

## 9 Territory, Resource Rights, and Rivers: A Philosophical Case for Overlapping Jurisdiction

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Territory (*terra-tory*) is about politically controlling a region of earth. Sociologists and political geographers look at territory as a historical feature of our political landscape. They investigate how actual territories are formed, of what they consist, and how they are maintained. Philosophical inquiries have a different target. They question the normative features of territory, asking about the moral justification of territorial *rights*. Who has moral standing to hold a territorial right? What morally justifies political control over resources? If a group has a territorial right, over which exact objects is that right held?

The latter question motivates this essay. One might wonder how high into the atmosphere a territorial right should extend, how deep underground, or how far out across the seas. One might also wonder whether territorial rights should include vast uninhabited areas, such as much of the Sahara Desert. A particularly tricky question probes the nature of territorial rights over rivers. Rivers create two puzzles for territorial rights. The first is metaphysical – a river is constant and yet is constantly changing. Far from merely a poetic muse, the river's nature as both moving and geo-stationary causes numerous tensions between riparian states. The second puzzle is normative – given a river's complex nature, can jurisdictional authority over it be divided coherently?

The traditional concept of territorial rights entails two assumptions about their object. First, the object of territorial rights – what a group has a claim *to* – is defined by what lies between political lines on a map. Second, overlap of territorial jurisdictions is prohibited. Together these elements produce simple, bilateral borders. After a philosophical assessment of the appropriate object of territorial rights, it seems difficult to adopt either of these assumptions in the case of rivers. To describe a river as an object of territorial rights, it is useful to adopt an account of a river as a functional organism. As a functional organism, the moving and geo-stationary qualities of rivers are coherently understood as performing functions inherent to the river itself. On this account, however, jurisdictional authority over the river

cannot be bilaterally divided between riparian states. A conclusion to draw is that incidents of territorial rights should extend over whole riparian regions; in circumstances where the riparian region falls between two or more states, these states should share jurisdictional authority over that region. Overlapping territorial jurisdictions are theoretically coherent and, perhaps, a practical improvement.

### WHY NOT OVERLAPPING BORDERS?

Modern territorial states emerged from the Peace of Westphalia (1648), born from a motivation to diminish ethnic and religious struggles for power within Europe. The treaties politically aligned people with a sovereign territory, rather than with a religion (or some other personal allegiance), preventing those living in close proximity from perpetual political conflict. This shift departed from a feudal, property owner-to-tenant conception of territory towards a state-to-citizen relationship. State borders were solidified around territories, making them less subject to frequent ‘property swaps’ between lords, and because political powers were prone to fight over control of people and resources, distinct borders were considered necessary to avoid conflict.

In the twentieth century, the territorial state transformed. Marked by the end of colonialism after World War II, statehood became a matter of collective self-determination, rather than of rule by a sovereign.<sup>1</sup> As is true of many historical political shifts, this one was supported by weighty normative considerations. From principles of equal respect for personal autonomy, the international community endorsed a strong right to self-rule. People within a territory should govern themselves, and, importantly, they should not be governed by a foreign power. Thus, knowing who has a legitimate say in political decisions within a territory is a prerequisite for exercising self-determination. To distinguish the foreign from the domestic, states reinforce the bilateral conception of borders.

Territorial rights in rivers are justified along similar lines, yet encounter unique constraints and tensions. In order to maintain the cartographic stability of territories, rights over rivers derive from rights over river banks. If a state has rights over the banks abutting the river, then the state *owns* (enjoys the right to use) the water that is between those banks. In contrast with rights over land, rights over freshwater resources are subject to specific international constraints. As rivers are used as essential routes of travel and commerce, and because river water is often essential to the survival of surrounding communities, international law endorses an ‘equitable use’ principle. Under this principle, river-sharing states have a duty to recognize each other’s equitable claims to the use of river resources. Interpreting the equitable use principle involves the balancing of different use interests in the resource, while the ensuing obligations remain anchored in territorial

91 sovereignty. Predictably, each state weighs its own interests more heavily  
 92 than its neighbours, even to the point of declaring its interests matters of  
 93 national security. This approach is ‘inherently confrontational and does little  
 94 to promote cooperation in the common environmental interests of States’.

95 State borders should not overlap, it is argued, because bilateral borders  
 96 prevent conflict over resources and support the independence of self-  
 97 determining groups. Nevertheless, bilateral territorial division over shared  
 98 resources can create predictable conflict, especially over riparian systems.  
 99 The arguments below suggest that clearly defined regions of shared  
 100 territories, rather than bilateral borders, may be more consistent with the  
 101 spirit of peace and self-determination over territory.  
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### 104 **ADDING LAND TO POLITICAL LEGITIMACY: LOCKEAN THEORY**

### 105 **APPLIED TO TERRITORIAL RIGHTS**

### 106

107 Even as ‘territory’ is a political construction regarding authority over  
 108 people, it is also constituted in part by natural non-human objects. John  
 109 Locke’s theory of property is often used in territorial rights literature to  
 110 explain political authority over natural resources, because his ideas provide  
 111 a pre-institutional theory of claims to goods. That is, in Lockean theory,  
 112 claims to territory can be understood in the absence of political institutions  
 113 that sanction those claims. This allows for the theory to criticize the  
 114 politically sanctioned system of territorial rights and to give an account of  
 115 rights that don’t merely appeal to political treaties.<sup>2</sup>

116 A justification of territorial rights must explain why a group has the right  
 117 to self-rule over non-human objects, and Lockean principles provide a  
 118 generalized, adaptable theory to this end. Unfortunately theories of  
 119 territorial rights based on Lockean principles tend to amplify the  
 120 importance and confusion surrounding the object of territorial rights.  
 121 Since Lockean theory requires the agent and the object to be distinct  
 122 entities, an account of the object is necessary, and it must be distinct from  
 123 an account of the people.

124 John Locke argued that persons could acquire rights over goods by  
 125 having certain interactions with those goods. Not just any interaction will  
 126 do – the interaction has to be value-generating. When a person invests her  
 127 labor in the land, the land becomes more valuable. The owner of the labor  
 128 deserves the product of her labour, because it is her labour that made the  
 129 product valuable.<sup>3</sup> Applied to territory: if a territory is made more valuable  
 130 by a group, then that group has a claim to the territory.<sup>4</sup> A group acquires a  
 131 territorial right by mixing itself with particular resources, including  
 132 agricultural land, aquifers, mountains, valleys and minerals. The geographical  
 133 location of these resources fixes the territorial right on the map; the group  
 134 claims territory over those specific lands, aquifers and minerals, and not over  
 135 similar resources in a different location.

136 Of central concern in the evaluation of this principle is the definition of  
 137 value. Which values give rise to a territorial right? Three options are  
 138 defended: material value, symbolic value, and the value of justice.

139 David Miller convincingly defends territorial rights as based on material  
 140 and symbolic values. A group can be a unique author of territory's material  
 141 value in several ways. The governance of land use creates stable systems of  
 142 agriculture and other forms of production, producing value from resources.  
 143 Much of the value of the land is due to the coordinated efforts under the  
 144 guidance of social and political institutions, such as cross-generational  
 145 technological advances and conservation efforts coordinated by commu-  
 146 nities and enforced by rule of law. These actions engender beneficial  
 147 material results ranging from real estate value to the fundamental values of  
 148 providing food, clothing and shelter to individuals.

149 Symbolic value, by contrast, picks out the cultural, religious, or social  
 150 meanings that a group attributes to certain places or features. The site of a  
 151 historical battle, the sacred river and the mythological skyline illustrate  
 152 the symbolic meaning of territory.<sup>5</sup> Symbolic value emerges out of deep  
 153 connections – the group's values and ways of life are shaped by the territory,  
 154 and the territory, in concord, reflects them. Through these connections, the  
 155 territory becomes an emblem of the group itself, representing its identity  
 156 and culture.

157 Taken together, material and symbolic values support a group's claim to  
 158 certain resources. Territorial rights are primarily jurisdictional rights to  
 159 enforce the rule of law within and over a region. These jurisdictional rights  
 160 necessarily include powers to legislate, adjudicate and enforce rights over  
 161 resources (land, water, minerals, etc), because the coordination of activities  
 162 over these resources is the key task for creating the rule of law. Although  
 163 material and symbolic value do not directly justify a claim to jurisdictional  
 164 authority, they may indirectly do so.

166 If a group has added value to territory, its continued enjoyment of the value it has  
 167 created will always be insecure unless the territory is controlled by political  
 168 institutions that represent the group. Rights of private property alone will not  
 169 serve because (1) such rights are always susceptible to being redrawn by whoever  
 170 holds rights of jurisdiction and (2) much of the embodied value that the group  
 171 has created is likely to be located in public space. The group needs to maintain  
 172 overall control over the territory in order to secure that value over time.



174 On Miller's theory, territorial rights can be justified indirectly over  
 175 particular resources, because jurisdictional authority is necessary to secure  
 176 group claims to the material and symbolic values embodied there.

177 The third conception of value – the value of justice – directly justifies  
 178 territorial rights. On this view, territorial rights are functional rights; a group  
 179 acquires a territorial right if and only if they demonstrate the capacity to  
 180 achieve just rule of law. When the group uses the resources within that

territory to achieve the value of justice, a right is acquired over a particular territory. Understanding the function of territorial rights highlights a counterargument against the above account based on material and symbolic value. An unjust nation may create symbolic and material value through jurisdictional control over a territory. In fact, great injustice often embeds heightened symbolic value in the place of that injustice. Granting a group the right to rule a region because it has created symbolic value through unjust acts subverts the function of territorial rights, that is, to rule justly. By contrast, the value of justice is created only by those groups that use the resources within a region to rule legitimately. The function of a territorial right is the establishment of the legitimate rule of law, so when a group interacts with territorial resources to create just institutions, it comes to deserve a territorial right over those resources.<sup>6</sup>

On each of these accounts of value, the theory emphasizes that an agent works on an object creating value. What exactly this object is remains unspecified. Two immediate, interconnected problems arise: geographical dispersion and overlap. Geographical dispersion occurs when a group interacts with more and less than is marked between lines on a map. National forest cultivation projects, for example, purify air that spreads beyond national borders. Overlap occurs when two or more groups simultaneously create value in the same object. Border towns, for example, create areas of dense multi-group interaction with their environment. A combination of dispersion and overlap is found in rivers. Rivers disperse the objects of labour through flow and erosion, and they also mix the objects of down- and cross-stream labour. It seems that, on Lockean accounts, the object of territorial rights might not be 'territorial' – it might not be containable within a geographical region.

A better understanding the object of territorial rights may ameliorate confusion about the application of territorial rights theory in these cases. If the object of territorial rights is not susceptible to dispersion or to overlap, then theories have a ready solution for these problems.

## THE OBJECT OF TERRITORIAL RIGHTS

Territory, by definition, refers to a geographical region. Consequently, 'geographical region' provides a starting point for this investigation. If the key object of a territorial right is some conception a geographical region, then the investigation of this object requires us to answer two questions: what is a 'region'? and, what justifies a territorial right over a region? In a successful account, the conception of 'region' in both answers should be identical to each other; territorial rights should be held over a region as identified by the answer to the first question. Second, the answer to each question should be, to a certain extent, forthcoming without reference to the answer to the other question. In order for our conception of the region

226 to help us better understand the pre-institutional contours of territorial  
 227 rights, the region should be independently identifiable.

228 On the traditional account of the object of territorial rights, the ‘region’,  
 229 refers to what lies between political lines on a map. This account fails the  
 230 second test – the account of the ‘region’ is not distinct from the account of  
 231 the territorial right. Rather, the account of the region is defined by the right.  
 232 This answer only provides a circular definition of the object of territorial  
 233 rights, and one that does not provide any traction to analyse the territorial  
 234 object itself.

235 A second attempt may refer to the particular resources that lie within a  
 236 region, defining a ‘region’ as an aggregation of those resources. On  
 237 Lockean theory, an agent acquires a special right to an object by labouring  
 238 on that object, producing from it greater value. And in fact, people labour  
 239 on particular resources rather than on an abstract region. As Lockean  
 240 theory grants rights over what is actually worked on, defining a region as an  
 241 aggregate of worked-on resources is appealing. The geographical location  
 242 of these resources fixes the territorial right on the map; the group claims  
 243 territorial rights over specifically located soil, aquifers and minerals, and not  
 244 over similar resources in a different location.

245 We tend to think of resources as stationary. Rocks, land, forests and  
 246 water aquifers lie within a territory – they do not pick up and wander off.  
 247 Or do they? Many essential resources migrate, such as soil, minerals, water,  
 248 pollen and animals. They are washed downstream, transported by wind, or  
 249 move of their own accord. According to traditional Lockean property  
 250 theory, labour gives rise to rights in non-stationary goods, such as animals  
 251 and wind-swept pollen. Thus a consistent application of Lockean territorial  
 252 rights over particular resources is worrying, because territorial rights in  
 253 non-stationary objects disperses sovereignty. Rather than supporting neat  
 254 geographical borders, it mixes territories like pollen in the wind.

255 To put it simply, because Lockean rights are launched from interaction  
 256 with particular resources, reducing the account of a ‘region’ to the  
 257 aggregate of material resources within that region is susceptible to a  
 258 *reductio ad absurdum* (the principles’ generalized implementation yields  
 259 a result that effectively destroys those principles). Since Lockean claims are  
 260 derived from interactions with particular objects, and because the same  
 261 interactions that ground claims to stationary objects also ground claims to  
 262 non-stationary objects, Lockean principles support claims of jurisdictional  
 263 authority over non-stationary objects. As a result, defining ‘region’ as an  
 264 aggregate of resources cannot sufficiently explain territory as a region with  
 265 contiguous geographical coordinates.<sup>7</sup> As this reductive understanding  
 266 of ‘region’ undermines the territorial right itself, it seems insufficient to  
 267 explain the object of territorial rights.

268 Alternatively, perhaps we can identify a ‘region’ not by aggregating  
 269 resources, but rather by the way that resources are used. A territorial region  
 270 can refer to something more than merely the set of resources, namely the

271 mutual and affective relationships that agents have with those resources.  
272 Literally place makers, we make a place into the kind of thing that it is, and  
273 our actions, practices and institutions greatly affect the material world and  
274 our experiences of that material world. A territorial region therefore refers  
275 to the complex relationship that agents have with each other within a  
276 certain place as well as to the stuff that one finds in that place (such as land,  
277 air, oil, roads, houses, ecosystems, etc). So understood, a 'region' is a  
278 compound object, not an aggregation. The region is identifiable as a site  
279 where interactions with resources are dense and mutually-affecting. For  
280 example, the extraction of a valuable mineral resource influences the  
281 adjacent employment structure, political institutions, location of settle-  
282 ments, use of land (away from agriculture towards mining), and overall  
283 environmental quality. On this compound object understanding, a group's  
284 way of using a resource can include its subjective, non-instrumental use,  
285 including symbolic use as a national symbol or sacred religious site.

286 On the compound object conception, valuable interactions are not only  
287 with a set of particular objects. The group also interacts with a region  
288 holistically, and because a holistically considered region is a geo-stationary  
289 object, this account avoids the *reductio*. By interweaving these resources  
290 and created values, group interactions reveal a whole – a territory – with  
291 characteristics and values that are not reducible to its individual parts.  
292 Through the creation of value in the whole region, a group acquires  
293 territorial rights over the whole.

294 Despite the switch in focus to compound – as opposed to individual –  
295 objects, Lockean principles of territorial rights continue to confuse the  
296 assumptions that territories do not overlap, because the object of territorial  
297 rights does not obey cartographic lines. Examples are found in overlapping  
298 transborder and layered 'regions'. First, border towns are ubiquitous  
299 examples of transborder sites of dense, mutually-affecting resource use.  
300 Since value-creating groups acquire territorial rights over a whole region,  
301 multiple groups acquire overlapping territorial rights over whole regions  
302 like border towns. Second, pockets of geographically thick non-nationals  
303 undermine traditional territorial claims by creating internal layered regions.  
304 Places like 'German Town', 'China Town', and 'Little Havana' can be found  
305 in almost every US city, many with unique economic, symbolic and  
306 institutional features. Dramatic examples of foreign involvement in  
307 developing countries seem to create new 'regions' inside of foreign states.  
308 China has built whole villages as well as environmentally-intense  
309 industries (such as mining and agriculture), social and economic  
310 infrastructure, and political institutions in many poor countries. These  
311 relations influence most of the areas' environmental interactions,  
312 producing Chinese regions inside developing states. Third, groups that  
313 track a migrating resource, such as fish or deer, create a roaming, layered  
314 region, following the path of the primary resource. Using the compound  
315 account of 'region', these examples of layered and overlapping regions

316 seriously complicate unilateral territorial claims, because the object of  
317 territorial rights crosses traditional boundaries.

318 The problem is that according to the compound object account of a  
319 region, groups interacting with a whole region acquire rights over the  
320 whole. When multiple groups interact with the whole, these groups share  
321 claims to the same whole region. Dividing the region between the groups is  
322 not initially warranted. To explain away this worry, a territorial rights  
323 theorist can appeal again to the analogy between territory and property. A  
324 person can hold property rights over parts of an object without owning the  
325 whole object. Two parties may each own half of a block of wood, for  
326 instance, without each owning the whole. The division of property rights  
327 between parties is often a matter of negotiation or is based on other  
328 secondary considerations. Likewise, territorial claims can be coherently  
329 divided between the various claimants, explaining how a territorial right can  
330 be held over half of a border town but not over the whole border town. It is  
331 common practice for states to divide rights over a whole region so that each  
332 state has a claim to only part of the whole. Regions may be artificially and  
333 legitimately divided between states for pragmatic reasons.

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## 336 RIVERS

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338 Rights over rivers are difficult to explain using the compound-object  
339 account of a 'region'. Basically, a river is not divisible. To be clear: the river  
340 as a natural object is not divisible, *and* rights over a river are not coherently  
341 divisible between geographical river segments. A river cannot be physically  
342 divided like a wood block can be divided, and rights over a river cannot be  
343 divided between geographical segments like rights over wood can be divided  
344 into rights over its left and right halves. To see why, we should revisit the  
345 problems facing attempts to identify the object of territorial rights raised  
346 above: that defining a 'region' as an aggregate of resources cannot  
347 sufficiently explain territory as having contiguous geographical coordinates,  
348 and that attempts to identify the object of territorial rights often reveal  
349 geographically overlapping objects.

350 The *reductio* made us wary of assigning territorial rights over non-  
351 stationary objects. Responding to the *reductio* forced us to widen the  
352 concept of the object of territorial rights to compound objects of dense,  
353 mutually-affecting resource use. A river counts as a compound object in this  
354 sense because its constitutive materials and supporting structures are, by  
355 their nature, mutually affecting, and in their variety they are used  
356 expansively to multiple ends. Examples of mutually-affecting resource use  
357 in rivers include how fishing affects the plant growth and chemical balance  
358 of the water, how water use affects fish populations, and how different  
359 uses of riparian soils change river water quality and volume. Acknowledging  
360 the ways in which river use is mutually-affecting highlights the variety of



361 riparian resource use. Fishing, riparian farming, mining, energy creation  
 362 (dams), drinking, navigating, crossing, irrigating... each river affords  
 363 robust, various use and each use affects the others.

364 This brings us back to the *reductio ad absurdum* (the principles'  
 365 generalized implementation yields a result that effectively destroys those  
 366 principles). River resources are not geo-stationary, and a river counts as an  
 367 object of dense, mutually-affecting resource use. One group's use of the  
 368 river has intimate causal connections to numerous uses by other states  
 369 across, down, and up stream. Yet in contrast with geo-stationary regions,  
 370 rivers constantly move. A river heightens worries that territorial rights over  
 371 a kind of region cannot be contained within a particular set of geographical  
 372 coordinates, even if we think of a region as a compound object. Rights over  
 373 an object will follow it as long as the object continues to have extensive  
 374 causal connections with other resource use, as long as it still counts as the  
 375 same 'region' under the compound object account. Effectively, given the  
 376 non-stationary, intimate causal connections in disparate river use, territorial  
 377 rights at any point on the river extend out to sea. Not only are we faced with  
 378 the problem of dividing rights over a shared object, but also, in the case of  
 379 rivers, we must figure out how to locate the object.

380 One way to respond to this puzzle is to explain how a river can be geo-  
 381 stationary. In fact, elements of rivers are geo-stationary. Rivers are drawn on  
 382 maps, and the geographical path of a river does not change significantly  
 383 over time. The challenge is to capture the features of a constantly moving  
 384 object in these geo-stationary terms. Such a description is outlined below.  
 385 Alas, the geo-stationary description of a river continues to resist the  
 386 possibility of physically or politically dividing the river between states.  
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### 388 ***The metaphysical question***

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 390 For a Lockean to give an adequate account of the object of territorial rights  
 391 over rivers, there are two tasks: i) to explain how the object is geo-  
 392 stationary (an account must describe how the object can persist in one  
 393 place through time even though its constitutive elements move and are  
 394 continually replaced); and ii) to explain how shared territorial rights over  
 395 this object should be divided.

396 In taking up the first task, it is productive to turn to Locke's metaphysical  
 397 philosophy in *An Essay Concerning Human Understanding*. Locke asks a  
 398 similar question regarding the persistence of an object's identity through  
 399 time. How can a thing continue to be the same thing, even after its parts  
 400 have changed? How can a particular tree continue to be *that* tree when its  
 401 cells are continually shed and replaced? For Locke, persistent identity is  
 402 explained by functional organization. A tree differs from its mass of matter,  
 403 because the mass of matter changes – its parts constantly shed and are  
 404 replaced. Yet the tree remains the same tree – it persists despite its  
 405 changing composition, because its mass is constantly organized to maintain

406 the life of the tree. The plant has ‘such an Organization of Parts in one  
 407 coherent Body, partaking of one Common Life, it continues to be the  
 408 same Plant, as long as it partakes of the same Life, though that Life be  
 409 communicated to new Particles of Matter vitally united to the living  
 410 Plant’.<sup>8</sup> The same rationalization explains the continuity of identity in  
 411 animals and in functional objects like watches. A watch, says Locke, is a  
 412 ‘Construction of Parts, to a certain end’, and even when those parts are  
 413 ‘repair’d, increas’d, or diminish’d, by a constant Addition or Separation of  
 414 insensible Parts’, the watch persists as the same object.<sup>9</sup> The parts  
 415 constitute the object, and the object is identifiable because of its parts.  
 416 The parts comprise the object if and only if they exist together as a  
 417 working organism, maintaining the function of the object. Replacement  
 418 parts do not alter the identity of the whole as long as the new parts work  
 419 towards its functional organization.

420 This analysis explains how a river is geo-stationary. The water and  
 421 its banks are part of an organized whole that maintains the river’s  
 422 organizational function. Even though the river and river bank’s constitutive  
 423 parts change (through soil erosion and the passage of water molecules),  
 424 the functional organization of the mass remains the same. The river  
 425 continues to feed, water and purify its surrounding environment because  
 426 its banks and water flow have a set geographical location and path. In fact  
 427 its geo-stationary features are what define its functions – it cannot water a  
 428 surrounding environment without existing within that environment. As the  
 429 river’s organization is geostationary, claims to the river are claims to a geo-  
 430 stationary object. As further evidence that a river is a geo-stationary  
 431 organism, for Locke, ‘existing’ refers not only to the object, but also to the  
 432 idea of the object. We cannot have an idea of a river without banks, and *vice*  
 433 *versa*. The river cannot exist without its geo-stationary banks, and the river  
 434 banks cannot exist without the river. Additionally, our idea of *this* river, the  
 435 Snake River, is inconceivable without placing it in its environmental/  
 436 geographical context. The idea of the Snake River is not an idea of *the*  
 437 *Snake River* if it omits this geo-stationary content.

438 Although Locke’s account of persistent identity in objects allows us to  
 439 describe a river as geo-stationary, it also makes the job of territorial rights  
 440 theorists more difficult by defining the object of a river as whole  
 441 organization. So far we have described the river as necessarily including an  
 442 account of both the banks of the river and the water flowing through those  
 443 banks. This, however, is not a sufficient account of its functional parts. The  
 444 river not only has banks, but it also has length. It runs from inland out to  
 445 sea. It has an approximate depth, speed, and unique chemical composition  
 446 (in water, soil and minerals). So, although a river can be described as a geo-  
 447 stationary object, it is not amenable to physical division. That is, dividing a  
 448 river into three parts does not create three rivers identical to three parts of  
 449 the original whole. Dividing a river separates essential elements of the  
 450 functional organism from the organism itself. Like stripping branches from

451 a tree, the alienated parts contain qualities of the organism, but the  
452 branches are not trees themselves. Sever enough branches from the tree,  
453 and the tree ceases to exist. By contrast, an object without an  
454 organizational structure can be divided. A litre of water can be divided  
455 without loss of identity or of function – half a litre put in one glass and half  
456 in another. Rivers, however, are not identical to a volume of water.  
457 Upstream and a downstream are analogous to the higher and lower parts  
458 of a tree trunk. By extension, an upstream state and a downstream state  
459 should not consider the object of their territorial rights in the river to be  
460 amenable to natural division from the river's other parts. An account of an  
461 appropriate division of rights over a river, then, must tell how states can  
462 hold unilateral territorial rights over only a part of a whole functional  
463 organism. The analogous task in property rights would be to explain how  
464 and why two people can each hold exclusive property rights over only half  
465 of a living object.

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### ***The political question***

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The concept of a river as a whole, functional organism complicates a traditional account of territory in two ways. First, it brings to the fore the problem of territorial overlap; multiple states may acquire territorial rights over the same whole river. Consequently, claimants must produce reasons for bilaterally dividing the river into territorial segments. Second, the nature of a river produces a new puzzle for the division of rights. Since a river is more like a living organism than a divisible mass, the interconnected functions of disparate parts of the river resist artificial division. Still, current wisdom holds that we should divide territorial rights over rivers bilaterally in order to preserve the self-determination of states and to avoid conflict over river resources.

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As justifications for bilateral borders are generally grounded in the importance of self-determination, it is useful to consider what is meant by self-determination. In order for a group to be self-determining, that group must be able to exercise a significant amount of autonomous authority over its members and territory. Yet while states are assumed to be capable of autonomous acts, they are also deeply engaged in interdependent relationships with foreign agents. Participation in global markets and in a global ecosystem creates circumstances of interdependence between all states, not to mention numerous other ways (cultural, political, etc) in which states depend upon each other. These interdependent relationships are ubiquitous, unavoidable elements of global politics. Self-determination under these circumstances cannot be described as complete freedom from interference, because foreign factors inevitably influence domestic affairs.

Instead, self-determination can be described helpfully as non-domination, where a group is not subject to the arbitrary will of another. Understood as

496 non-domination, self-determination acknowledges that states operate under  
497 conditions of interdependence, and autonomy is defined in terms of the  
498 structuring of these interdependent relationships. States are self-  
499 determining if they do not stand in a relation with other states where  
500 one state has the authority to interfere arbitrarily with the actions of the  
501 others. To make self-determination possible, international institutions  
502 must articulate and support a system of rights where states are protected  
503 from subjection to the arbitrary will of another. Obviously, this system  
504 cannot guarantee that domination will not occur; the system of rights is  
505 best if it supports the maximal pursuit of an agent's ends without  
506 domination, even if that system cannot guarantee it. A system of territorial  
507 rights, therefore, is best if it supports the maximal pursuit of individual  
508 state's ends, while that pursuit is maximally protected from arbitrary  
509 domination by other states. We have reason to prefer an alternative system of  
510 territorial rights over the traditional system if the former performs these  
511 functions better than the latter.

512 As mentioned previously, traditional territorial and property rights over  
513 rivers derive from rights over the river banks and are subject to 'fair usage'  
514 constraints. These accounts of river property can be explained through an  
515 analogy to a water bucket. When you own a bucket (or property in river  
516 banks), the water in the bucket is yours because it is inside of your bucket.  
517 When it is not in the bucket, it is no longer yours. Qualifications are  
518 attached to this property right in water. Suppose that the water in my  
519 bucket comes directly from the overflow of water from your bucket. It is  
520 possible for you to use up all of your water, eliminating overflow and drying  
521 up my bucket. Given that your water use affects mine, your water rights are  
522 legitimately constrained: you can do whatever you want to your water when  
523 it is in your bucket, as long as your use does not eliminate overflow into my  
524 bucket (or cause similar significant harm).<sup>10</sup>

525 The water bucket conception of river rights is common practice; it is  
526 used in international law and to articulate domestic property rights in  
527 rivers. The Colorado River Compact, for example, divides the Colorado  
528 River into two divisions (upper and lower) within the United States, and  
529 each division has a the right to control independently a 7.5 million acre-  
530 feet of river water annually – a large 'bucket' share of water.<sup>11</sup> Despite its  
531 general use, this conception continually leads to confusion and conflict.  
532 Frequently an upstream state will claim that its interests (in state or  
533 national security for example) outweigh the interests of any downstream  
534 state. On this reasoning, upstream states argue that they can use their  
535 river resources without constraint, as long as those resources are in their  
536 'bucket'. Predictably, these unilateral assertions lead to conflict.  
537 Fortunately, these tensions can be attributed to failures in the water  
538 bucket conception, and the metaphysical analysis developed above can be  
539 used to reconstruct an account of rights over rivers avoiding the water  
540 bucket analogy.

541 Given the foregoing metaphysical account of rivers and the compound  
542 object account of a territorial 'region', the water bucket conception  
543 misconstrues the nature of rivers as an object of territorial rights. As we  
544 have seen, the object of territorial rights is best understood as a geo-  
545 stationary region. A compound region is something more than its aggregate  
546 parts and is constituted by its dense, mutually-affecting use. The water  
547 bucket conception, by contrast, sees a river as an aggregate of its various  
548 geographical segments, with each group's way of using the resource distinct  
549 from the others.

550 This error in metaphysics confuses rights. With the water bucket  
551 conception, agents assume that they can exercise control over the water in  
552 their bucket, as long as it is there. But this is not the case. Down- or cross-  
553 stream states cannot exercise unilateral jurisdictional control over their  
554 river segments. Jurisdictional control over a territory includes the powers to  
555 determine property rights in that region, including the power to designate  
556 zoning rights and to mark certain resources for special use (or  
557 preservation). A state may, for example, legislate the zoning of a section  
558 of riparian lands for agricultural development. As crops depend on specific  
559 chemical and water quantity and quality in the riparian soil, up- and cross-  
560 stream use of the riparian region could make this agricultural development  
561 impossible. Successfully legislating property rights and zoning will depend  
562 on constant cooperation with other up and cross-stream states.

563 Moreover, the nature of a river makes numerous unilateral state powers  
564 *incoherent*. The articulation of property rights in resources frequently  
565 depends on environmental factors. Property rights in land are often placed  
566 into different categories, including lands with river access and those  
567 without. Each category of property is subject to different legislation, such as  
568 conditions on sale and on use. If river use by other states changes the  
569 direction or flow of a river, for example, then a category of property may be  
570 made incoherent. Similarly, a state's environmental protection legislation  
571 may allow for a one-time pollution 'dumping' into the river as long as the  
572 pollutant materials do not exceed a certain amount. If this amount of  
573 pollutant is already present in the water when it travels into the state, then  
574 the legislation is nullified. Similar examples can be found in legislation over  
575 fishing and other resource use. Fishing rights may be articulated in terms  
576 of equity – a commercial vessel has rights to no more than X amount of  
577 fish and no less than Y amount. The Y, minimal condition is to prevent  
578 other vessels from taking more than a fair share during times of scarcity.  
579 Obviously the coherency of this legislation depends on the fish  
580 population not falling below the equitable threshold. The point is that  
581 down- and cross-stream states cannot exercise vital unilateral jurisdic-  
582 tional authority over the riparian region without constant cooperation  
583 from up and cross-stream states.

584 Now we can articulate why the water bucket conception of territorial  
585 rights over resources is flawed: it assumes that states can exercise their

586 basic functions, exercising unilateral jurisdictional authority, over their  
587 'bucket', their section of the river. In fact, states do not possess this power  
588 over their segment of a river. The water bucket system of rights does not  
589 acknowledge that rivers are compound regions identifiable as an object of  
590 territorial rights only as functional organisms. Riparian states cannot  
591 exercise their rights without the constant cooperation of other states.  
592 Without this cooperation, states are subject to the arbitrary will of other  
593 states. As this constitutes a system of rights that supports domination, it  
594 prevents the self-determination of down and cross-stream states.

595 A better system of rights starts by acknowledging the nature of the river  
596 as a compound region and functional organism. Rather than existing as an  
597 aggregate of 'buckets', a whole riparian environment is instead like an  
598 animal. Perhaps, then, owning the southern half of a river is like owning the  
599 left half of a horse. Even though we cannot physically separate the halves of  
600 the horse, just as we cannot physically separate the halves of a river, we can  
601 articulate the division of particular rights over parts of the horse. I can plait  
602 my half of the horse's mane however I choose. If the horse wins a race, we  
603 split the winnings equally. Certain rights, such as the right to a percentage  
604 of the profit received from the horse's use, to access, and to make cosmetic  
605 changes to the horse can be coherently divided into rights that either party can  
606 unilaterally exercise. Nevertheless, key rights cannot be divided in this way.  
607 Importantly, it is impossible for each owner to unilaterally manage half of the  
608 horse. I cannot feed and train only the left half of the horse. If I want to train it  
609 as a racehorse, then I have to convince the other owners to do it with me, and  
610 we have to coordinate our efforts to this end. In this analogy, shared  
611 management is the only way for an agent to exercise its right to manage a  
612 portion of the horse. Similarly, shared jurisdictional authority is the best means  
613 for states to have the capacity to exercise jurisdictional powers over rivers.

614 In summary, the nature of shared rivers makes it inevitable that one  
615 state's resource use will have continuous, profound impacts on the capacity  
616 of down- and cross-stream states to exercise jurisdictional authority over  
617 river resources. This creates circumstances of domination, so river  
618 resources should be under shared jurisdictional authority in order for  
619 states to continue to be self-determining.

620 This conclusion matches nicely with accounts of the Lockean values of  
621 territorial rights. Valuable interactions with a river can neither be achieved  
622 nor enjoyed with only unilateral control of one part of the river. To create  
623 material or symbolic value, the group needs to be able to exercise  
624 jurisdictional authority over the full riparian environment. Likewise, to use  
625 the river's resources to secure justice in the area requires similar control.  
626 Thus territorial claims on Lockean theory should extend over the full river.  
627 The territorial claim – the claim to jurisdictional authority – is a claim to  
628 the entire riparian environment. Rather than thinking of these claims as  
629 conflicting, we should embrace them as claims to shared jurisdictional  
630 authority over the relevant object.

631 **REVISITING THE PROBLEM OF OVERLAP**

632

633 State borders should not overlap, it is traditionally held, because bilateral  
634 borders prevent conflict over resources and support the independence  
635 of self-determining groups. The above arguments suggest that the latter  
636 claim is not true. Taking the nature of a river and the interconnected  
637 relationships of river sharers into account, shared jurisdictional authority  
638 over rivers promotes self-determination better than its bilateral alternative.

639 Still, the claim that bilateral borders prevent conflict over resources  
640 remains. There are three reasons to question this claim. First, bilateral  
641 borders over rivers may exacerbate conflict more than shared authority.  
642 Especially with the increased environmental vulnerability of states, rivers  
643 are crucial for fundamental state interests. The motivation to exploit river  
644 resources while they are within the state territory has in many areas become  
645 overwhelming. Several damming projects are already under way in Asia –  
646 threatening to eradicate downstream resources altogether, resources that  
647 states are willing to fight for. Emerging conflict from bilateral borders  
648 currently presents a significant threat to international security. Conflict  
649 may be initially avoided if states jointly rule riparian regions. At the very  
650 least a conversation about shared interests will take place between states,  
651 and unilateral decisions weighting of one state's interests will not be  
652 allowed as part of the political procedure. Consequently, the exploration  
653 of shared sovereignty between riparian states is important in the efforts to  
654 maintain peace.

655 Second, rather than arising from holistic 'control' over territory, conflict  
656 often comes from particular incidents of territorial authority. The foregoing  
657 proposal endorses shared jurisdictional authority over riparian resources.  
658 This shared sovereignty necessarily entails joint decision-making over the  
659 articulation of zoning, development, and property rights. It does not include,  
660 however, any claims about immigration/citizenship or rights of access. States  
661 may retain current citizenship/immigration policies and borders while  
662 exercising joint jurisdictional authority over resources. This distinction  
663 between shared and unshared powers may avoid potential cultural,  
664 nationalist, or ethnic conflict between citizenry. It may also avoid worries  
665 about massive mobilization of individuals from one state to another.


666 Finally, there are many examples of peaceful jurisdictional overlap within  
667 and between states. The best example is of hierarchical self-determination  
668 within states, such as federal and municipal systems. The European Union  
669 is a prime example of regional self-determination, where French citizens  
670 have a limited say in what happens in Germany, and *vice versa*. Cross-  
671 border cooperation exists in the management of fish reserves in coastal  
672 waters and there is limited state cooperation over the management of shared  
673 rivers is mandated in international law. In short, cases of cooperation of  
674 self-determining units over shared territory already peacefully exists. The  
675 proposal supported in this chapter offers theoretical support to existing

676 cases of territorial overlap and calls for the institutionalization of shared  
 677 sovereignty over river resources. While a specific form of institutionalization  
 678 is not described here, several models for cooperation can be derived from  
 679 these smaller-scale examples.

680 To conclude, in the case of rivers, we have sufficient reason to reject  
 681 traditional assumptions about the object of territorial rights: that the object  
 682 is defined by what lies between political lines on a map and that the overlap  
 683 of territorial jurisdictions is prohibited. Shared jurisdictional authority over  
 684 riparian resources presents a coherent theoretical alternative to bilateral  
 685 borders. Moreover, this alternative offers a better systemic approach to  
 686 supporting rights of self-determination and international stability. Given  
 687 that several diminutive models of shared sovereignty over resources  
 688 already exist, there are good reasons to explore this option further in  
 689 international law.

## 692 NOTES

694 1 Cassese 1995, 48–56.


695 2 Theories that use collectivistic Lockean principles: For comparison,  
 696  alternative approaches include:,, and.

697 3 Locke, *The Second Treatise of Government*, 2003 [1690].

698 4 I here focus on collectivistic Lockean theories of territory. While traditional  
 699 interpretation holds that individual property owners create state territory by  
 700 transferring their powers over property to the state, recent theorists have  
 701 defended a collectivistic version of Lockean theory. The collectivistic version  
 702 does not rely on a transfer of rights from individual property owners. Instead,  
 703 groups can acquire territorial rights directly.

704 5 Similar arguments in an 

705 6 Nine, *A Lockean Theory of Territory*, 2008

706 7 A coherent conception of a 'region' must have a sufficient density of contiguous  
 707 coordinates. This is not to say that all of the geographical coordinates of a region  
 708 must be contiguous. Hawaii is not contiguous with the continental US, for  
 709 example. However, Hawaii is a unit with sufficient contiguous coordinates to be  
 710 considered a geographical region.  for analysis.

711 8 2.27.4.

712 9 2.27.5.


713 10 This is an articulation of the Lockean 'enough and as good' proviso.

714 11 US Department of the Interior, 2011.

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