reflection by international lawyers, especially considering legal ecology’s alternate teleology and mission. How is it that modern maps have been revisited—and radically—by many geographers

78. SCHMITT, *supra* note 11, at 87–88.

79. Bruno Latour, *Visualisation and Cognition: Drawing Things Together*, in 6 KNOWLEDGE AND SOCIETY STUDIES IN THE SOCIOLOGY OF CULTURE PAST AND PRESENT 2, 4, 30 (H. Kuklik ed., 1986), <http://www.bruno-latour.fr/sites/default/files/21-DRAWING-THINGS-TOGETHER-GB.pdf>.

80. CHRISTIAN JACOB, *THE SOVEREIGN MAP: THEORETICAL APPROACHES IN CARTOGRAPHY THROUGHOUT HISTORY 2* (Tom Conley trans., Edward H. Dahl ed., 1992).

and sociologists, but, yet, international law continues to uphold statist mapping with the veneer of “hard” science? As emphasized repeatedly by the International Court of Justice,⁸¹ linear precision or accuracy, rather than the normativity of lines, has predominated doctrinal law’s mapping of the globe:

Any maps which do not precisely indicate the political distribution of territories . . . must be rejected forthwith. unless [sic] they contribute—supposing that they are accurate—to the location of geographical names. Moreover, indications of such a nature are only of value when there is reason to think that the cartographer has not merely referred to already existing maps—as seems very often to be the case—but that he has based his decision on information carefully collected for the purpose. Above all, then, official or semi-official maps seem capable of fulfilling these conditions

. . . .

The first condition required of maps that are to serve as evidence on points of law is their geographical accuracy. It must here be pointed out that not only maps of ancient date, but also modern, even official or semi-official maps seem wanting in accuracy.⁸²

Notably absent, however, is scrutiny of the anthropocentrism working within the incumbent “World Map.” There are pertinent short and long answers to how that normative inquiry has been stunted across institutional and scholarly awareness, which I will address now (short answer) and in the ensuing sections (long answer).

81. Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea (Nica. v. Hond.), Judgment, 2007 I.C.J. Rep. 659, ¶¶ 134, 138, 165, 214 (Oct. 8).

82. Island of Palmas Case (Neth./U.S.), 2 R.I.A.A. 829, 852–53 (1928).

First, international lawyers have side-stepped greater historical or sociological explanations via adept use of a powerful conceptual and rhetorical bulwark: *uti possidetis juris*. This doctrinal principle asserts that states must accept the inherency and primacy of established (state) boundaries,⁸³ so as to prevent widespread conflict and preserve stability within the international legal system—foremost in decolonized Africa⁸⁴ and Asia.⁸⁵ However, despite its doctrinal centrality, critique surrounds *uti possidetis juris* in terms of its perpetuating “artificial” colonial frontiers, and the implications this has brought by dominating alternate cultural, political,⁸⁶ or ecocentric⁸⁷ conceptions of boundaries. The legal extent of this criticism, as Robert McCorquodale and Raul Panagalangan illustrate, focuses on *uti possidetis juris* as a juridical time-machine that has reproduced the colonial state trans-historically:

The power of the colonial state is affirmed . . . [through] an allocation of ‘power across time by entrenching the categories and generalizations of the past and thus dissipating the power of the present . . . [which] reflects the extent of decisional conservatism within the system’. . . . By ignoring natural boundaries and by ensuring that new states, and the boundaries of new states, are decided in the interests of the existing states, the international legal system recreates and affirms the dispositions by colonial powers.⁸⁸

83. IAN BROWNLIE, BOUNDARY PROBLEMS AND THE FORMATION OF NEW STATES 3–4 (1996).

84. See Frontier Dispute (Burk. Faso/Republic of Mali), 1986 I.C.J. Rep. 554, ¶¶ 19–20 (Dec. 22).

85. See Temple of Preah Vihear (Cambodia v. Thai.), Judgment, 1962 I.C.J. Rep. 6, 16 (Jun. 15).

86. Peter Radan, *Post-Secession International Borders: A Critical Analysis of the Opinions of the Badinter Arbitration Commission*, 24 MELB. U. L. REV. 50, 59 (2000).

87. Mickelson, *supra* note 10, at 621.

88. McCorquodale & Pangalangan, *supra* note 56, at 876–77 (second alteration in original) (footnotes omitted) (quoting FREDERICK SCHAUER, PLAYING BY THE RULES: A PHILOSOPHICAL EXAMINATION OF RULE-BASED DECISION-MAKING IN LAW AND LIFE 173

Yet, a larger artificiality looms with *uti possidetis juris*, which law school, and even critical legal scholarship, rarely teaches. The conventional curriculum typically fails to engage the immense epistemic and graphic infrastructure that stands behind *uti possidetis juris*, which requires grasping how state-centric cartography has created the appearance of a brute spatial order that *uti possidetis juris* enacts as a matter of compliance. In other words, the spectre of artificiality extends beyond the colonial connotation into the ongoing reign of cartographic reason over the earth, whether in formal colonial or postcolonial iterations. As Tania Li Murray reminds us, this reign has turned the earth into a surface for exploitation, where anthropic lines and boundaries transform a planet into a resource: inscriptive devices “the spade, the plough, the title deed, the tax register, maps, graphs . . . do more than simply record the presence of land . . . they are integral to assembling it as a resource”⁸⁹

Murray Li’s quote points to an underlying visual conquest, which involves layers of inscriptions that stand at the root of *uti possidetis juris* and anthropocentric legal ordering: a conquest by cartographic reason—and “reality”—where the earth’s “land” has become fashioned into an anthropic object and, subsequently, a universal planimetric map. This brings us now to the promised “long” answer, and the most fundamental legacy that legal ecology has yet to confront: the graphic empire of the “World Map.”

A. *The Cartographization and Conquest of Earth*

There are many layers that go into the earth’s so-called cartographization, and how such a teleological process came to visually, and then materially, slice all manners of rivers, forests, nomads, and “wild” life in its path.⁹⁰ It’s a graphic empire that

(1991)).

89. Tania Murray Li, *What is Land?: Assembling a Resource for Global Investment*, 39 TRANSACTIONS INST. BRIT. GEOGRAPHERS 589, 589 (2014).

90. Damian Carrington, *Humans Just 0.01% of All Life but Have Destroyed 83% of Wild Mammals—Study*, GUARDIAN (May 21, 2018, 3:00 PM), <https://www.the>

took its first steps when Copernicus' image of a finite globe seized sovereign, and most significantly, jurisdictional imaginations.⁹¹ The historical power and domination of that finite image, I argue, is difficult to unseat via momentary (judicial) assertions for "ecocentric-anthropic" hyphenation, when the earth's conquest by cartographic reason still remains epistemically and optically intact. In other words, the apparent naturalness of the "World Map" quietly conditions even eco-minded lawmakers into acting upon "nature" within cartographic and geometric parameters, and thus in effect making legal ecology less about radical hyphenation and more about anthropocentrism *light*.

The confines of this article permit only summary engagement with how recent centuries of statist mapping came to mimic the earth, position the "World Map" as an authoritative mirror of nature, and thus materialize a geometrically perfect world⁹² within which *uti possidetis juris*, extraterritoriality and, notably, state-centric involution continually circulate. As such, my sociological eye colors the analysis as I seek to unpack how cartographization, through several centuries of lines and mappings, came to gradually colonize and normalize nature's externalization from an anthropic globe. The aim is to reveal the depth with which legal ecology is embedded within, and dependent upon, the system of thought that is statist cartography's conquest of "nature."

Thus, the task is to grasp how the cultural embedding of cartographic reality has made thinkable a carving up of the biophysical earth in the name of altruistic "science," but at the political service of anthropic domination. This gives us another line of sight into the IACtHR's earlier-noted hesitation: the application of extraterritoriality is as much about jurisdiction's proper extension as it is the reproduction of a robust cartographic and geometric empire. Or, to paraphrase the words of the late

[guardian.com/environment/2018/may/21/human-race-just-001-of-all-life-but-has-destroyed-over-80-of-wild-mammals-study](https://www.guardian.com/environment/2018/may/21/human-race-just-001-of-all-life-but-has-destroyed-over-80-of-wild-mammals-study).

91. ARTHUR JAY KLINGHOFFER, *THE POWER OF PROJECTIONS: HOW MAPS REFLECT GLOBAL POLITICS AND HISTORY* 75 (2006).

92. See Abraham Akkerman, *Urban Planning in the Founding of Cartesian Thought*, 4 *PHIL. & GEOGRAPHY* 141, 144, 161 (2001).

critical cartographer J.B. Harley, boundaries of any sort are the product “not only of ‘the rules of the order of geometry and reason’ but also of the ‘norms and values of . . .’ the social forces that have structured . . . all map knowledge.”⁹³

A brief comparison of pre-modern and modern worldviews becomes useful for grasping how cartographic science came to optically colonize and naturalize an anthropic globe that still sits at the foundation of international law. Such a colonization was not rapid or linear, but rather an assemblage over several centuries of intersecting inscriptive projects that eventually produced a hegemonic model grounded on a “single sphere with one common centre of gravity.”⁹⁴ For instance, despite popular reference in contemporary scholarship to “Euclidian space” and the inheritance of Greek geometry,⁹⁵ what is forgotten is that the Ancient Greeks had in fact no word which equated to the modern term “space.”⁹⁶ Similarly, proceeding into European medieval history, as Camille notes, “there was no such thing as ‘space’ for medieval people” as understood in the modern “global” abstraction.⁹⁷ Rather, the medieval conceptualization of what modernity calls space, as Jordan Branch explains, involved a complex constellation of distinct places and subjectivities rather than any universal geographic architecture:

Two key features of the medieval view of space can be discerned: first, the world was understood as a series of unique places rather than as a geometric area or expanse; and, second, space was conceived in terms of time as much as distance. . . .

93. J. B. Harley, *Deconstructing the Map*, in CLASSICS IN CARTOGRAPHICA: REFLECTIONS ON INFLUENTIAL ARTICLES FROM CATOGRAPHICA 273, 275 (Martin Dodge et al. eds., 2011).

94. Jens Bartelson, *The Social Construction of Globality*, 4 INT’L POL. SOC. 219, 225 (2010).

95. See Gavin Sullivan, *Transnational Legal Assemblages and Global Security Law: Topologies and Temporalities of the List*, 5 TRANSNAT’L LEGAL THEORY 81, 90 (2014).

96. Stuart Elden, *Missing the Point: Globalization, Deterritorialization and the Space of the World*, 30 TRANSACTIONS INST. BRIT. GEOGRAPHERS, 8, 12 (2005).

97. Michael Camille, *Signs of the City: Place, Power, and Public Fantasy in Medieval Paris*, in MEDIEVAL PRAC. SPACE 1, 9 (Barbara A. Hanawalt & Michal Kobińska eds., 2000).

Medieval Europeans perceived the world as a series of places, each with its own, possible unique, characteristics.⁹⁸

This now sets the stage for a figure not typically identified as seminal to the founding of the modern international legal order: Rene Descartes. His analytic geometry became, ultimately, the (scientific) language by which imperial Europe encoded its appropriations of the earth, or what Copernicus labelled the *rotunditate absoluta*.⁹⁹ In other words, Cartesian geometry was revolutionary for both modern science and modern legal history. Yet, a stylized division between scientific versus legal history, and the fact that Descartes was a mathematician and not a lawyer, has led most to overlook this profound normative contribution toward cartographic world-making, and thus international legal ordering.¹⁰⁰ Descartes developed a mathematics, and specifically metrics, that became the universal basis for normatively inscribing and demarcating anthropic boundaries, and, consequently, the visual domestication of all animate and inanimate life on Earth into territorial units, notably the Euro-centric state system.¹⁰¹

To be proportionate, Descartes' work stood at the vanguard of a much longer process where sovereign power and authority underwent geometrization, which grew out of the cumulative philosophical interventions of Spinoza, Newton, and Kant—to name a few.¹⁰² Notwithstanding, Descartes represented a

98. JORDAN BRANCH, *THE CARTOGRAPHIC STATE: MAPS, TERRITORY, AND THE ORIGINS OF SOVEREIGNTY* 48 (2014).

99. See Nikolas M. Rajkovic, *On Fragments and Geometry: The International Legal Order as Metaphor and How It Matters*, 6 ERASMUS L. REV. 6, 11–12 (2013) (discussing Copernicus' assertion of the *rotunditate absoluta* and how Descartes' analytic geometry was used for the modern state's appropriation of territory).

100. John W. Cooley, *Descartes' Analytic Method and the Art of Geometric Imagineering in Negotiation and Mediation*, 28 VAL. U. L. REV. 83, 84, 92–93 (1993).

101. Ramón Grosfoguel, *Transmodernity, Border Thinking, and Global Coloniality*, HUMANDEE (July 4, 2008), <http://www.humandee.org/spip.php?article111>.

102. HENRI LEFEBVRE, *THE PRODUCTION OF SPACE* 1–2 (Donald Nicholson Smith trans., Blackwell 1991) (1984).

vanguard in that process because he formulated new conditions of possibility in two key ways, and this disrupted the "thinkable" as passed down from the Ancient Greeks. First, he made a pivotal separation between human thought (*res cogitans*) and the material world "out there" (*res extensa*),¹⁰³ and in this way non-human "space" assumed a material existence and identity alleged to be independent from human thought and senses. Second, flowing from this premise, Descartes held that this non-human materiality (Cartesian space) was arithmetically divisible and calculable,¹⁰⁴ and that opened capacity for algebraic translation (analytical geometry) and appropriation by mathematics. As Stuart Elden usefully explains, Cartesian geometry reassembled Aristotle's classical separation between geometry and arithmetic, and this made possible a political geometry that enacted (state) border lines:

For Aristotle, the key thing about the connectivity of units is that they are discrete, separate from each other. A sequence of numbers, for example, has a distance between each of them, we count one after the other, steps along the way. A line, in distinction, while it has points within it, cannot simply be reduced to a string of points. There is more to the line, because the connection of points is different from the sequence of numbers. Points, when they are connected, literally have the end of one as the beginning of the next, there is nothing between them

. . . .

Descartes [saw] geometry as equivalent of algebra; it is the symbolic version of the world. . . . Descartes [saw] geometrical figures and, by extension, the world of which they are symbols, as

103. *Id.* at 1–2.

104. RENÉ DESCARTES, *OEUUVRES DE DESCARTES: PRINCIPIA PHILOSOPHÆ* 85–86 (Léopold Cerf ed., 1905).

numerically calculated.¹⁰⁵

In a nutshell, Descartes' mathematical intervention enabled what Henri Lefebvre coined the geometric "science of space"¹⁰⁶ and Carl Schmitt called the rise of "the first global lines,"¹⁰⁷ where the earth became translated into an anthropic model with subjectivities defined by the rules and rule of algebraic precision. The Cartesian coordinates system provided a metric platform, which governed the visibility of all entities, human and non-human, through a grammar of planimetric borders and geometric domains. As a result, an anthropic globe could be calculated, constructed, and materialized much in the way the Renaissance had made "geometrically perfect town[s]."¹⁰⁸ Descartes' algebraic move reassembled Aristotle's ontology of the line, and in the process, turned geometric science into an asset and *actant* for territorializing an anthropic globe on the earth's displaced, and thus invisible, nature.

It did not take long for terrestrial implications to become manifest within and at the frontiers of early modern geopolitics, as European states applied the principles and aesthetics of geometrization as rigorously as was practicable. The most discussed examples are how baroque dynastic states in the seventeenth and eighteenth centuries harnessed geometrization to exert measurable control over land via projects such as cadastral mapping, military surveys, and longitude measurement techniques.¹⁰⁹ The most architectonic examples illustrated Europe's first geometric border produced in the Pyrenees in 1659, and, more grimly, how planimetric¹¹⁰ gridlines of latitude and longitude were used to sterilize and then colonize the lands of

105. Elden, *supra* note 96, at 12.

106. LEFEBVRE, *supra* note 102, at 2.

107. SCHMITT, *supra* note 11, at 86.

108. Akkerman, *supra* note 92, at 161.

109. JEREMY BLACK, MAPS AND HISTORY: CONSTRUCTING IMAGES OF THE PAST 14–16 (1997).

110. Rajkovic, *supra* note 99, at 11.

indigenous peoples¹¹¹ across the Americas¹¹² and Africa.¹¹³

Yet, what is decisive for our purposes here is grasping how the “science” of cartographic literacy became embedded within juridical representation. What textual overlap or bridge made possible such a cartographic colonization of legal seeing and knowing?

B. To Think Is to Map? The Rise (and Fall) of Cartographic Naturalism

To address that question, one underlines a medium international lawyers have heavily invested in but rarely scrutinize beyond the annexes of late nineteenth- and twentieth-century peace treaties: the “World Map” and its jigsaw lines, borders, and shapes that have been fundamental for anthropic legal ordering. As the International Court of Justice (ICJ) affirmed in both the *Pedra Blanca* and *Eritrea/Ethiopia* cases, a map “stands as a statement of geographical fact.”¹¹⁴ Further, “draw[ing] a line, and a precise line”¹¹⁵ has predominated modern geopolitical disputes and, accordingly, shaped a considerable case load before the ICJ. These observations become emblematic for a central presumption that has defined the map-mindedness of positivist international law over the past century: “[t]o map [is] to think.”¹¹⁶ Extraterritoriality is, *par excellence*, a jurisdictional maneuver tied to this cartographic imperative of drawing

111. GEOFF KING, *MAPPING REALITY: AN EXPLORATION OF CULTURAL CARTOGRAPHIES* 142, 144 (1996).

112. See generally ROBERT DAVID SACK, *HUMAN TERRITORIALITY: ITS THEORY AND HISTORY* 127–68 (1986).

113. Makau wa Mutua, *Why Redraw the Map of Africa: A Moral and Legal Inquiry*, 16 MICH. J. INT’L L. 1113, 1115 (1995).

114. *Pedra Branca/Pulau Batu Puteh, Middle Rocks and South Ledge (Malay./Sing.)*, Judgment, 2008 I.C.J. Rep. 12, ¶ 271 (May 23) (quoting *Determination of the Border between Eritrea and Ethiopia*, 25 R.I.A.A. 83, 116 (2002)).

115. See *Frontier Dispute (Burk. Faso/Republic of Mali)*, 1986 I.C.J. Rep. 554, ¶ 148 (Dec. 22).

116. Jordan Branch, *Mapping the Sovereign State: Technology, Authority, and Systematic Change*, 65 INT’L ORG. 1, 8 (2011) (emphasis omitted) (quoting JOHN PICKLES, *A HISTORY OF SPACES: CARTOGRAPHIC REASON, MAPPING, AND THE GEO-CODED WORLD* (2004)).

“precise” lines of human propriety over the non-human, even when earthly problems, i.e. transboundary ecological harms, are antithetical to such planimetric demarcation.¹¹⁷ As such, the methodology behind extraterritorial responsibility is informed both by juridical reasoning and agency, as well as the graphic legacy and politics of modern cartography.¹¹⁸ It’s a hegemony ingested so completely that few would notice how or when cartography became subsumed by, and forgotten within, the visual grammar that international lawyers and many social scientists still take as commonsensical—even when seeking to promote rights-of-nature and *eco-territorialization*.

Where does this leave legal ecology and its aim to instill a “world ecological public order?” Quite bluntly, it leaves legal ecology tied to a cartographic institution and graphic empire that has served the anthropic domination of the earth. There are considerable stakes that confront international lawyers when one pinpoints an anthropocentric “World Map” as the governing medium within which the doctrinal field is embedded. Specifically, legal ecology faces a notable difficulty in realizing ecocentric hyphenation because its activism relies on mapped subjectivities engendered by a vast history of cartographic world-making.¹¹⁹ As such, the map has been a distinctly modern *actant*, which has served to inscribe an anthropic model and imperium as uniquely representing earthly reality.¹²⁰ The chief implication is to what extent can legal ecology, in its legislative and judicial manifestations, move away from this anthropic legacy of visualizing nature?

This is where Bruno Latour forcefully re-enters with—what is effectively—his re-description of *uti possidetis juris*. He

117. Mickelson, *supra* note 10, at 621.

118. Bartelson, *supra* note 94, at 231 (discussing the significance of geographical and cartographical knowledge in justifying states’ imperial pursuits and the creation of political communities).

119. See generally NICHOLAS GREENWOOD ONUF, *WORLD OF OUR MAKING: RULES AND RULE IN SOCIAL THEORY AND INTERNATIONAL RELATIONS* 36–43 (1989) (discussing the theory of world-making through a constructivist point of view).

120. See Kitchin & Dodge, *supra* note 71, 334 (discussing the role maps play as “entities that have effects,” or “actants”).

discusses that principle not as a time-machine of the colonial state but, more profoundly, colonial science. The fundamental implication being how the cartography and science of European colonialism consolidated a seeming *res extensa* embodied by the "World Map." As Latour explains:

If postcolonial studies have succeeded in provincialising Europe, it still exerts one imperial dominion in its full and undisputed splendor, namely this strange idea that the Globe is the equivalent of the natural world. . . .

In other words, a natural Globe still offers the 'ground map' which allows any localisation to occur. . . . Nobody can stake a claim to power without its position being *relativised* and instantly situated, while the system of coordinates that allows for such a localisation is *absolute* and remains in the background, fully invisible. . . . All loci might differ, but they are all visualised and pointed to on the same grid. They all differ from one another, but in the same predictable way: by their longitude and latitude.

What is amazing if you look at geopolitical textbooks, is that, apparently, the Globe remains . . . universal, unproblematic But for me, this is just the position that marks, without any doubt, the imperial dominion of the European tradition that is now shared, or so it seems, by everyone else.

. . . .

. . . On such an empire—the empire of cartography, the world order, the all-encompassing Globe—the sun never sets. . . .

. . . .

. . . [I]t has become clear that in addition to the land grabbing that has authorised the seizure of the Earth in the past by the competing imperial European powers, there is still present a much

deeper ‘*land drawing*’ that has expanded naturalism everywhere. While the first colonial expansion is clearly visible, criticised, and partially—only partially—counter-acted, this other land grab remains invisible.¹²¹

Hence, Latour’s emphasis on *land drawing* generates particular insight when one loops back to the hesitation of the IACtHR in its *Advisory Opinion*, and how extraterritoriality came to subtly discipline a rights-of-nature agenda via the subterranean politics and science of *uti possidetis juris*. In other words, cartographic inscription has produced a jurisdictional rock-bottom through countless layers of geometric lines, graphics, and mappings accumulated over three centuries,¹²² with few, and even the most critically-minded, failing to register the “World Map” as a graphic platform that has served anthropic domination of life in and on Earth.¹²³ It’s a robust substrate difficult to displace, owing to its mathematical encoding that demarcates the material essence of all human and non-human forms: “while nearly every technology of mapmaking continues to evolve, the foundational structure provided by the coordinate grid remains the same.”¹²⁴

That, in a nutshell, explains an epistemic and graphic infrastructure quietly disciplining the brave cause of legal ecology, whether by enacting rights-of-nature legislation or pursuing judicial challenges to impose extraterritorial obligations for transboundary damage. For international lawyers—among other social scientists—the “World Map” represents a ruling graphic that has set the scientific parameters of anthropic

121. Bruno Latour, *Onus Orbis Terrarum: About a Possible Shift in the Definition of Sovereignty*, 44 MILLENNIUM J. INT’L STUD. 305, 307–09 (2016).

122. JOHN PICKLES, *A HISTORY OF SPACES: CARTOGRAPHIC REASON, MAPPING AND THE GEO-CODED WORLD* 4–5 (2004).

123. See J.B. Harley, *Historical Geography and the Cartographic Illusion*, 15 J. HIST. GEOGRAPHY 80, 81 (1989); J.B. Harley, *The Map and the Development of the History of Cartography*, in 1 THE HISTORY OF CARTOGRAPHY 1 (J.B. Harley & David Woodward eds., 1987) [hereinafter Harley, *The Map and the Development*].

124. BRANCH, *supra* note 98, at 52.

legalism and, thus, normative boundaries for assigning jurisdictional responsibility in remedy of nature's inaudible conquest.¹²⁵ Yet, as disciplinary geographers have recently confronted vis-à-vis the IMW, the trouble with all ruling graphisms is that time's corrosiveness, manifold practices, and, ultimately, unruly history do not cease to unfold. At some point, the incisive gaze of the "World Map" crosses into the messy past of the wooly knowledge it is professed to transcend, losing capacity to trace patterns and consequences of globalization, e.g., climate change, that proliferate increasingly outside its ruling image.

Yet, in order to address that growing drift, international lawyers need to reacquaint themselves, metaphorically, with the tree that is extraterritoriality and the graphic forest within which it grows. This requires reconnecting lawyerly assessments of extraterritoriality to the overlooked substrate of graphic power and politics, which have inscribed anthropocentric categories such as the state, territory, borders, or jurisdiction as the alleged *res extensa* of geographic reality. It is upon this optic infrastructure which legal ecology finds itself entrenched at present, until that collective moment when the "World Map" becomes visible as a two-dimensional inscription rather than *the* authoritative picture of Earth. In this way, as Latour's contribution suggests, the colonial critique of *uti possidetis juris* likely confuses symptom with root cause because it overlooks the work of a deeper epistemic and visual conquest:

There is no detectable difference between natural and social science, as far as the obsession for graphism is concerned. . . . Scientists start seeing something once they stop looking at nature and look exclusively and obsessively at prints and flat inscriptions. In the debates around perception, what is always forgotten is this simple drift from watching confusing three-dimensional objects, to inspecting two-dimensional images which have

125. See Rajkovic, *supra* note 19, at 267, 269.

been made less confusing. Lynch, like all laboratory observers, has been struck by the extraordinary obsession of scientists with papers, prints, diagrams, archives, abstracts and curves on graph paper. No matter what they talk about, they start talking with some degree of confidence and being believed by colleagues, only once they point at simple geometrized two-dimensional shapes.¹²⁶

IV. CONCLUSION: THE ELEPHANT OF NATURE WITHIN THE JUNGLE OF GRAPHIC POWER

This is the acute challenge legal ecology now faces, which can be answered with affirmative or negative outlooks on the prospect for change. The former option consumes this concluding section because a positive outlook requires the labor of connecting legal ecology and the possibility of ecocentric lawmaking to what J.B. Harley explains as “a wider history of how concepts and facts about space have been communicated, and the history of the map itself—the physical artifact—is but one small part of this general history of communication about space. . . . [as] maps did not become everyday objects in many areas of the world until the European Renaissance”¹²⁷ For instance, while the use of maps to systemically display national borders first took shape in the seventeenth century, statist cartography only gained juridical recognition as a sufficient and authoritative source for representing sovereign claims over European lands in the latter nineteenth century.¹²⁸ Yet, this fact amounts to more of an appetizer than an entrée because it sets up a far grander historical observation for legal ecology vis-à-vis our earlier discussion of nature’s *eco-territorialization* and potential proto-sovereignty. It points to how modern cartography was preceded by, and materialized out of, a different literary medium for representing Earth orderliness. Specifically, a textual medium that strongly favored the written word over mapped depictions,

126. Latour, *supra* note 79, at 15–16 (emphasis omitted) (footnotes omitted).

127. Harley, *The Map and the Development*, *supra* note 123, at 1.

128. BRANCH, *supra* note 98, at 135.

with its advantage being that named places, locations, and subjects could be specifically "listed and carefully described in writing without the need to depict or understand the spaces in between."¹²⁹

Sparse significance has been assigned to this epochal switch from textual lists to mapped depictions because an evolutionary and, specifically, enlightenment storyline narrated this shift of media as inherent to the progressive march from medieval to modern civilization. As a result, the medieval European worldview, as defined by its governing textual medium, assumed a subaltern frame relative to a later cartographic medium that came to dominate modern geographic knowing.¹³⁰ The subaltern frame is conditioned notably with an underlying and popularized claim of technological immaturity: the material and mathematical conditions essential for the systematic institution of the (geometric) map medium only became available with the scientific revolution and the invention of the printing press. Following this narrative—so the logic goes—why would one, in this century, resort to a new medievalism of listing, and thus a seemingly pass. . . methodology for legal ordering?

However, what the enlightenment storyline has bludgeoned is the richer topological capacities textual inscription possesses compared to its cartographic descendant. As Urs Staeheli explains, this historical stereotype has attached to textual inscriptions and, specifically, listing media has wrongly presumed datedness to be some measure of institutional potency:

The medium of the list may seem to be a simple artifact, but it easily generates a hyperconnective dynamic of its own. . . . Precisely because the list has no narrative structure and no pre-given order, its elements can easily relate to each other in many unforeseen ways. The list opens up a topological space—in contrast to many

129. *Id.* at 49.

130. *Id.* at 42–43.

topographical symbols (such as the globe).¹³¹

In this light, the textual medium, which defined rule in medieval Europe, gains a whole new relevance for legal ecology, bringing into question an Enlightenment frame that cast this mode of inscription as pre-cartographic backwardness. Instead, what comes into view is a listing platform that extended a detailed capacity to inscribe and proxy non-cartographic relations and subjectivities that were integral to pre-modern European comprehensions of public order.¹³² As Gunther Teubner describes:

In medieval and Renaissance Europe and also in other cultures, the world of law was populated with non-human beings, with ancestors' spirits, gods, trees, holy shrines, intestines, birds' flight, to all those visible and non-visible phenomena to which communication could be presupposed Today, under the influence of rationalizing science, the number of actors in the legal world has been drastically diminished. After the scientific revolution, after philosophical enlightenment, after methodological individualism dominating the social sciences . . . the only remaining plausible actor is the human individual. The rest is superstition.¹³³

Teubner's above summary brings into view how a more ecocentric-anthropic world of law did actually exist at one time in Europe, but became effaced with the political, epistemic, and optic institutionalization of modern cartography from the sixteenth century to the nineteenth century. The textual medium, which

131. Urs Staeheli, *Listing the Global: Dis/Connectivity Beyond Representation?*, 13 DISTINKTION: SCANDINAVIAN J. SOC. THEORY 233, 235–36 (2012).

132. *See id.* at 234, 237.

133. Gunther Teubner, *Rights of Non-Humans? Electronic Agents and Animals as New Actors in Politics and Law*, 33 J. L. SOC'Y. 497, 498–99 (2006).

sustained that one-time hyphenation, becoming provincialized by an ascendant “World Map” that asserted its graphic superiority, imposing a visual economy and hegemony that appeared intrinsically planimetric by nature and not artifice. This brings us, therefore, to two important concluding queries: was that displacement by planimetric realism rooted truly in the bygone and antiquated qualities of the textual medium? Or, is it more accurate to say European colonialism manufactured a system of geographic visibility that privileged the “seeing” of a certain planimetric hierarchy of life and rule? These inquiries point to, ultimately, a medium that legal ecology could seize upon to inscribe and leverage jurisdictional possibilities for ecocentric legalism and make strategic use of a once reigning textual medium with its capacity to list, and thus see, a richer array of human and non-human subjects, and thus enact a far more hyphenated and topological—as opposed to planimetric—system of law’s anthropic rule.