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ARTICLE

Discovery Rights and the Arctic

Daniel Schwartz*

Department of Political Science, Department of International Relations, Hebrew University of Jerusalem, Jerusalem 91905, Israel
*Corresponding author. Email: daniel.schwartz3@mail.huji.ac.il

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Abstract
This article examines whether discovery could, contrary to common philosophical opinion, be taken seriously as a ground of territorial rights. I focus on the discovery of uninhabitable lands such as found in the Arctic. After surveying the role of discovery in Roman private law and modern international law, I turn to Locke's well-known theory or original acquisition. I argue that many of the justifications that do the work in Locke's theory also apply to discovery. I then discuss some of the many reasons why discovery may seem unpromising as a ground of original acquisition. I close by arguing that if there is a bridge mechanism by which property can legitimately transform into territory and if, at least in some circumstances, discovery can produce property rights, then it would follow that in some circumstances discovery could also produce territorial rights.

Keywords: discovery; Locke; Arctic; territorial rights; original acquisition

Discovery has an important role both in international law litigation and international diplomatic negotiations. Discovery rights have been invoked in international law textbook cases such as Palmas Island (1931), Clipperton Island (1931), and East Greenland (1933). They are particularly prominent today, and for understandable reasons, in the disputes over Arctic claims (including claims over Arctic lands, maritime navigational routes, such as the famous Northwest Passage, and floating ice islands). Canada, Norway, and Russia have to various degrees buttressed their Arctic claims on the grounds of their discoveries – Russia on the basis of Soviet discoveries; Canada on the basis of British ones.[1]

[1]For instance, the Russian claim for Wrangel Island in the Arctic is based on the ground of discovery, as reported in 'Laurence Collier, Memorandum Respecting Territorial Claims in the Arctic to 1930, 10 February 1930', in Peter Kikkert and P. Whitney Lackenbauer, *Legal Appraisals of Canada's Arctic Sovereignty: Key Documents, 1905–56* (Calgary: Centre for Military and Strategic Studies, University of Calgary, 2014), 121–2. Norway based its claims for the Sverdrup Islands on this ground as mentioned in the same memorandum, at 132, 134–135. Canada's appeal to discovery rights can be found, for example, in 'Memorandum, W. F. King, Chief Astronomer, to Hon. Clifford Sifton, Minister of the Interior, Report upon the Title of Canada to the Islands North of the Mainland of Canada, 23 January 1904' and various

Discovery-based territorial claims are not confined to the Arctic. China is making rather a widespread appeal to discovery rights in its present dispute with Malaysia, the Philippines, the ROC, and Vietnam over islands in the South China Sea (including the Spratly and Paracel Islands), claiming that they made these discoveries around 200 BC, during the Hang dynasty. Indeed it is Chinese legal scholars who are the most ardent supporters of the reemergence of discovery rights.[2]

International law scholars believe that a proclaimed discovery, while failing to provide full territorial claims, does create an 'inchoate right' which needs to be 'perfected' through acts of possession, occupation, effective control, administrative acts, or, as Judge Max Huber wrote, a 'continuous peaceful display of sovereignty'.[3] The case of the Arctic is interesting in this respect because most of the Arctic's surface is incapable of settlement or continuous occupation. As Santiago Torres Bernárdez has argued, 'it would not be logical to require the same intensity of exercise of sovereignty as elsewhere when an area is uninhabited, inhospitable and/or of difficult access'.[4] In the same vein, Jianming Shen added, 'a strict application of the effectiveness principle (i.e. the principle requiring effective control) to unpopulated or barely inhabitable territory is neither reasonable nor necessary'.[5] In the case of the Arctic, this consideration gives more weight to discovery among the possible grounds of acquisition.

My purpose in this article is to assess whether territorial claims based on discovery carry any normative force. In particular, I wish to defend the claim that some discoveries can generate for the discoverer or its sponsors a moral entitlement to some property rights to what has been discovered. Further, in some cases, the discoverer can use these property rights to select the jurisdictional authority that holds territorial rights to the property. The hope is to contribute to the philosophical rehabilitation of geographic discovery as a possible source of rights.

Nothing in this article aims to suggest that the discovery of unoccupied land generates rights that cannot be overridden by subsequent settlement. It only asks whether in the absence of other grounds of rights, such as occupancy, discovery is capable of generating rights. By arguing for this claim, I offer considerations

other internal memoranda, such as those by L. C. Christie, J. B. Harkin, and E. R. Hopkins, in Kikkert and Lackenbauer, *Legal Appraisals of Canada's Arctic Sovereignty: Key Documents, 1905–56*, 4, 7, 8, 12, 260. This research has been possible thanks to a generous grant by the Halbert Centre for Canadian Studies at the Hebrew University of Jerusalem. I would like to thank the editors of this journal and two reviewers who remain anonymous, as well as Dr Cara Nine who disclosed her identity at the final review stage, for their excellent comments and corrections. Thanks are due also to Professor Chris Armstrong and Professor Anna Stilz for their generous and useful advice. I am grateful to Yulia Erfurt, who provided excellent research assistance and Dr Elizabeth Miles who carefully edited the final version.

[2]See Michael Bennett, 'The People's Republic of China and the Use of International Law in the Spratly Islands Dispute', 28 *Stanford Journal of International Law* (1992) 425–50; Jianming Shen, 'International Law Rules and Historical Evidence Supporting China's Title to the South China Sea Islands', 21 *Hastings International and Comparative Law Review* (1997) 1–76.

[3]Reports of International Arbitral Awards, *Island of Palmas Case (Netherlands/U.S.A.)*, II Vols (1928), 839.

[4]Santiago Torres Bernárdez, 'Territory, Acquisition', in Rudolf Bernhardt (ed.), *Encyclopedia of Public International Law*, 4 Vols (New York: North-Holland, 2000), 834.

[5]Shen, 'International Law Rules', 14–15.

that may help assess the normative force of the claims presented in the current territorial disputes in the Arctic.

Many of the geographic and geophysical components of the Arctic area are already under the jurisdiction of national or supranational bodies. The argument to be deployed is not motivated by revisionism about the present political status of such geographical components but by the more theoretical question of whether these geographical components are in principle acquirable via discovery.

There is a vast literature on the many justifications available to defend the rights of states, nations, peoples, and cultural communities over land and what land contains. However, one struggles to find much on discovery rights in these works.[6] Discovery as a justification for territorial acquisition has been seriously neglected in the territorial rights literature. For example, when explaining why some of the purported justifications of territorial acquisition are not examined in her book, Tamar Meisels expressly notes that: 'Some arguments purporting to justify territorial acquisition, most notably discovery, were once especially popular but have since vanished from the territorial debate.'[7] Meisels' observation of the literature is entirely correct. The question is whether discovery rights deserve this present state of scholarly neglect.

The dismissive attitude among many authors toward discovery rights can be attributed to a number of causes. First, there is a set of negative historical associations. It seems to many that discovery rights were just a fanciful way for imperialists to expand and conquer by claiming to have discovered territories which had been populated long before their arrival. Nowadays we find it risible and naive to think that an explorer's planting a national flag on some peak and proclaiming the lands to belong to a king or queen can change anything legally, let alone morally.

The philosophical dismissiveness toward discovery rights may not be connected with negative historical associations, however. Rather, it may just be an instance of general philosophical dismissiveness of theories of original acquisition, such as those proposed by Cumberland, Grotius, Locke, and Pufendorf. As A. John Simmons remarked, 'There is a solid consensus among philosophers and political and legal theorists that attempted OA [original acquisition] justifications of private property, when presented in any even remotely plausible form, in fact have little or no justificatory force.'[8]

It is not my purpose here to defend the plausibility of the original acquisition justifications of property. Such defenses have been attempted by others.[9] Rather,

[6]This is clear from a survey of some of the important contributions to this literature. For example: Avery Kolers, *Land, Conflict and Justice: A Political Theory of Territory* (Cambridge: Cambridge University Press, 2009); Tamar Meisels, *Territorial Rights* (Dordrecht: Springer, 2009); David Miller, 'Territorial Rights: Concept and Justification', 60 *Political Studies* (2012) 252–68; Alejandra Mancilla, 'Rethinking Land and Natural Resources, and Rights over Them', 6 *Philosophy and Public Issues* (2016) 125–41 and her 'The Volcanic Asymmetry or the Question of Permanent Sovereignty over Natural Disasters', 23 *Journal of Political Philosophy* (2015) 192–212; Margaret Moore, *A Political Theory of Territory* (Oxford: Oxford University Press, 2015); Cara Nine, *Global Justice and Territory* (Oxford: Oxford University Press, 2012).

[7]Tamar Meisels, *Territorial Rights*, 9.

[8]A. John Simmons, *Boundaries of Authority* (Oxford: Oxford University Press, 2016), 200.

[9]A. John Simmons, 'Original-Acquisition Justifications of Private Property', 11 *Social Philosophy and Policy* (1994) 63–84.

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my purpose is to argue that, assuming that some forms of original acquisition indeed generate a moral entitlement to property rights, discovery is eligible to be one of these forms. For this reason, I do not address objections against discovery rights which are really instances of objections against original acquisition as such, but only those objections that tackle the aptness of discovery as a ground of original acquisition.

Lastly, it could be argued that the dismissiveness toward discovery claims has to do with the fact that there are no more geographic discoveries to be made on earth, because all the land and seas have been fully surveyed, charted, and photographed. However, this assertion is incorrect in many ways. Geographic discovery includes discoveries of previously unknown natural resources, such as discoveries of manganese deposits in the oceanic bed. This is the sort of geographic discovery that raises international disputes such as those that are now raging between Russia, Canada, Denmark, Norway, and the USA over the Arctic seafloor. The prospection of the riches of the seabed beyond the continental shelf is an enterprise that is far from over, as is ocean topographic surveying. In addition, territorial disputes which involve appeals to past discoveries are, as noted, ongoing.

This paper is organized as follows. Section 'Discovery: the concept' discusses the concept of discovery; section 'Institutional approaches: discovery as part of the *Ius Gentium*' considers institutional approaches to discovery rights within the tradition of the *ius gentium* or Law of Nations. Sections 'Non-institutional approaches: Caramuel ' and 'Discovery and Locke's theory of original acquisition' approach discovery rights non-institutionally by inspecting the arguments of the little known Juan Caramuel y Lobkowitz and John Locke's theory of original acquisition. Section 'Deficiencies of discovery as a ground of original acquisition' addresses some of the problematic features of discovery as a ground of original acquisition. Finally, in Section 'From discovery to territory', I discuss possible ways in which property-like rights over uninhabited land can become territorial rights so that, to the extent that discovery can produce property-like rights, it could in some circumstances also produce territorial rights.

Discovery: the concept

Geographic discovery is a form of scientific discovery. Consider the case of the Norwegian explorer Otto Sverdrup. Starting as a simple seaman and rising to the rank of shipmaster, Sverdrup explored the Arctic from 1898 to 1902, charting and surveying many islands, among them three uninhabited islands now named after him, and spending three winters in the harshest conditions on Ellesmere Island at great risk to his and the expedition members' lives. In 1929, after lengthy negotiations, the British Empire granted Sverdrup an ex gratia payment and annuity 'for his services to scientific research in the Arctic'.[10] As part of the deal, Sverdrup gave all maps, charts, expedition diaries, and logbooks to Britain, and Norway acknowledged British sovereignty over the Sverdrup Islands. One of the

[10]Letter by the Canadian Permanent Undersecretary of State Oscar D. Skelton, 7 January 1930 in Thobias Thorleifsson, 'Norway "Must Really Drop Their Absurd Claims Such as That to the Otto Sverdrup Islands"' (2006) (*Bi-polar International Diplomacy: The Sverdrup Islands Question, 1902–1930*, Thesis, Simon Fraser University) 79.

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interesting features of this deal is that the nature of Britain's requests suggests that Britain believed its claims of sovereignty over the islands would be strengthened not only by its acquisition of the knowledge about the boundaries and other geophysical features of Ellesmere Island but also by the actual possession of the original maps and logs – almost as if these documents considered in their materiality were deeds of title of ownership transferred by an original proprietor (Sverdrup).

The point of mentioning Sverdrup's story is not to say that Sverdrup or Norway acquired via discovery some sort of territorial claim to the discovered islands which could then be transferred to Britain. I mention it simply to give some initial plausibility to the idea that geographic discovery may produce *some sort* of right for the discoverer or her sponsors, just as scientific discovery may.

What counts as discovery? There are two main scholarly contexts in which discovery is important: the philosophy of science and the philosophy of intellectual property law. Disappointingly, philosophers of science have taken the concept of discovery more or less for granted and have focused instead on the distinction between the 'context of discovery' (i.e. the coming up with an idea) and the 'context of justification' (the defense of that idea). One exception is Aharon Kantorovich who characterizes scientific discovery as 'the acquisition of an item of knowledge which constitutes an increment in the body knowledge of the scientific community' and goes on to examine some important questions, such as to what extent must the discoverer understand the nature and importance of what she discovered to count as the discoverer.[11]

Philosophers interested in intellectual property law have focused on the distinction between inventions and discoveries. This is natural, because in many jurisdictions, discoveries are not patentable but inventions are, and yet it is not always easy to distinguish between the two. However, it is hard to find characterizations of discovery considered in its own right, as opposed to only what makes it different from invention.[12]

For the purposes of this article, it seems more useful to focus on the specific context of territorial rights. Discovery, as considered here, does not include occupation and possession. The distinction between discovery and occupation and possession has been historically contested. Hugo Grotius realized that the Portuguese appeal to discovery as a ground for rights (for instance, the right to exclusive use of nautical routes) was obstructive of Dutch commercial interests in Asia. In *The Free Sea* he challenged discovery-based Portuguese claims by arguing that 'to find/discover [*invenire*] is not to see a thing with the eyes but to lay hold of it with the hands'; thus, for Grotius, the purported legal effects of discovery must be attributed to occupation instead.[13] Because portions of the sea are not capable of occupation (at least not then), Grotius could claim that the Portuguese could not argue that these portions of sea had been discovered. Serafim de Freitas, in *On the Just Portuguese Empire in Asia*, responded that there is an accepted meaning of

[11]Aharon Kantorovich, *Scientific Discovery: Logic and Tinkering* (New York: State University of New York Press, 1993), 13. Kantorovich adds that not every increment of knowledge counts as discovery but only an increment that is unexpected, has a special interest or constitutes an increment of *general* knowledge or a change in our general beliefs.

[12]Peter Drahos, *A Philosophy of Intellectual Property* (Acton: ANU eText, 2016), 80–81.

[13]Hugo Grotius, *The Free Sea*, David Armitage, ed. (Indianapolis: Liberty Fund, 2004) ch. 2 at 13–14.

discovering that does not conceptually include occupation: it is to search for something or to investigate something.[14] This exchange makes clear that early modern authors such as Grotius did not find it easy to dismiss discovery outright as a source of rights. In order to neutralize the political bite of discovery they sought to fuse it with occupation or possession.

This article begins with a deliberately thin and incomplete notion of discovery. This notion says that discovery is an increment of geographical knowledge that does not involve occupation, control, possession, or altering (physically or symbolically) of what is discovered. I then ask what positive conceptions of discovery, if any, among those which can plausibly complete the thin characterization, are capable of generating territorial rights.

Institutional approaches: discovery as part of the *Ius gentium*

We should distinguish between institutional defenses of discovery rights and non-institutional approaches. Institutional defenses of discovery rights point to some benefit created by an institution allocating incentives to discoverers (as patent law does with inventors). Non-institutional defenses of discovery rights argue that even the incentivizing institutions are absent, discovery could produce rights. When we discuss reasons for supporting institutional discovery rights, we do not inspect the merits of token acts of discovery considered in themselves, but rather the merits of a rule saying that discoverers should be granted some rights over what they discover.[15]

Discovery is one of the various methods of original acquisition contemplated by Justinian's legal code, the *Institutiones*. Historically, natural law theorists have understood the 'division of things', whether effected by discovery, occupation, accession, or some of the other forms of original acquisition, to be a matter of the Law of Nations or *ius gentium*. Views on the exact connection between the *ius gentium* and natural law proper varied over time, but around the 16th century, the consensus was that the principles of the *ius gentium*, such as the diplomatic immunity, were not necessarily logical deductions or conclusions from natural law. Rather, natural law *permitted* the adoption of these principles, which were considered to be 'fitting' with it.[16] 'Fittingness' pointed to a looser connection than the sort of logical necessity that would have made the *ius gentium* collapse into natural law proper.[17] For Francisco Suárez, the 'fittingness' of the provisions of the *ius gentium* consists in their being easier or more convenient to implement than

[14]Serafim de Freitas, *De iusto imperio lusitanorum asiatico* (Valladolid: Jerónimo Morillo, 1625) c. 3 n. 14 at 17B. There is another possible meaning to *invenire* favored by the Portuguese: to 'open up' as in opening up a route. See Anthony Pagden, *Burdens of Empire: 1539 to the Present* (Cambridge: Cambridge University Press, 2015), 168.

[15]The distinction between the justification for an institution and the justification for particular moves allowed by the institution is taken from David Schmidtz, 'The Institution of Property', at 8. https://davidschmidtz.com/sites/default/files/research…/InstitutionProperty2012.pdf

[16]On permissive natural law see Brian Tierney, *Liberty & Law: The Idea of Permissive Natural Law 1100–1800* (Washington, DC: CUA Press, 2014).

[17]See Paula Oliveira Silva, 'Facing the Ambiguities of Aquinas: The Sixteenth-Century Debate on the Origins of the *ius gentium*', in Guy Guldentops and Andreas Speer (eds), *Das Gesetz – The Law – La Loi* (Berlin and Boston: De Gruyter, 2014), 489–508.

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alternative arrangements, thereby promoting the utility of the community of humankind.[18] So, for instance, he writes that humankind could have instituted a way of punishing international wrongs different than giving the victim nation the right to resort to war. While this right could have been vested in a third party, it seems to him that allocating the right to punish wrongs to the victim is simply easier (and more efficient) than the alternatives.

In what way could the institution of allocating rights of some sort to discoverers be beneficial to humankind and thus a plausible component of the *ius gentium*? The rationale of patent law and intellectual property regimes in general can be seen to apply to geographic discovery. Patent law produces incentives for investment in research. If there were no promise of a temporary monopoly, it might not be worthwhile for Bayer, Pfizer, or Roche to invest millions in a new vaccine. The thought is that in the end we all benefit.

In the case of geographic discovery, at least in the past, some privileges given to the discoverer or his sponsors could be seen as incentives promoting geographical exploration. Even a nation that does not itself have opportunities for exploring can benefit from the fact that another nation has expanded its total territory to include newly discovered land. For one, new territories often mean new resources that can be traded for the mutual benefit of everyone. Much of humanity benefitted from the discovery of the route from Europe to America because it made tomatoes, cocoa beans, potatoes, and maize available to non-Americans. Moreover, geographic discovery includes the discovery of maritime routes, such as the Northern Passage, which clearly benefit all humankind, even if the use of the route to non-discoverers is permanently subject to tolls.

A regime that allots permanent sovereignty to the discoverer or the discoverer's sponsors is not the best possible incentive regime. One can think of more efficient incentives regimes, for example, a regime granting only temporary exclusive rights to exploit natural resources. Moreover, a regime giving permanent sovereignty to discoverers is unjust from the point of view of distributive justice since not all states or, more generally, not all political associations have equal resources to engage in geographic exploration. However, when geographic discovery is still possible, it remains the case that overall it is better to have some incentive system in place than none at all, even if this incentive system fails to maximize justice and efficiency and instead merely meets a sufficiency threshold.

Non-institutional approaches: Caramuel

Surprisingly, despite the frequent appeals to rights of discovery made during the process of European overseas expansion, colonization, and conquest, it is hard to find philosophical defenses of the right of discovery during the time in which this process evolved (de Freitas' approach is more polemical than philosophical). One interesting exception is Juan Caramuel y Lobkowitz (1606–82), a polymath theologian. For Caramuel, the original acquisition is a matter of natural law rather

[18]On the *ius gentium* as exhibiting fittingness to natural law see Francisco Suárez, *On Laws and God the Lawgiver* [*De legibus ac Deo legislatore*], book 2 ch. 19 nn. 8–9 in *Selections from Three Works of Francisco Suárez, S. J.*, James Brown Scott (ed.), Gwladys L. Williams et al. trans. 2 vols (Oxford: Clarendon Press and London: Humphrey Milford, 1944), 348.

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than *ius gentium*. His method of defending original acquisition relies not on explaining the benefits of the institution establishing the modes of acquisition, but simply as deducible from pre-positive moral principles.

Caramuel motivated his discussion by noting – rightly – that although the right of discovery was standardly endorsed by his predecessors and contemporaries, no one attempted to produce a philosophical defense of this right.[19] His defense of discovery rights starts by asserting, in line with traditional Catholic teaching, that we have ownership neither over our bodies nor over our souls: these are owned by God. However, we have usufruct over them that confers a true dominium over the fruits of our bodies and souls; such fruits include our actions and their physical products.

One acquires physical dominium over something by materially producing it. Yet, says Caramuel, 'just as every cause acquires physical and natural dominium over the things that it has physically produced, [every free cause] also acquires moral dominium over things produced morally'.[20] For Caramuel, when something is discovered it 'acquires a human mode of being [*humanitus esse*], which is owed to the discoverer so that it is appropriate to say that he morally produced that which he discovered'.[21] Since 'discovery [*inventio*] is a moral production, discovery acquires moral dominium [for the inventor]'.[22]

Caramuel's asserting that discovery is a moral production is a way of affirming that discovery is a form of non-physical production that should be treated as analogous to physical production and should be attributed similar moral effects. The person who discovers something 'virtually produces it, and hence has the same relation to it as if he had really produced it. Since had he really produced the thing, he [the producer] would have physical dominium in the case of moral production, he relates to it [*se habet*] *as if* he has the physical dominium.'[23]

In short, Caramuel holds that: (1) the discovery of a thing produces in the thing discovered a non-physical mode of being (a human *esse*); (2) productive acts generate dominium; (3) therefore discovery generates dominium over the discovered thing. Caramuel does not place any limits on the territorial extension appropriable by discovery.

Caramuel's view is essentially identical to that of the Austrian School economist Israel M. Kirzner who, discussing Jones' hypothetical discovery of lumber in a hole, writes 'Jones may in an important sense be held to have created the very lumber that he notices. True, the lumber was physically in existence long before Jones fell into the hole. But unnoticed lumber is, in a very practical sense, non-existent lumber. […] Objects whose existence has not been suspected have, after all, been utterly irrelevant to human history. They have played no role in the sequences of cause and effect that make up the tapestry of history. Their injection into history occurred only at the moment of their discovery.'[24]

[19]See Daniel Schwartz, 'Caramuel on the Right of Discovery', in Jorg Tellkamp (ed.), *A Companion to Iberian Imperial, Political, and Social Thought* (Brill, forthcoming).

[20]Juan Caramuel y Lobkowitz, *Theologia Moralis* (Leuven: Petrus Zangrius, 1645), 27, n. 122. All translations from this work are mine.

[21]Caramuel, *Theologia Moralis*, 70, n. 264.

[22]Caramuel, *Theologia Moralis*, 70, n. 264.

[23]Caramuel, *Theologia Moralis*, 70, n. 264.

[24]Israel M. Kirzner, *Discovery, Capitalism and Distributive Justice* (Oxford: Blackwell, 1989), 42.

Discovery and Locke's theory of original acquisition

Many of the rationales behind Locke's justifications for property acquisition also apply to discovery. Clearly, this fact does not justify discovery rights per se, as Locke's own justifications may be wrong. However, if it is shown that Locke's rationales also apply to discovery as a form of original acquisition, we can at least say that those sympathetic to some version of Locke's theory have good reason to give serious consideration to discovery as a method of original acquisition.

Locke's chapter on property contains at least five possible justifications for original acquisition: (1) that self-ownership extends to labor and whatever one mixes it with (II, §27–§28); (2) that labor significantly adds value to the resource (II, §28); (3) that we deserve the thing because of the effort invested in creating this added value (II, §34); (4) that our labor makes more resources available for others (II, §37); (5) that appropriation produces an opportunity to secure one's own self-subsistence, to which we have a right (II, §28–§29).[25]

Note that some of these justifications apply to discovery too. Arguably discovery creates value (2), is capable of generating desert claims (3), and makes more resources available to others (4). Those theorists of territory who are sympathetic to Locke should therefore examine whether the justifications doing the work in Locke's account of original acquisition are also applicable to discovery.

Consider first the argument from value. Cara Nine, in one of her works exploring the question of Arctic resources, relies on the added value feature of Locke's original acquisition. According to Nine, the investment of 'vast resources in the discovery and extraction of deep seabed resources' could allow within labor-mixing original acquisition a state claiming ownership of oceanic resources because the 'state has physically worked on them to produce added value'.[26]

What is needed for discovery to fall under the general thrust of Locke's value-adding argument is an argument showing that the act of discovery of something *on its own* can make that thing more capable of satisfying human needs and desires. One such argument can resort to the difference, drawn from Marx's terminology, between two kinds of use-value: potential-use value and actual use-value. The potential use-value is the capacity of a thing to satisfy human desires. But that

[25]These are usefully summarized in Karl Widerquist, 'Lockean Theories of Property: Justifications for Unilateral Appropriation', 2(1) *Public Reason* (2010) at 6. He refers among others to the work of Barbara Arneil, *John Locke and America: In Defence of English Colonialism* (New York: Oxford University Press, 1996); Karl Olivecrona, 'Appropriation in the State of Nature', 35 *Journal of the History of Ideas* (1974) 211–30; G. A. Cohen, *Self-Ownership, Freedom, and Equality* (Cambridge: Cambridge University Press, 1995); David Schmidtz, 'When is Original Appropriation Required?', 73 *Monist* (1990) 504–18; Jeremy Waldron, *The Right to Private Ownership* (Oxford: Clarendon, 1988); and Gopal Sreenivasan, *The Limits of Lockean Rights in Property* (New York: Oxford University Press, 1995).

[26]Cara Nine, 'Claiming the Arctic: Principles for Acquiring Territory from the Commons' (2012), SSRN. available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2065734, 23. David Miller follows Locke in providing an argument for territorial rights based on added value. David Miller, *National Responsibility and Global Justice* (Oxford: Oxford University Press, 2007), 217–8. Meisels distinguishes between adding value as a ground for rights and 'creator's right' more in the direction of Caramuel, *Territorial Rights* (Dordrecht: Springer, 2009), 124.

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capacity needs actualization.[27] By enabling human beings to know the capacity of something to satisfy human desire, discovery removes an obstacle to the actualization of the value of the discovered thing. So while discovery does not affect potential use-value, it certainly adds actual use-value.

According to Kirzner's more extreme view, the discovery of opportunities by the alert entrepreneur creates *all* the value. Discussing again the case in which Jones discovers lumber, Kirzner says: 'That created value [of the lumber] must be attributed *entirely* to Jones' alertness. […] The value created by the discovery of the hitherto valueless lumber was created *ex nihilo*.'[28]

Consider now dessert. It is not difficult to show that discovery very often involves considerable effort. Suffice it to remember the toil and hardships endured by Sverdrup and all the early Arctic explorers, for instance, those involved in the discovery of the Northwest Passage, such as John Franklin who perished with his men in the attempt. The view that effort is a basis of desert and that desert generates legitimate claims is not attributable only to Locke. Modern moral philosophers, such as Joel Feinberg, Shelly Kagan, and George Sher have argued, the latter contra Rawls, that desert is a basis for moral entitlement.[29] Sher and Wojciech Sadurski also believe that effort is an appropriate desert basis.[30]

It may be objected that while we may agree that discoverers such as Sverdrup deserve something for their achievement – for example, some form of recognition, such as having the islands named after him – it is far-fetched to say that Sverdrup's discovery gives him a moral entitlement to some form of proprietary ownership of the entire territory of the islands. This rings true, possibly because there is a disproportion between the achievement and the reward, not because there is a specific problem with proprietary ownership as an appropriate form of reward. Perhaps Sverdrup had a desert-based moral entitlement to own some land within the islands, but perhaps only a few acres, not the entire islands.[31] Perhaps over this limited land, he was not entitled to full liberal ownership rights but only some of the components of these rights, or what Honoré designates 'incidents of ownership'.[32] If we are sympathetic to the view that he has this moral entitlement, then it seems that our problem is not with discovery creating property claims, but only with property claims that are disproportionate to the amount of effort invested by the discoverer.

The upshot is that there is nothing qualitatively different between acquisition of property by discovery and acquisition by labor. In both cases, any reward must be

[27]See Karl Marx, *A Contribution to the Critique of Political Economy*, trans. N. I. Stone (New York: International Library Publishing, 1904), 50.

[28]See Kirzner, *Discovery, Capitalism and Distributive Justice*, 45.

[29]See Joel Feinberg, *Doing and Deserving* (Princeton, NJ: Princeton, 1970) and George Sher, *Desert* (Princeton, NJ: Princeton, 1987), ch. 4.

[30]Sher, *Desert*, ch. 4; Wojciech Sadurski, *Giving Desert its Due: Social Justice and Legal Theory* (Dordrecht: D. Riedel, 1985), ch. 5. For a review and analysis of the literature, see Julian Lamont, 'The Concept of Desert in Distributive Justice', 44 *Philosophical Quarterly* (1994) 45–54.

[31]Chris Armstrong has made a similar point in discussing Locke's reliance on desert: why should the Lockean farmer get all of the land and not what is proportionate to the intensity of her labor? Chris Armstrong, *Justice and Natural Resources: An Egalitarian Theory* (Oxford: Oxford University Press, 2017), 97.

[32]As noted by Armstrong. See Tony Honoré, 'Ownership' in his *Making Laws Bind* (Oxford: Clarendon, 1987), 165–79.

proportionate to the effort invested and is subject to constraints determined by the needs of others. In Locke's discussion, the limits to appropriation are set by the well-known 'enough, and as good' proviso. Locke says about a justified act of appropriation: (II §33) 'Nor was this *appropriation* of a parcel of Land, by improving it, any prejudice to any other Man, since there was still enough, and as good left'. Earlier he wrote, 'For this *Labour* being the unquestionable Property of the Labourer, no Man but he can have a right to what that is once joyned to, at least where there is enough, and as good left in common for others.' (II §28)

So if I fence off and till the entire tillable surface of an island, but as a result there are people on the island who are left without land 'enough, and as good', then I do not acquire property rights over the entire surface of the island, even if my toils and resulting achievements have been such that from the perspective of desert, the property rights to the entire territory would not be a disproportionate reward. The 'enough, and as good' proviso can apply similarly to discovery. Whatever rewards are appropriate to the efforts behind the exploratory ventures, they will be limited by further constraints determined by the needs of other people.

Consider now Locke's labor-mixing justification. It is not clear how this sort of justification could apply to discovery. Thinly characterized, discovery consists essentially of a cognitive event that leaves extra mental reality unchanged; there is no actual mixing going on. Note, however, that in one interpretation of Locke's labor-mixing, what matters to Locke is the laborer's 'creator's right' over something that through alteration has become virtually a new thing.[33] As we have seen, Caramuel argued that the discovered thing, by being discovered, acquires a human mode of being: a human *esse*.[34] If Locke's argument is that I gain property rights to something if I have created it, and if Caramuel and Kirzner are right that to discover is, in moral terms, not unlike creating, then this suggests a way in which discovery can fall under the workmanship interpretation of Locke's labor-mixing claims.

Moving to the last Lockean justification – that labor generates more resources for others – the fact that geographic discovery can generate more resources for others, as discussed above in relation to America's native vegetable species, does not seem controversial.

In conclusion, some of the justifications of original acquisition that can be teased from Locke seem to support rather than rule out property claims based on discovery.

Deficiencies of discovery as a ground of original acquisition

Anyone attempting to demonstrate the bare plausibility of original acquisition by discovery must not, however, underestimate the formidable challenges standing in her way. Here are some of them.

Mental content requirements

It is far from clear what the epistemic requirements of discovery are. Or, more prosaically, it is unclear whether you must realize what you are discovering and what it

[33]See James Tully, *A Discourse on Property: John Locke and His Adversaries* (Cambridge: Cambridge University Press, 1980), 'workmanship model' (4–9 and chapter 2).

[34]Caramuel, *Theologia Moralis*, 66, n. 241.

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is useful for for you to count as having discovered that thing. It is also unclear whether, if the realization concerning the discovered thing is acquired ex post facto, this retrospectively makes the original encounter count as a discovery. Many reputed discoverers misidentified the character of the geographic entity that they discovered. Some authors shortly after Columbus' voyages argued that the real discoverer of America was actually Amerigo Vespucci, the first to realize that this was a new continent rather than a prolongation of Asia.[35] There must be some difference between merely coming across something and discovering it. It is hard to know where, in the spectrum between mere coming across and the full understanding of the nature of the discovered item, we should draw the line.[36]

Extension of discovery

A related problem concerns the extension of the space being discovered. If you spot a coast previously unknown to humankind, are you discovering the whole body of land or only the space adjacent to the coast? The practical implication of an unrestrictive understanding of discovery rights would be that by spotting one mountain peak or by setting foot on the beach, you could acquire the whole of a vast uninhabited land.[37]

Extension of acquisition

Even if we put aside questions concerning the extension of what is being discovered and the knowledge about its nature and uses, problems remain. If you discover a distant planet, all of it in your telescope sight, and you realize that this is indeed a new planet of such and such characteristics, it seems undisputable that you are discovering the entire planet. Yet it would seem absurd to say that in doing so you have acquired full property rights to the entire planet, no matter how much effort you invested in discovering the planet. Even when the fact and scope of a discovery are undisputed, embracing the view that discovery generates full acquisition rights has implausible and unwelcome implications.

Fortuitousness

Another problem with discovery qua grounds of acquisition is that, as Caramuel observed, it seems that many discoveries are fortuitous, not the result of deliberate actions.[38] Just as you would not gain ownership rights to the products of involuntary movements of yours, the same seems to be true of discovery. The artist is

[35]This sentence is not meant to recognize neither Columbus nor Vespucci as discoverers of America: America was already settled, Norse expeditions to America predated Columbus' voyages and (as if this was not enough) a rumor circulated shortly after 1492 that Columbus learned about the route to America from a 'mysterious pilot' who landed in America and spent his last days in the Genovese captain's house. On the mysterious pilot see Edmundo O'Gorman, *La idea del descubrimiento de América: Historia de esa interpretación y crítica de sus fundamentos* (Ciudad de México: Centro de Estudios Filosóficos, 1951), 67–68. On different conceptions of discovery, see 32–44.

[36]Kantorovich argues that 'If A 'discovers' X but mistakenly identifies it with Y, we cannot say that A discovered X, even if X turns out to be useful and of interest.' *Scientific Discovery*, 15.

[37]This problem is sometimes discussed under the rubric 'contiguity' which is considered by international law as a ground for territorial acquisition. See Donat Pharand, *Canada's Arctic Waters in International Law* (Cambridge: Cambridge University Press, 1988), 29.

[38]An objection to discovery rights already addressed by Caramuel, *Theologiae Moralis*, 71, n. 266.

entitled to the product of his work. Yet if Jackson Pollock, by leaning against a wall to rest, stained the wall without noticing, it is unclear whether that counts as a creation over which he has property rights. Indeed many important early geographic discoveries were the result of sea storms forcing ships off their routes.[39] As Caramuel noted, this is why occupation seems superior to discovery; occupation is usually deliberate (although there are possible non-deliberate occupations, such as shipwreck survivors who wash ashore).

Here is a twofold response to these challenges. First, it is easy to find discovery cases that remain unaffected by these challenges. Take a treasure hunter who, after months of meticulous research, finally locates an ancient gold statuette in international waters. In this case, there will be agreement on the fact that there has been a discovery, that the discoverer realizes the nature and uses of what has been discovered, that the discovery was not fortuitous, and that this being a ground of acquisition would not produce the sort of absurdly unwelcome implications as in the case of the discovery of a planet. We may still believe that discovery, even in the case of the statuette, produces no property rights, but this may not necessarily be for any of the problems listed above. Even if we accept that many cases of discovery may indeed be affected by the listed challenges, these cannot ground a flat rejection of discovery claims, because there are many cases in which these challenges have no purchase.

Second, the listed challenges need not be considered as lethal to discovery claims, but as useful inputs to help delimit the nature of the claim advanced here, namely, that some discoveries can generate for the discoverer or the discoverer's sponsors a moral entitlement to some property rights to what has been discovered. Consider the first two challenges, namely the 'mental content requirement' and 'extension of discovery'. These conceptual questions on the nature and extension of discovery are important in their own right. Note however that someone holding the view that the discoverer acquires rights over what she discovered *can* remain agnostic about whether the title 'discoverer' should be attributed to the person who finds the thing, the person who first understands the nature and uses of what has been discovered, or the person who persuades the relevant scientific community of the discovery, or indeed whether we should treat all of them as contributors to discovery conceived as collective process. Concepts that do moral work are often rich and versatile. Consider Locke. It does not seem a very good reason to dismiss Locke's theory of original acquisition the fact that such concepts as 'labor', not to mention its 'mixing with the land', invite various different interpretations. Similarly, the claim that discovery can generate moral entitlement to property should not be dismissed simply because we can have an interesting (and long) philosophical conversation on the question of who should be considered the discoverer of something.

Now consider the challenge of 'extension of acquisition'. As noted in the discussion of Sverdrup, the claim defended here is not that the discoverer is entitled to full property rights over what she has discovered, but that she may acquire an incident

[39]So the Jesuit José de Acosta wrote in a book first published in 1590: 'Everybody knows that many or even most of the regions that have been discovered in this New World have been discovered in this way, more thanks to the violence of tempests than to the good industry of the discoverers.' José de Acosta, *Historia natural y moral de las indias*, c. 19, 18 (Madrid: Historia 16, 1987), 109.

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of property rights over it.[40] There is no claim of co-extension between what one discovers and what one is morally entitled to. Moreover, any theory of property includes, alongside the proposed grounds of original acquisition, independent limiting principles, such as Locke's proviso of 'enough, and as good'. The view that discovery can ground property rights does not rule out, but rather calls for, such extrinsic limiting principles. A theory of property acquisition that gives a person unlimited property rights over vast lands is of course problematic, but acknowledging discovery as a ground for property rights in no way commits its holders to such a theory of property acquisition any more than a theory that places the emphasis on mixing labor with what is acquired does.

Finally, consider the challenge of fortuitousness. The claim advanced here is not that *every* discovery generates rights, but only that some discoveries might. It could be that only discoveries that result from effort, or from some sustained valuable attitude such as alertness, generate entitlements for the discoverer.

The objection of fortuitousness would only be fatal to discovery rights if it was the case that all discovery involved only luck. Louis Pasteur famously said that 'in the fields of observation chance favors only the prepared mind'.[41] While many or perhaps most discoveries involve some amount of luck, they also generally involve considerable training, planning, and effort. When luck is indeed involved in a discovery, it is for the most part what Ronald Dworkin has dubbed 'option luck' rather than 'brute luck'. Option luck 'is a matter of how deliberate and calculated gambles turn out – whether someone gains or loses through accepting an isolated risk he or she should have anticipated and might have declined'.[42] Many theorists think, as Dworkin, that one is not morally entitled to goods obtained through brute luck, such as the gold embedded in a meteorite that fell in your yard, but that one is morally entitled to the goods obtained through option luck, such as wins in voluntary lotteries.

It may even be that discovery *conceptually* presupposes an activity of searching for something before the event of the finding. So Serafim de Freitas pointed out that the Latin *invenire* (to discover or to find) differs from *reperire*, which is merely to bump into something that is yours. *Invenire* is a finding that has been preceded by an act of searching.[43] What made the Portuguese the most successful discoverers of their time was the crown's investment in a program to harness the most advanced nautical, cartographical, and astronomical knowledge of the time by recruiting experts and developing new navigational technologies.[44]

A related problem is that, arguably, the effort that turns out to be unsuccessful should also be rewarded. Many explorers paid with their lives for unsuccessful discovery attempts. Do they not deserve some property rights over land as reward? It is

[40]I would like to thank Cara Nine for this suggestion.

[41]Louis Pasteur, *Œuvres complètes*, Vol. 7 (Paris: Masson, 1939), 131.

[42]Ronald Dworkin, *Sovereign Virtue* (Cambridge, MA: Harvard University Press, 2000), 73.

[43]de Freitas, *De iusto imperio*, c. 3 n. 14 at 17B. On the Portuguese's marked predilection for discovery claims, see Patricia Seed, *Ceremonies of Possession in Europe's Conquest of the New World 1492–1640* (Cambridge: Cambridge University Press, 1995), 100–07.

[44]See Seed, *Ceremonies*, 107–20, 291, and Maria Fernanda Alegría, Suzanne Daveau, João Carlos García and Francesc Relaño, 'Portuguese Cartography in the Renaissance', in David Woodward (ed.), *The History of Cartography*, Vol. 3 (Chicago: Chicago University Press, 2007), 997–1068.

indeed an interesting and insufficiently discussed philosophical question (sometimes treated by philosophers of sport)[45] whether successful performance has independent value, or whether it is to be valued simply as evidence of effort, skill, and other desert bases, which can be exercised even in the absence of success. Happily we need not address this question to handle the objection. For note that discovery rights are not more vulnerable to general worries about desert and performance than other grounds of original acquisition. Consider an industrious but unsuccessful Lockean settler whose crop fails. In this case, effort and value-adding to the land come apart. Lockeans must decide whether all laborers who mix their labor with the land gain property rights or only the successful ones. There is nothing distinctive about discovery that makes it more vulnerable to the criticism that it rewards people who invest equal effort differently than other theories of territorial rights which have success conditions built into them.

Let me now consider a different type of objection to discovery rights. It argues that it problematically gives rights to persons merely for 'being there first'. Being there first, as argued by Chaim Gans in the context of discussing collective occupancy as a source of territorial (not property) rights, generates too weak an interest to create a right for the first comer that can override the possibly weightier interests of second comers to use the land.[46] We know that sometimes firstness should not be given too much weight. In the queue in the emergency ward, it is not the first who should get treatment but, rather, the person who needs it more urgently.

In regard to this type of objection, there are two points to make. First, the objection makes sense if rights are conceived of as interests that are or ought to be legally protected.[47] The objection will be less convincing for those who embrace the 'will theory of rights' (or 'choice theory of rights'),[48] according to which to have a right means to have a control over others' duties and permissions (in the case of land, the control over who is allowed to enter the land, e.g.).[49] Scholars tend either to see Locke as holding a will theory of rights[50] or at least as subscribing to some of its elements.[51] If one embraces the will theory of choice, Gans' objection loses much of its force.

The second point has to do with the concept of discovery. Discovery is in a special class of actions that we may call unrepeatable. Other examples are 'breaking the news' or 'breaking a bottle'. Once you do an action of this type, the action cannot be repeated in relation to the same item: you cannot break the same bottle twice (unless you glue it back together in the meantime) and you cannot successfully break the same news twice to the same public (unless you give them some amnesiac). Once you do an unrepeatable action, other agents are incapable of

[45]For example, Robert Simon, 'Deserving to be Lucky: Reflections on the Role of Luck and Desert in Sports', 34 *Journal of the Philosophy of Sport* (2007) 13–25.

[46]Chaim Gans, 'Historical Rights: The Evaluation of Nationalist Claims to Sovereignty', 29 *Political Theory* (2001) 59–62.

[47]A classic defense of an interest theory of rights can be found in Joseph Raz, *The Morality of Freedom* (Oxford: Clarendon, 1986), 166.

[48]One modern defender is H. L. A. Hart, who defines having a right as 'being in the position to control the performance of a duty' in *Essays on Bentham* (Oxford: Clarendon, 1982), 189.

[49]A. John Simmons, *The Lockean Theory of Rights* (Princeton: Princeton University Press, 1992), 93.

[50]John Finnis, *Natural Law and Natural Rights* (Oxford: Clarendon, 1980), 208.

[51]Simmons, *The Lockean Theory of Rights*, 93.

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doing the same, not because by some additional act you prevent them from doing so, but simply because the nature of the action involved is such that it becomes unavailable once performed.

Some of the activities traditionally regarded as grounds of original acquisition are not unrepeatable. It is possible for newcomers to settle on occupied land (although not exactly in the precise space occupied by the earlier settlers' bodies) and it is possible for you to mix your labor with land which has already been mixed with someone else's labor. You could, for example, water land that has been tilled by another person. So there is conceptual space for the question, 'Why should the first occupant get the land and not the second?' or 'Why should the first person to mix his labor with a portion of land get the land rather than the second?' However, there is no conceptual space for the question, 'Why should the first discoverer of a thing get rights and not the second discoverer?' All you can ask is whether discovery generates rights or not.

To sum up, in this section, I considered some of the possible objections that beset discovery as a source of property rights. These are the problems of mental content requirements, extension of discovery, extension of acquisition, fortuitousness, unsuccessful effort, and firstness. Some of these objections affect only some discoveries, some simply highlight the need for conceptual discernment, some point at problems that underline theories of acquisition in general or theories of desert in general instead of pointing to a specific vulnerability of discovery rights. None of these objections is fatal to the general argument that it is possible for discovery to generate a moral entitlement to property rights.

From discovery to territory

Can that portion of land over which the discoverer acquires rights become a territory, and if so how? In considering this question, we may distinguish, again, between institutional and non-institutional approaches. From an institutional perspective, we should ask whether an international regime by which states can acquire territorial rights over land discovered by individuals suitably related to that state is one that would make sense for humankind to adopt. A non-institutional approach would ask whether, in the absence of such a regime, a state could acquire moral entitlement over land outside its territory by reason of the discovery.

It is tempting here to make things simpler by simply asking whether there is a route from full property to territory. But this way of posing the question leaves too much out. First, because the discoverer may acquire a moral entitlement to only some of the incidents of property rather than to full liberal property. Second, and more importantly, the specific sort of activity by means of which any rights are originally established matters because we want to consider the question whether this specific activity (i.e. discovery) is the sort of activity to which the state can contribute, thereby establishing rights for itself. The intention is not to find a route from discovery to territorial rights that goes around property acquisition, but only to keep in view, as we proceed, that the property acquisition under discussion is one that has been generated by discovery.

The modern notion of territory prevalent in the West is the outcome of complex historical and intellectual transformations, which have been usefully mapped out by

political geographers such as Stuart Elden.[52] From a philosophical perspective, we can characterize territorial rights, along with David Miller, as containing three main elements: (1) the right of jurisdiction, (2) the right to control the movement of goods and persons across the border, and (3) the right to control and use the resources that are available in the territory.[53] A state's right over natural resources in some way resembles property-like rights.[54] However, these can be disaggregated into a number of different rights. According to Elinor Olstrom's analysis, these include the right to access, withdraw, alienate, and derive income from resources and the right to exclude others, to manage them, to regulate their alienation and the income derived from them. A collective may have only some of these rights.[55]

Margaret Moore has argued that unoccupied land, because it is irrelevant to group self-determination, ought to be treated as a resource.[56] If this is correct, the question we should ask is: assuming that discoverers acquire a moral entitlement to some property rights over some unoccupied land, by which mechanisms, if any, can a state become morally entitled to include the land to which the discoverer is morally entitled within its territory so as to hold over it the kind of rights that states have over natural resources that are already in their territory?

In the following, I will examine whether Lockean approaches to territorial rights can accommodate discovery-generated territorial right.[57] Note that the appeal of a Lockean argument for discovery-based territorial claims is not confined to self-declared Lockeans. This is because some critics of Lockean approaches to territorial rights also incorporate Lockean elements in their explanations. David Miller, for instance, believes that an increase in the material and cultural value of the land creates desert grounds capable of justifying some aspects of territorial rights.[58]

There are two main strains of Lockean theories of territorial rights. According to the individualist account proposed for instance by Hillel Steiner and A. John Simmons, it is the pre-political consent of individuals to incorporate their property that creates jurisdictional rights of the society that results from the incorporation of the land. As approvingly put by Steiner: 'the nation territory for Locke is composed of the real estate of the members'.[59] Lockean collectivists doubt the capacity of Lockean individualism to generate territorial rights. Instead they argue, as Nine

[52]See Stuart Elden, *The Birth of Territory* (London and Chicago: University of Chicago Press, 2013).

[53]Miller, *Territorial Rights*, 253; Simmons, *The Lockean Theory of Rights*, 187.

[54]A. John Simmons, *Boundaries of Authority* (New York: Oxford University Press, 2016), 5.

[55]Chris Armstrong, *Justice and Natural Resources*, 22–23 after Elinor Ostrom, 'Private and Common Property Rights', in B. Bouckaert and G. De Geest (eds), *Encyclopedia of Law and Economics* Vol. II: *Civil Law and Economics* (Cheltenham: Edward Elgar), 339; Margaret Moore, *A Political Theory of Territory* (Oxford: Oxford University Press, 2015), 167.

[56]Moore, *A Political Theory of Territory*, 167–70.

[57]I do not discuss here the openness of other approaches such as Liberal Nationalist, Self-Determination, and Kantian or Legitimacy-based approaches to discovery rights. While none of these approaches endorses discovery rights over unoccupied land, there is nothing in them that necessarily rules them out.

[58]See Miller, *Territorial Rights*, 258, where he argues that territorial rights require a transformative relationship to land effected through long occupation which makes the territory 'materially valuable because it has been improved in a way that reflects their [the occupant group's] needs and cultural values', as well as symbolically transformed.

[59]Hillel Steiner, 'Territorial Justice', in Simon Caney, David George and Peter Jones (eds), *Natural Rights, International Obligations* (Boulder: Westview, 1996), 144.

does, that a collective (the state) may generate a morally valuable relationship with land such that the way to promote the values of liberty, desert, and efficiency would be best realized by the state acquiring territorial rights over that land. These rights for Nine consist of limited use-rights providing lifetime satisfaction of basic needs consistent with others' capacity to have the same.[60] What are the implications of each of these approaches for the prospects of discovery as a ground for directly or indirectly establishing territorial rights?

If we consider Lockean individualism, the answer is easy. If discovery can generate individual property rights, the rest of the story can stay more or less the same. I have argued in the previous sections that discovery is sometimes capable of entitling the discoverer to property rights (perhaps full property rights) over a portion of what she discovered. Estate holders, including those who acquired property rights via discovery in a pre-political stage, can incorporate their property rights, thus creating a state with rights over the sum of estates which then constitutes the state's territory. The initial territory can be expanded via subsequent incorporation of additional estates, including those acquired by discovery.

Who gets to have territorial rights over the portion of the discovered land owned by the discoverer? The Lockean individualist would say that this is the owner's choice, namely her choice of whom to incorporate to. This would basically work as in the present United Nations Convention on the Law of the Sea regime, by which the owner of a vessel is allowed to choose the flag state. In doing so, the owner of the vessel decides which authority will have jurisdiction over the boat.

Now consider Lockean collectivism, as espoused among others by Meisels and Nine. Here we must consider whether collectives can take credit through their institutions for some of the increase in the value of land discovered by private persons. According to Nine, the acts that generate property rights for an individual are not the same acts that generate territorial rights for a state. Consider desert. The state does not till my land. But, according to Nine, the state typically adds value to land by developing and applying agricultural systems and production, developing technologies that aid production, and shaping the landscape in a way that reflects the people's cultural values.[61] So if the state sets up irrigation systems, the value added to my land is partly due to my own effort and partly due to the effort of the state. Therefore, the state may acquire some sort of right over that land. Crucially, for collectivists, this can happen *even without* the consent of the estate holder.

Assuming that Nine is correct that the increase of value for which the state is responsible gives the state a right over and above the owner's property rights (such as a territorial right), we can say the same about discovery. Discovery as per the thin characterization involves an increment in knowledge, and knowledge is incremental. So if I discover a new material but do not know some of its physical features, and thanks to funding from my national research institution, I can conduct the necessary expensive experiments, the value generated by my discovery is increased.

[60]Cara Nine, *Global Justice and Territory*, 41.

[61]Also Meisels, *Territorial Rights*, 147.

So in principle, it seems that there is no reason why Lockean collectivists need to rule out discovery generating at least some of the moral grounds on which, in their view, a state's territorial rights can be based.[62] The value generated by an individual's discovery can be in part due to the effort of the collective through its political institutions. If Norway made Sverdrup's discovery more valuable than it would otherwise have been, say by funding the purchase of advanced cartographic equipment, it could by this account acquire territorial rights of a portion of the islands even without Sverdrup's consent.

Importantly, depending on how you construe Lockean collectivism, there is the possibility that this could happen even if Sverdrup himself did not acquire *any* property rights over any part of the islands. For it is at least theoretically possible for a collective to generate a morally valuable relationship with the land through its institutions without that land being already divided between land owners. Suppose a state, through its agents, discovers an island which is the only habitat of a particular species. Consider, for example, Lord Howe Island in the Pacific sub-Antarctic area – the only habitat in the world of the Lord Howe Island stick insect. This island was discovered by the crew of the HMS *Supply* in 1788 when, it seems, it was unknown to anyone else, including Polynesian navigators.[63] Under a plausible construal of Lockean collectivism, Britain could acquire territorial rights over the island because discovery added value to the island from the perspective of humankind, even though, in this case, the value addition was not reducible to the value adding contributions generated by individual owners, since there were none on Lord Howe Island. Perhaps, given the absence of pre-existing proprietors, Lockeans would be inclined to recognize Britain's acquisition of only property rights or property-like rights rather than of territorial rights over the land. But then it would seem quite natural to assume that, since the owner in this case is also capable of exercising jurisdiction (being a state), it would incorporate this private estate into the estates that already compose its territory, at least in terms of holding natural resource rights over it.

This means that while there is a collectivist route from discovery to territorial rights that goes through the pre-existing individual property rights generated by individual discovery, there could also be a collectivist route that bypasses individual property rights. In the case of Lord Howe, the British people, through their institutions, could acquire territorial rights over all or part of the island by virtue of the value added to the island by discovery.

What do Lockean collectivists say about cases in which original acquisition of land by individuals takes place *without* the contribution of effort of a state? Nine allows that in these cases owners may have a restricted say in the selection of the

[62]In an earlier article, Nine rejects the possibility of territorial rights over unoccupied lands partly because territorial rights imply the rule of law, and the law rules only over persons. This seems true of the jurisdictional element of territorial rights. However, it is less true of a different element, namely the property-like right over natural resources. Nine, 'Territory in a World of Limits: Exploring Rights to Oil and Ice', in Liam Leonard, John Barry and Marius de Geus (eds), *Environmental Philosophy: The Art of Life in a World of Limits* (Bingley, UK: Emerald Press, 2013), 149.

[63]Lord Howe Island was almost certainly never settled before, partly because it was difficult for Polynesians to sail in its direction. Atholl Anderson, 'Investigating Early Settlement on Lord Howe Island', 57 *Australian Archaeology* (2003) 98–102.

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jurisdictional authority. The way in which jurisdiction over vessels works in maritime law can be applied to natural resources found outside any state jurisdiction, such as those in the Arctic. In her example, if South Africa had territorial rights to an extraction site in the Arctic, the sort of right they have to the site would be similar to that of the 'state over a ship flying its flag; the state has *limited* jurisdictional authority over goods that have already been discovered and appropriated.'[64] It seems that, for her, South Africa's jurisdiction would result from the people at the extraction site choosing South Africa, say, rather than Australia, as the bearer of territorial jurisdiction. Still, for Nine, the territorial jurisdiction that results from an owner choosing the jurisdictional authority is confined to a jurisdiction over the *property* there, not over the persons.[65]

The upshot of this section is that Lockeans, both individualist and collectivist, should be sympathetic to the possibility of discovery-based territorial claims, whether made by individuals or agents of states.

Summary

In this paper, I set out to examine the normative force of discovery claims mainly in the context of the international territorial disputes in the Arctic. I have argued that discovery claims indeed possess normative force because some discoveries can generate for the discoverer or its sponsors a moral entitlement to some property rights over what has been discovered. Moreover, I have argued from a roughly Lockean perspective that property rights can sometimes give standing to the owner to decide which authority will have jurisdiction not only over the property itself but also over the people residing temporarily or permanently within the property.

In deploying this argument, I considered Juan Caramuel y Lobkowitz, who produced an interesting argument for discovery generating moral entitlement to property rights – an argument that has some parallels with the much better known theory of original acquisition by Locke. When we look at Locke's theory, we see that many of the justifications that do the work in Locke's theory also apply to discovery. In particular, it is plausible to say that discovery creates value, makes more resources available to others, and involves effort, and so it provides a basis for desert and, finally, in some way alters the mode of existence of that which has been discovered.

It is not difficult to come up with objections to discovery generating entitlement to property rights. A list of such objections is provided in section 'Discovery and Locke's theory of original acquisition'. There I argue that these objections are not only incapable of establishing a flat rejection of discovery rights, but also do not affect the specific normative claim on behalf of discovery rights that is defended in this article.

[64]Nine, 'Claiming the Arctic', 24.

[65]Nine has subsequently explored an alternative approach based on compromise between claims, partly motivated by the irrelevance of settlement and adjacency claims, which do not apply in much of the Arctic. See 'Compromise and Original Acquisition: Explaining Rights to the Arctic', 32 *Social Philosophy and Policy* (2015), 149. More recently, she has explored the application of Pufendorf's criteria for the acquisition of territorial rights over ocean portions to questions concerning passage and exploitation of Canada's Northern Passage. See Cara Nine, 'Right to the Oceans: Foundational Arguments Reconsidered', *Journal of Applied Philosophy* 2019(36): 626–642.

In the closing section, I explored different arguments for discovery-generated territorial rights that should appeal to Lockeans. I discussed first the mechanisms of incorporation of private property to territory suggested by the individualist Lockean approach. Secondly, I discussed whether there is a route to territorial rights that does not go through prior acquisition by private individuals, as suggested by collectivist Lockeans.

It is important to point out that one cannot deduce from the view argued here that the actual discovery-based territorial claims over the Arctic made by Canada, Norway, and Russia, or discovery claims elsewhere over Antarctica or over the Spratly Islands, are persuasive. The normative currency of such claims depends, among other things, on often intractable and contentious historical facts, on the nature of the moral and legal relation between explorers and sponsor states, and on the transferability of discovery rights.

However, if the argument advanced here is correct, we can at least say that while claims made by states over the Arctic may be, and possibly are, morally spurious, what makes them spurious is not as such the appeal to discovery.

Most people will agree that territorial and proprietary claims over Arctic land are subject to moral constraints on the use of the huge natural resources found there. These constraints result from our duties to future generations as well as our duties of global distributive justice. Canada, Norway, and Russia are not morally allowed to dispose of oil and other mineral deposits as they see fit regardless of the plausibility of their territorial claims to Arctic regions.

Any reasonable view on territorial jurisdiction in the Arctic must bear in mind the moral constraints imposed by the present and future needs of humankind. Thus, the view that discovery can in some circumstances produce territorial rights can be reasonably held only to the extent that its proponents accept these higher constraints. Importantly, there is nothing in the view itself that prevents them from doing so.

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