

# Indigenous Peoples, Political Economists and the Tragedy of the Commons

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*In “The Tragedy of the Commons,” Garrett Hardin implicitly moved from bounded commons — a pasture or a tribe’s territory — to the case of boundless commons — the ocean, the atmosphere and planet Earth. He insisted on the need for imposing limits on the use of these resources, blurring the difference between communal property and open access regimes. The success of his paper is due in great measure to his neglect of economic, scientific, legal and anthropological literature. His main lifelong focus was on limiting population growth. He could have avoided the conceptual confusion he created by turning to well-known political economists such as John Locke and Adam Smith or, for that matter, jurists, such as Blackstone. Instead, he simply envisioned indigenous lands as an unbounded wilderness placed at the disposal of frontiersmen. Though he eventually acknowledged the existence of managed commons, he had little interest in community rules pertaining to resource exploitation. For him, these were simply moral norms which inevitably became ineffective after a community reached a certain level of population. He also took economists to task for failing to include in their analysis the true environmental and social costs of public decisions. Still, the famous example of the indigenous people of Northeastern Quebec illustrates a shortcoming of his analysis: community members did not act in total isolation from each other. On the contrary, communal norms*

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*could prevent an overexploitation of resources or allow for the adoption of corrective measures.*

## INTRODUCTION

In his celebrated “The Tragedy of the Commons,” Garrett Hardin showed that the failure to manage the commons would inexorably lead to their destruction. His analysis left out some essential elements that will be the focus of this Article, namely the attitude of indigenous peoples toward their commons and the reasoning of political economists. This can be seen from Hardin’s discussion of a “pasture open to all” on which “each herdsman will try to keep as many cattle as possible.”<sup>1</sup> This scenario was borrowed from a lecture given by W. F. Lloyd in 1833.<sup>2</sup> For Hardin, an arrangement of this kind could last for centuries if “tribal wars, poaching and disease keep the number of both man and beast well below the carrying capacity of the land,” a clear reference to indigenous peoples.<sup>3</sup> With social stability, however, the never-ending increase in the number of herds would bring “ruin to all.”<sup>4</sup>

Similarly, unlimited access to the ocean threatened species of fish and whales with extinction.<sup>5</sup> Under frontier conditions, using the commons “as a cesspool,” for instance by killing a bison only to eat his tongue, did not cause harm, because there was “no public” to speak of (here indigenous peoples became invisible).<sup>6</sup> In general, increases in population density lead to the abandonment of the commons “in food gathering,” to the “enclosing of farm land,” and to the restriction of access to “pastures and hunting and fishing areas.”<sup>7</sup> For Hardin, the next step was limiting population growth, his lifelong cause, because the earth’s resources would inexorably become too limited to ensure a decent living for the human race — a Malthusian theme.

Hardin used a rhetorical ploy that needs to be highlighted. Starting from bounded commons — a pasture or the territory of a tribe — he moved to the case of boundless commons — the ocean, the atmosphere and planet Earth. He then insisted on the need to regulate the use of these resources. He thereby blurred the difference between communal property regimes, where access to resources is controlled by co-owners or community members, and open-access

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1 Garrett Hardin, *The Tragedy of the Commons*, 162 *Sci.* 1243 (1968).

2 *Id.* at 1244.

3 *Id.* at 1244.

4 *Id.* at 1244.

5 *Id.* at 1245.

6 *Id.* at 1245.

7 *Id.* at 1248.

regimes, for example areas where lands are unoccupied, or substances that cannot realistically be appropriated, such as the atmosphere.<sup>8</sup> As we shall see in this Article, this can be attributed to stereotypical ideas about commons and indigenous peoples that were widespread in 1968 but that never completely disappeared from Hardin's thinking. For example, in 1974, he declared that the proposal to "give back' the land to Indians" was unassailable as a matter of "pure logic," but that he was unwilling to live by it, and knew of no one who would. For him, the law rejected "pure justice" and recognized "only recent property rights," because we "are all descendants of thieves."<sup>9</sup>

It is well known that after 1968, historical research provided many examples of commons that were managed in a sustainable way.<sup>10</sup> This Article aims to show that the success of Hardin's paper is due in great measure to his neglect of economic, scientific, legal and anthropological literature. Part I will explain that, before writing his paper, he could easily have clarified the distinction between various types of commons. All he needed to do was to read carefully an author that he quoted, Adam Smith, and one upon which he implicitly relied, John Locke, or even jurists, such as William Blackstone. This is remarkable, since Hardin was fond of referring to an array of famous authors from many disciplines, civilizations and historical periods, but not economists, at least in the 1960s.<sup>11</sup> To his credit, Hardin would later recognize, and repeatedly emphasize, that extremely small communities could preserve their commons over a long period of time.

Part II will show that, in his opinion, managing the commons successfully depended on moral norms that inevitably became ineffective after a community exceeded a certain level of population.<sup>12</sup> Similarly, in order to highlight the risks posed by population growth, he criticized economists for not paying sufficient attention to the societal costs imposed by various human activities.

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8 Elinor Ostrom et al., *Revisiting the Commons: Local Lessons, Global Challenges*, 284 *SCI.* 278–81 (1999); Richard A. Epstein, *How Spontaneous? How Regulated?: The Evolution of Property Rights Systems*, 100 *IOWA L. REV.* 2341, 2343–44 (2015).

9 Garrett Hardin, *Living on a Lifeboat*, 24 *BIOSCIENCE* 561, 567 (1974).

10 Fabien Locher, *Third World Pastures: The Historical Research of the Commons Paradigm (1965-1990)*, 51 *QUADERNI STORICI* 303 (2016); Surabhi Ranganathan, *Global Commons*, 27 *EUR. J. INT'L L.* 693 (2016); Ostrom et al., *supra* note 8.

11 See, GARRETT HARDIN, *POPULATION, EVOLUTION, & BIRTH CONTROL – A COLLAGE OF CONTROVERSIAL READINGS* (1965); Fabien Locher, *Les Pâturages de la Guerre Froide: Garrett Hardin et la "Tragédie des Communs"* [*Cold War Pastures: Garrett Hardin and the "Tragedy of the Commons"*], translated in 60 *REVUE D'HISTOIRE MODERNE & CONTEMPORAINE [RHMC]* 7, XXIII (2013).

12 For a similar point, see Ranganathan, *supra* note 10, at 701–02.

However, he remained uninterested in actual examples of commons that had been managed successfully, focusing instead on the risk of “tragedy.” Yet, already in 1967, Harold Demsetz had argued that familial property appeared to prevent the extermination of beavers by indigenous peoples who were only too eager to exchange furs with Europeans.<sup>13</sup> Demsetz’s analysis was much more sophisticated than Hardin’s, yet both of them assumed that no restriction whatsoever applied to indigenous peoples who hunted game or captured fur-bearing animals. The basic scenario in this famous example was therefore similar to Hardin’s, and attracts the same criticism. Part III will review this analysis, as well as the conclusions that can be drawn from recent research on the importance of indigenous communal norms for the avoidance of overexploiting resources or the adoption of corrective measures. This will provide yet another example of the beneficial role played by communities in the management and preservation of their resources, as well as some shortcomings in this regard.

### I. BOUNDED AND UNBOUNDED COMMONS FOR LOCKE AND SMITH

Hardin was familiar with the traditional historical narrative regarding the appearance of property, which emphasized the role played by pastoralists and later agriculturalists.<sup>14</sup> Subpart (A) will show that he neglected the distinction made by John Locke between wild forests and the English commons. Locke was perhaps more of a philosopher than an economist, but his extremely influential justification of property rights was certainly based, at least in part, on economic arguments. Similarly, although Hardin referred to Adam Smith’s “invisible hand,” he did not look into Smith’s thoughts about the commons, nor into those of legal scholars who studied their regulation, as will be seen in subpart (B).<sup>15</sup> Had he done so, he could not have missed the importance of various management systems in European commons, although it might have reinforced his stereotypical views of hunter-gatherers in North America.

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13 Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. 347 (1967).

14 Hardin, *supra* note 1, at 1245, 1248; see David B. Schorr, *Savagery, Civilization, and Property: Theories of Societal Evolution and Commons Theory*, 19 THEORETICAL INQUIRIES L. 507 (2018).

15 Hardin, *supra* note 1, at 1244.

### A. John Locke and the Limitless Forests of America

In 1690, John Locke assumed that in North America, indigenous peoples did not establish boundaries between the territories where they hunted and fished.<sup>16</sup> In his view, in the “beginning and first peopling of the great common of the world [...] God, by commanding to subdue, gave authority so far to appropriate.”<sup>17</sup> At that time “all the world was America.”<sup>18</sup> In the state of nature, by his labor, a man who tilled land enclosed it from the commons.<sup>19</sup> To do so, he did not require the consent of “his fellow-commoners, all mankind,” because remaining lands exceeded what could be used by those who were still “unprovided.”<sup>20</sup> Similarly, a man or a family who planted “in some inland vacant places of America” did not obtain a “very large” possession “nor, even to this day, prejudice the rest of mankind, or give them reason to complain,” for unimproved lands remained plentiful there.<sup>21</sup> However, having neglected to cultivate lands, “several nations of the Americans” did not dispose of “one-hundredth of the conveniencies” enjoyed by Englishmen; in America, “a king of a large and fruitful territory [. . .] feeds, lodges, and is clad worse than a day-labourer in England.”<sup>22</sup>

Initially, a place where crops rotted on the ground or where fruits perished without being gathered was “to be looked on as waste,” notwithstanding its enclosure.<sup>23</sup> A “just property” did not extend to things that perished without being used, until the appearance of money made possible the accumulation of wealth.<sup>24</sup> Property also developed gradually. In biblical times, pastoralists no longer had “room enough in the same place for their herds,” so families “separated and enlarged their pastures.”<sup>25</sup> Later, in some parts of the world, the “increase of people and stock, with the use of money, had made land scarce” so that “several communities, settled the bounds of their respective territories and, by laws within themselves, regulated the properties of the

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16 JOHN LOCKE, *THE SECOND TREATISE ON GOVERNMENT AND A LETTER CONCERNING TOLERATION* 13-14, ¶ 30-34 (Paul Negri & Tom Crawford eds., 13th ed. 2002).

17 *Id.* at 15-16, ¶ 35.

18 *Id.* at 22, ¶ 49.

19 *Id.* at 14, ¶ 32.

20 *Id.* at 14-15, ¶ 32-33.

21 *Id.* at 16, ¶ 36.

22 *Id.* at 19, ¶ 41.

23 *Id.* at 18, ¶ 38.

24 *Id.* at 22, ¶ 46-47.

25 *Id.* at 18, ¶ 38.

private men”; they settled “by compact and agreement [. . .] the property which labour and industry began.”<sup>26</sup>

This innovation required “several states and kingdoms” to renounce “expressly or tacitly” the “natural communal right” to use lands where other people dwelled. Therefore, it is only at this stage that property became “settled” and regulated by laws which, *ex hypothesi*, did not exist in the state of nature. In this new context, communally owned lands could not be appropriated without the consent of commoners, because “what is common in respect of some men [. . .] is not so to all mankind; but is the joint property of this country, or of this parish.”<sup>27</sup> However, in places where the bounds of territories had not been ascertained (such as America), uncultivated lands remained subject to this right of universal use, as long as enough lands remained available to provide for the needs of all.<sup>28</sup>

In other words, Locke assumed that indigenous peoples allowed any person to install himself on uncultivated or uninhabited land. From this point of view, they could neither own nor claim ancestral lands.<sup>29</sup> Forests were unbounded and indigenous peoples wandered haphazardly in their hunts.<sup>30</sup> In fact, many parts of their lands became available because they were either massacred or forced to relocate themselves; in other cases, a treaty was entered into to authorize new settlements by colonists. Locke also wrote that in Europe, some areas “had been left common by the law of the land,” which regulated all types of property “for those of the same society.”<sup>31</sup> In America, there had been no agreement to renounce the right to use the land; therefore, it could be subdued by newcomers. In Locke’s view, this would not prevent indigenous peoples from satisfying their basic needs.

The distinction between bounded commons regulated by law after the institution of governments, and boundless forests available to anyone, was therefore clear to him. However, the transition to private property was not due to the exhaustion of resources, but to the appearance of money, which was not used by indigenous peoples in the parts of North America colonized

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26 *Id.* at 21, ¶ 45.

27 *Id.* at 15, ¶ 35.

28 *Id.* at 17-18, ¶ 37-38.

29 BARBARA ARNEIL, JOHN LOCKE AND AMERICA (1996); Allan Greer, *Commons and Enclosure in the Colonization of North America*, 117 *AM. HIST. REV.* 365 (2012); CRAIG YIRUSH, *SETTLERS, LIBERTY AND EMPIRE* (2011); Kathy Squadrito, *Locke and the Dispossession of the American Indian*, 20 *AM. INDIAN CULTURE RES. J.* 145 (1996); ANDREW FITZMAURICE, *SOVEREIGNTY, PROPERTY AND EMPIRE* (2014).

30 Put differently, they remained “on the move.” Epstein, *supra* note 8, at 2345.

31 LOCKE, *supra* note 16, at 15, 18 ¶ 35, 38.

by the French and the British during the seventeenth century.<sup>32</sup> Therefore, they had no incentive to increase production beyond what they could preserve and consume. The consequences of an open-access regime would also be analyzed by Adam Smith.

## B. Adam Smith and the Commons in Europe and America

Smith also distinguished between commons in Europe and America. In Scotland, lands enclosed to maintain cattle yielded a high rent because these animals were used to cultivate corn on neighboring lands, which were generally unenclosed. As well, cattle on enclosed lands would feed better, since they would not be bothered by their keepers or some dogs, contrary to what would happen if they strayed in an open field.<sup>33</sup> However, where cattle could not be used in the growing of corn, the rents on both types of lands would tend to equalize.<sup>34</sup>

In the colonies, waste land was so plentiful that it was primarily used to feed cattle, which soon multiplied and became “half-starved” after “having long ago extirpated almost all the annual grasses by cropping them too early in the spring.”<sup>35</sup> Therefore, in Smith’s time, it was barely possible to maintain one cow in places where, in the past, four would easily have grown healthily.<sup>36</sup> If a piece of land became exhausted because of continual cropping, farmers

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32 Beaver pelts were used for accounting purposes by indigenous peoples and European traders in Northeastern America, but they could not be accumulated indefinitely nor exchanged outside of the fur trade network: Brian Gettler, *Money and the Changing Nature of Colonial Space in Northern Quebec: Fur Trade Monopolies, the State, and Aboriginal Peoples during the Nineteenth Century*, 46 *SOC. HIST.* 271, 279 (2013). Around the Great Lakes and in New England, small tubes that had been fashioned out of seashells were assembled in belts or strings of “wampums” and could be easily accumulated; eventually, they were produced by European settlers and served as a currency for them as well: Jonathan C. Lainey, *Les colliers de porcelaine de l’époque coloniale à aujourd’hui [Wampum Belts from Colonial Times to Today]*, 35 *RECHERCHES AMÉRINDIENNES AU QUÉBEC* 61 (2005). This did not lead to individual ownership in land, contrary to what Locke assumed. The explanation for this is beyond the scope of this paper.

33 ADAM SMITH, *AN INQUIRY INTO THE NATURE AND CAUSE OF THE WEALTH OF NATIONS* ¶ I.11.23 (Edwin Cannan ed., 1904) (1776), <http://www.econlib.org/library/Smith/smWN.html>.

34 *Id.* ¶ I.11.24.

35 *Id.* ¶ I.11.198.

36 *Id.*

would clear and cultivate another piece, as often as needed.<sup>37</sup> But at some point, it would “become profitable to feed cattle upon the produce of cultivated land” following “a system of husbandry not unlike that which still continues to take place in so many parts of Scotland.”<sup>38</sup>

Without ascertaining the historical accuracy of this narrative, it should be noted that in America, “waste land” actually belonged to indigenous peoples, who were completely absent from this picture.<sup>39</sup> Be that as it may, Smith, like Locke, believed that in America, lands were unbounded, both physically and legally. For him, the solution to their depletion consisted in enclosing and pooling resources: cattle raised on enclosed lands would improve the cultivation of corn in Scotland, while feeding corn to cattle in America would make it produce more milk and become weightier. In such a context, the use of the commons was implicitly subject to regulation, for instance the “system of husbandry” used in many parts of Scotland, to which Smith elliptically referred.

In England, a detailed system of rules also existed. As early as 1598, a treatise on the laws of the forest explained that the “right of common” extended only to a fixed number of beasts.<sup>40</sup> A commoner who exceeded this limit became a “surcharger” and, as such, a “trespasser of the forrest.”<sup>41</sup> Even the right of “common without number” could not prejudice the right of the grantor to “have sufficient comon for himselfe in the same land [...] with his beasts.”<sup>42</sup> At common law, commoners who found “themselves greeved by surcharging of their Common” could request a writ of “Admeasurement of pasture,” which would “cause every Commoner [...] to be admeasured, and to common with no more beasts than his rate wil allow him.”<sup>43</sup> Hardin seems to have discovered the existence of this work after 1968, since the relevant excerpt appears in a set of notes that he kept until 1992.<sup>44</sup> However, he apparently ignored that

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37 *Id.*

38 *Id.*

39 Greer, *supra* note 29; in New England, swine and dry cattle were generally let loose on the land: WILLIAM CRONON, *CHANGES IN THE LAND: INDIANS, COLONISTS AND THE ECOLOGY OF NEW ENGLAND* 134 (1983).

40 JOHN MANWOOD, *A TREATISE AND DISCOURSE ON THE LAWES OF THE FORREST* 79-80, 83-84 (1978).

41 *Id.* at 83.

42 *Id.*

43 *Id.* at 84.

44 Garret Hardin, Notes From Note Set 11 (unpublished note, University of Santa Barbara Special Collections, Garrett Hardin Papers) [hereinafter Garrett Hardin Papers Collection]; JOHN MANWOOD, *A TREATISE ON THE LAWES OF THE FORREST* 220, 223, 228-29, 231 (3d ed. London, 1665) (Hardin’s notes indicate “my copy”).

for Blackstone already, the various rights to “common of pasture [...] may be and usually are limited as to number and time,” although some could be “without stint, and [...] last all the year.”<sup>45</sup>

In summary, for Locke, indigenous peoples acknowledged the right of every human being to start cultivating land, up to the point where crops or fruits would be wasted because no one would consume them. In other parts of the world, the increase of population, the use of money and the scarcity of land led to the establishment of territorial boundaries and the adoption of laws regulating property. Both Locke and Smith were clear that English or European commons were owned by a local community and were regulated by law. Indeed, jurists such as Manwood or Blackstone explained the relevant rules in their works. Smith also believed that in America, “waste” land remained available to the first taker. For him, the issue was which use of the commons was the more profitable, not the spiraling downward assumed by Hardin. No doubt, Hardin would have replied that for these authors, new lands remained abundant and were not yet depleted. Still, they did not believe that the commons system would inevitably exhaust the land. Hardin later recognized this and modified his analysis accordingly.

## II. UNMANAGED COMMONS AND ECONOMIC ISSUES

Hardin seems to have read very few journals or books focusing explicitly on economic issues, as opposed to ecology or population issues.<sup>46</sup> In 1978, he explained that ten years earlier, he was actually concerned with “a subset of commons – those where ‘help yourself’ or ‘feel free’ attitude prevail,” for instance when European pioneers “chose to perceive” North America “as unpeopled.”<sup>47</sup> In other words, he was referring to “‘unmanaged’ commons,” not to those that were managed within a socialist or a free-enterprise regime. Both could work or fail, depending on the context. But he persisted: without management, “as overuse of resources reduces carrying capacity, ruin is inevitable.”<sup>48</sup> He underlined that in interdisciplinary work, the stitching together

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45 2 WILLIAM BLACKSTONE, COMMENTARIES ON THE LAWS OF ENGLAND 34 (London, Chicago Univ. Press. 1979) (1766), [http://avalon.law.yale.edu/subject\\_menus/blackstone.asp](http://avalon.law.yale.edu/subject_menus/blackstone.asp).

46 Garrett Hardin Papers Collection, *supra* note 44; Locher, *supra* note 11 at XXIII.

47 Garrety Hardin, *Extensions of the “Tragedy of the Commons,”* 280 SCI. 682 (1978).

48 *Id.* at 683.

of numerous specialties increases the risk of error, although he was concerned only with criticism that focused on the “underlying nature of things.”<sup>49</sup>

After his retirement in 1978, Hardin started to pay some attention to commons that were successfully managed by small-scale communities, but he did not acknowledge seriously the existence of legal or customary rules, as we shall see in subpart A. More generally, he remained quite critical of economists, an aspect of his thought we will discuss in subpart B. In all of this, he focused primarily on rising population levels and the threat this posed for the wellbeing of the human species, as opposed to commons per se.

### A. The Successful Management of the Commons

Hardin recognized that various options existed to stop the use of the commons “as a cesspool” and to restrict the use of public property. Using the example of National Parks, he argued that if the land was not privatized, various systems could be devised to allocate a right of use: an auction, the selection of meritorious persons, a lottery, a first-come, first-served system, etc.<sup>50</sup> He took for granted the quasi-inevitable exhaustion of commons by the members of the community; only the state, in his view, had the power and the ability to regulate their use. Common ownership was equated with an unregulated and unlimited open access to the land.

An apparently unpublished manuscript dated 1969 provides more insight into Hardin’s thoughts. He acknowledged that no problem would appear until a resource became scarce as a result of a substantial increase in the local population, leading to the development of competition amongst users.<sup>51</sup> A “decrease in the feeling of community” was also necessary, because in a small community, all people know each other and “community standards of proper behavior have a force far exceeding that of law as we know it.”<sup>52</sup> As population increased, the feeling of community would weaken and laws would replace tradition. This invited evasion by at least some members whose nonconforming behavior had a snowballing effect.<sup>53</sup> He repeated these arguments in 1978, arguing that an “egoistic harvester” who takes more from

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49 *Id.*

50 Hardin, *supra* note 1 at 1244.

51 Garrett Hardin, *Breeding Disasters in the Commons of the Sea* (1969) (unpublished manuscript, Garrett Hardin Papers Collection) [hereinafter Hardin, *Breeding Disasters*]; see also Garrett Hardin, *Political Requirements for Preserving our Common Heritage*, in *WILDLIFE AND AMERICA* 312 (Howard P. Brokaw ed., 1978) [hereinafter Hardin, *Political Requirements*].

52 Hardin, *Breeding Disasters*, *supra* note 51, at 4.

53 *Id.*

the commons than the rest will “prosper more,” like his “family or tribe.” He therefore focused on “standards of proper behavior” and on persons being “shamed into conformity.”<sup>54</sup>

In 1991, Hardin stressed that his 1968 paper should have been entitled “The Tragedy of the *Unmanaged Commons*,” because it was concerned with problems such as the open ocean or the atmosphere.<sup>55</sup> Drawing on the example of Hutterite communities in North America, he concluded that colonies of between 60 to 150 persons could rely on shame to ensure that everyone assumed his fair share of the collective endeavor. He was also familiar with other publications suggesting similar numbers.<sup>56</sup> Under these conditions, groups of herdsmen and fishermen could successfully impose limits on the use of their commons, or defer to the decision of elders.<sup>57</sup> However, “formal, explicit government” was “more necessary in large groups than in small.”<sup>58</sup> Considering next the right of human beings to “reproduce at will,” Hardin criticized its unlimited nature. If such unmanaged commons persisted, population increases would “finally exhaust the environment” and lead to “ruin.”<sup>59</sup>

Hardin believed that “under conditions of true plenty the unmanaged commons is not only tolerable, it may be the most efficient way of exploiting the environment.”<sup>60</sup> Restraining an “American frontiersman” from shooting “a dozen passenger pigeons for his dinner [...] would have been wasteful of

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54 Hardin, *Political Requirements*, *supra* note 51, at 314.

55 Garrett Hardin, *The Tragedy of the Unmanaged Commons: Population and the Disguises of Providence*, in *COMMONS WITHOUT TRAGEDY* 178 (Robert V. Andelson ed., 1991).

56 Garrett Hardin, *Paradise Lost: The Unmanaged Commons* 7 (1991) (unpublished manuscript, Garrett Hardin Papers Collection); Napoleon A. Chagnon & Thomas F. Melancon, *Reproduction, Numbers of Kin and Epidemics in Tribal Populations: A Case Study*, in *POPULATION AND BIOLOGY: BRIDGE BETWEEN DISCIPLINES: PROCEEDINGS OF A CONFERENCE* 150 (Nathan Keyfitz ed., 1984); CLAUDE LÉVY-STRAUSS, *THE VIEW FROM AFAR* 287 (Joachim Neugroshel & Phoebe Hos trans., 1985).

57 Garrett Hardin, *The tragedy of the unmanaged commons*, 9 *TREE* 199 (1994).

58 Hardin, *supra* note 55, at 181; for Ellickson, “close-knit” communities need not be small if they display reciprocity of power, future ease of exercising power and effective networks of information. ROBERT C. ELICKSON, *ORDER WITHOUT LAW, HOW NEIGHBORS SETTLE DISPUTES* 182 (1991); similarly, for Ostrom, small numbers (a few hundreds) are one variable to consider among others. ELINOR OSTROM, *GOVERNING THE COMMONS, THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION* 26, 188 (2010).

59 Hardin, *supra* note 55, at 183.

60 *Id.* at 177.

human time and effort.”<sup>61</sup> He also used “commonism” to refer to unmanaged commons and equated “socialism” with the appointment of a manager who enforced or even made rules for all co-owners, unless they were able to adopt these norms in a general meeting.<sup>62</sup> The possibility that a small group could make decisions collectively on an ongoing basis was either ignored or only mentioned in passing.

It seems that Hardin had some difficulty admitting that stateless communities could manage their commons by adopting rules having the force of law or allocating well-defined responsibilities in this regard.<sup>63</sup> He assumed that there was an unlimited right to use resources. An individual could voluntarily abstain from overuse because of a sentiment of propriety or for fear of being shamed. As long as the population remained low compared to the carrying capacity of the land, this was not problematic. In general, Hardin was not interested in understanding how local rules could actually be enforced by a village or persons wielding power in a community. These were just instances of “management.” Furthermore, he absolved from blame the American pioneers who killed game needlessly and who implicitly considered indigenous lands as their commons. Be that as it may, he offered interesting insights on the traditional economic concepts that were used to describe the unmanaged commons.

## B. The Hidden Costs of the Commons

In 1980, Hardin acknowledged that his 1968 paper neglected the economic literature on common pool resources.<sup>64</sup> In return, he criticized the way in which mainstream economists applied their theories. Moving away from the commons metaphor, he focused on the presence of un-assumed costs to emphasize the risk of a downward spiral. A look at three papers will illustrate this aspect of his thought.

In 1980, Hardin recognized that ascertaining the carrying capacity of the Earth was a complex matter involving the long-term effects of technology

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61 *Id.*

62 Hardin, *Political Requirements*, *supra* note 51, at 314; GARRETT HARDIN, *LIVING WITHIN LIMITS* 218-19 (1993); GARRETT HARDIN, *CREATIVE ALTRUISM: AN ECOLOGIST QUESTIONS MOTIVES* 39 (1999).

63 *See also* Carol M. Rose, *Commons and Cognition*, 19 *THEORETICAL INQUIRIES L.* 587 (2018).

64 Garrett Hardin, *Second Thoughts on “The Tragedy of the Commons,”* in *ECONOMICS, ECOLOGY, ETHICS* 115 (Herman E. Daly ed., 1980) [notably, he had not read the seminal 1954 paper of Canadian economist H. Scott Gordon]; Locher, *supra* note 11, at XXII-XXIII.

and the desired standard of living for the population.<sup>65</sup> Nonetheless, he called for “a fundamental improvement in the theory and practice of economics, which needs to be tied down to the sort of conservation laws that have proven essential to the progress of the natural science.”<sup>66</sup> Economic decisions on the Earth’s carrying capacity should not be based on anticipated increases, but on the principle of conservation so dear to ecologists. However, “few economists in the twentieth century” had been “conservatives” in this sense, because they could not resist immediately “spending [...] tomorrow’s (possible) income.”<sup>67</sup> Answering such questions required a political decision. In this context, the “metaphor” of the commons and the formulation of conservation laws were “necessary measures in putting the policy sciences on the path toward a rigorous grounding in conservation principles.”<sup>68</sup>

In 1985, Hardin published a book with the following subtitle: “How to Survive Despite Economists, Ecologists, and the Merely Eloquent.”<sup>69</sup> In chapter 10, he argued that many business fortunes were built by communizing costs and privatizing profits. In other words, before the twentieth century, successful industries did not support the costs of infrastructure, healthcare for workers, etc. Subsidies and tax breaks were another way to communize costs that was (or is) in no danger of disappearing. To explain the relative indifference to these problems, he quipped that “economics, so useful a study for business, has been generously supported in the universities by business interests.”<sup>70</sup>

Externalities were another way to communize costs. In reality, this “marvelous euphemism” truly referred to a cost that is “external to the accounting books of the firm producing the pollution.”<sup>71</sup> To catch the attention of the public, “impositions” or “excretions” would have been better words.<sup>72</sup> The classic case of externality is of course pollution, where negotiating costs between a polluter and the persons who sustain damages in a given area are prohibitive.<sup>73</sup> Hardin called this the tragedy of the commons “in a reverse way,” because pollutants were added to the commons without anything being taken out of them.<sup>74</sup> For the future at least, the true costs of production needed to be

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65 Hardin, *supra* note 64, at 119-20.

66 *Id.* at 118.

67 *Id.* at 120.

68 *Id.*

69 GARRETT HARDIN, *FILTERS AGAINST FOLLY* (1986).

70 *Id.* at 108.

71 *Id.* at 110.

72 *Id.* at 111.

73 Demsetz, *supra* note 13, at 357.

74 Hardin, *supra* note 1, at 1245; Hardin seems not to have read Ronald Coase, *The Problem of Social Costs*, 3 J.L. & ECON. 837 (1960).

internalized by businesses or, if that was impractical, “socialized” in a given area.<sup>75</sup> For the past, he suggested erecting monuments to the “Unknown Worker” or the “Unknown Citizen, as symbols of the millions whose unrequited suffering from ‘externalities’ over the centuries made possible the industrial momentum that propelled Western civilization to so high a material level in so short a time.”<sup>76</sup>

In 1992, Hardin acknowledged that because of technological advances “there are more people now *and* the people are richer.”<sup>77</sup> However, for economists, externalities or side effects were “rhetorical smoke screens for non-conservative thinking,” whereas ecologists included “everything on earth” in their balance sheet.<sup>78</sup> For example, the North American Free Trade Agreement had been criticized for its impact on the working conditions of employees and on the environment, with the result that side agreements were entered into to mitigate these problems. Nonetheless, Hardin argued that under conditions of “free competition, low standards drive out high standards” pertaining to working hours, wages, pollution, etc.<sup>79</sup> Whatever their negative consequences, tariffs could compensate for the increased costs imposed on producers by higher national standards. Putting an end to sovereignty “in the movement of goods across borders” would theoretically leave untouched the power to set these standards, but in practice, governments would need to adjust to the lower ones, because they were attractive to businesses willing to move abroad.

If a manufacturing facility was relocated to a foreign country, would it be in the interest of society to see workers and their families move to another location? If unemployed persons remained where they lived, should they “just quietly die or disappear”?<sup>80</sup> Considering the increase in the amount of social benefits or private insurance payments, or even in the rate of criminality or in the use of recreational drugs, the “savings that an industrialist achieves by moving operations to a foreign country are largely wiped out by costs imposed on the body politic.”<sup>81</sup> Put differently, those “who point to early and limited gains from free trade must prove that dissolving the borders will not universalize poverty or propagate revolutions – or both.”<sup>82</sup> Twenty-four

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75 HARDIN, *supra* note 69, at 113.

76 *Id.* at 114.

77 Garrett Hardin, *NAFTA, Ponzi and Gresham: Can There Really Be a Free Lunch?*, 4 SOC. CONT. 16, 16 (1992).

78 *Id.* at 16.

79 *Id.* at 17.

80 *Id.* at 18.

81 *Id.*

82 *Id.* at 19.

years later, during the Brexit referendum and the U.S. Presidential elections of 2016, an unexpectedly large number of voters agreed with this assessment.

It can be seen that in his writings on economic issues, Hardin argued that policy decisions should not be based on projected technological advances; instead, to protect the environment effectively, a “conservative principle” should be followed. Far too often, businesses had been allowed to communize costs and to privatize profits through government subsidies, tax breaks, uncompensated damage to the environment, physical injuries suffered by workers or even premature deaths. The bland term “externality” did not draw attention to the nature of the problem, which was an unauthorized “imposition” or “excretion” on other persons. Similarly, free trade had extremely harmful consequences on the environment and on workers who lost their jobs because manufacturing facilities were relocated abroad, but this was denied or minimized by economists who predicted a huge increase in international trade.

These issues are relevant to “The Tragedy of the Commons,” because they illuminate one of its most enduring themes: far too many decisions can be made without the decision-maker(s) being held responsible for their economic and social consequences. In this view, the fact that some commons can be successfully managed is just an example of a system where norms exist and are voluntarily adhered to. That is not the case for environmental and social problems that depend on the decisions of governments and multinational businesses to use freely accessible resources. As for indigenous peoples, Hardin’s ignorance of their juridical norms deserves further comment.

### III. HUNTER-GATHERERS OF NORTHEASTERN QUEBEC AND THE COMMONS

In 1968, Hardin assumed that indigenous peoples had no property rights in land. In all likelihood, he ignored the existence of a paper published by Harold Demsetz a year earlier, “Toward a Theory of Property Rights,” which presented a similar but more elaborate argument on the origins of property rights.<sup>83</sup> Demsetz used historical evidence concerning indigenous peoples of Northeastern Quebec in the seventeenth century. For him, in a system of communal ownership, neither the state nor the individual citizen could “interfere with any person’s exercise of communally-owned rights,” except if the co-owners unanimously agreed to limit their right.<sup>84</sup> This made explicit the assumptions that were taken for granted by Hardin. Demsetz added

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83 Demsetz, *supra* note 13; see also Schorr, *supra* note 14.

84 Demsetz, *supra* note 13, at 354.

that the development of family-owned hunting districts had prevented the exhaustion of resources, whereas for Hardin, such a development was unlikely. Subpart A will review briefly this thesis and the differences with Hardin's paper. Subpart B will show that, in contrast to these views, indigenous rules governing access to forest resources, or providing for their management, were observed within communally owned territories during the seventeenth century in Northeastern Quebec. These norms could theoretically have prevented the tragedy of the commons, although they did not always succeed in doing so. Subpart C will use the example of the Innus (formerly called Montagnais) living in some parts of Northeastern Quebec to illustrate how traditional norms ensuring the reproduction of beavers were shattered by the colonial enterprise, but were later strengthened in some areas. This reverses Hardin's reasoning: the disappearance of community rules that effectively regulated resource consumption prior to the arrival of Europeans was due, for the most part, to epidemics, warfare and intrusions from neighboring tribes that were spurred on by greedy French agents. Therefore, the tragedy of the commons was not caused by a lack of self-restraint in the face of rising demands for fur, contrary to the assumptions of Hardin and Demsetz.

#### **A. The Commons and the Origins of Indigenous Familial Property**

In his 1967 article, Demsetz's basic assumptions were similar to Hardin's. Both argued that individuals maximize the number of animals they raise on, or kill in, the commons, without regard to the deterioration caused by their actions, since they bear only a fraction of the resulting damage. Demsetz went on to show that the creation of private property rights would give landowners an incentive to preserve resources for the future.<sup>85</sup> He relied on Leacock's 1954 thesis outlining the appearance of property rights among Algonquian hunter-gatherers following the development of the fur trade and the consequent diminution of the beaver population.<sup>86</sup> Initially, their territory was exploited collectively and no hunter had a specific incentive to take conservation measures, since every band member was free to hunt everywhere. However, with the development of trade with Europeans, furs increased in value for indigenous peoples, who exchanged them for goods

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85 *Id.* at 351-55.

86 ELEANOR B. LEACOCK, *THE MONTAGNAIS "HUNTING TERRITORY" AND THE FUR TRADE* (Kraus ed., 4th ed. 1974).

that they could not produce themselves — metal objects in particular. This led to the intensive exploitation of resources.<sup>87</sup>

In the long run, the result could be the complete extinction of one or even several species, which would impose a huge cost on the community as a whole. Therefore, in the course of the seventeenth century, indigenous peoples gradually recognized family territories that generated an incentive for their owners to preserve fur-bearing animals. This reduced the problems associated with a collective property regime, where one needs the consent of every community member to limit the quantities harvested. Obviously, this involves laborious negotiations and poses the problem of monitoring the activities of community members. In an individual or family property regime, these difficulties are less acute.<sup>88</sup>

In 1967, Demsetz relied on a small number of publications to which he did not do justice, notably those of Frank G. Speck.<sup>89</sup> As for Leacock, she was greatly influenced by Marxist thought, according to which primitive communism constitutes the first stage of social evolution — a variation on the Golden Age myth. In reality, the social organization of the Montagnais at the beginning of the seventeenth century, with its war expeditions and extended commercial networks, was not compatible with the model of an elementary society made up of simple bands from which pronounced inequalities were practically absent. Above all, the transformation and acculturation process had been much lengthier and much more complex than Leacock made it appear.<sup>90</sup>

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87 Demsetz later nuanced this position. See Harold Demsetz, *Toward a Theory of Property Rights II: The Competition Between Private and Collective Ownership*, 31 J. LEGAL STUD. 653 (2002); for an excellent presentation of the current literature, see Ejan Mackaay, *Sui Generis Rights on Folklore Viewed from a Property Right Perspective*, in SUI GENERIS RECHTE ZUM SCHUTZ TRADITIONELLER KULTURELLER AUSDRUCKSWEISEN – INTERDISCIPLINÄRE PERPEKTIVEN [Sui Generis Rights in Traditional Cultural Expression – Interdisciplinary Perspective] (Killan Bizer, Matthias Lankau, & Gerald Spindler eds., 2013), [webdoc.sub.gwdg.de/univerlag/2013/GSCP5\\_sui\\_generis.pdf](http://webdoc.sub.gwdg.de/univerlag/2013/GSCP5_sui_generis.pdf).

88 Demsetz, *supra* note 13.

89 See Michel Morin, *Propriétés et Territoires Autochtones en Nouvelle France: I – Contrôle Territorial et Reconnaissance de Territoires Nationaux* [Properties and Territories in New France: I – Territorial Control and Recognition of National Territories], 43 RECHERCHES AMÉRINDIENNES QUÉ. [RAQ] 59 (2013) (Fr.); Schorr, *supra* note 14.

90 Harvey A. Feit, *Histories of the Past, Histories of the Future: The Committed Anthropologies of Richard Slobodin, Frank G. Speck and Eleanor Leacock*, in A KINDLY SCRUTINY OF HUMAN NATURE: ESSAYS IN HONOUR OF RICHARD SLOBODIN 45, 57-60 (Richard Preston ed., 2009); Barbara Bender & Brian Morris, *Twenty*

Both Hardin and Demsetz agreed that under the commons regime, a given resource would inexorably be depleted. For them, land ownership regimes, whether individual, familial or collective, were a prerequisite to effective management. Although Demsetz tried to understand the communal norms of indigenous people, his initial bias against collective ownership prevented him from recognizing the importance of the rules that were in place prior to the arrival of Europeans.<sup>91</sup> We will now examine these in the setting of New France.

## B. Indigenous Territories and Conservation Measures in New France

Recent research has clearly demonstrated that band leaders have since ancient times played an important role in dividing hunting groups and in controlling the use of territories with relatively well-defined boundaries.<sup>92</sup> Seventeenth

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*Years of History, Evolution and Social Change in Gatherer-Hunter Studies*, in 1 HUNTERS AND GATHERERS: HISTORY, EVOLUTION AND SOCIAL CHANGE 4 (T. Ingold, D. Riches & J. Woodburn eds., 1988).

91 But see Demsetz, *supra* note 87.

92 See Jacques Leroux, *Éthique et Symbolique de la Responsabilité Territoriale Chez les Peuples Algonquiens du Québec* [*Ethics and Symbolism of Territorial Responsibilities Among the Algonquian Peoples of Quebec*], 29 RECHERCHES AMÉRINDIENNES QUÉ. [RAQ] 85 (2009) (Fr.); Jacques Leroux, *Le Contrôle Territorial ou Posséder ce l'on Protège Chez Trois Peuples Algonquiens du Québec* [*Territorial Control or To Possess what One Protects Among Three Algonquian Peoples in Quebec*], in GOUVERNANCE AUTOCHTONE: RECONFIGURATION D'UN AVENIR COLLECTIF [ABORIGINAL GOVERNANCE: RECONFIGURATION OF A COLLECTIVE FUTURE] (Pierre Noreau ed., 2010) (Fr.) [hereinafter GOUVERNANCE AUTOCHTONE]; Sylvie Vincent, *Circulation sur la Territoire et Régime Foncier des Innus dans la Première Moitié du XX<sup>e</sup> Siècle* [*Circulation in the Territory and the Land Regime of the Innus in the First Half of the Twentieth Century*], in GOUVERNANCE AUTOCHTONE 135 (Fr.); Jean-Paul Lacasse & Valérie Cabanes, *Les Fondements de l'ordre Juridique Innu: La Parole des Aînés Comme Source de Connaissance* [*The Foundations of the Innu Legal Order: Elders' words as a Source of Knowledge*], in A-T-ON OUBLIÉ QUE JADIS NOUS ÉTIIONS "FRÈRES" [HAVE WE FORGOTTEN THAT ONCE WE WERE "BROTHERS"] (M. D'Avignon & C. Girard eds., 2009) (Fr.); Jacques Leroux, *Structure Sociale et Ordres Juridiques Originels dans l'Outaouais Supérieur et les Régions Voisines: I – L'organisation Sociale des Peuples Algonquiens du Québec dans la Perspective de la "Longue Durée"* [*Social Structure and Original Legal Orders in the Upper Outaouais and Neighboring Regions: I – The Social Organization of the Algonquian Peoples of Quebec in the Perspective of the "Long Term"*], 46 RECHERCHES AMÉRINDIENNES QUÉ. [RAQ] 105 (2016) (Fr.) [hereinafter Leroux, *Structure Sociale*]; Sylvie Vincent,

century sources refer to independent nations that occupied a hydrographic basin or, in the James Bay area, territories separated by very large rivers. Crossing a territory required the offering of substantial gifts to a regional chief who seemed to have been in charge of relations with other nations; goods destined for trading with an enemy were seized.<sup>93</sup> In other words, foreigners needed permission to circulate within a nation's territory, although it could be assumed in some cases when relations between nations were friendly.

As for hunting and gathering, they were not difficult during the summer months, when large groups assembled on the shore of a lake where they could easily find fish, fruits and game. During the winter, small bands of hunters composed of up to perhaps fifty family members occupied a few familial districts extending over a radius of between 15 and 20 kilometers.<sup>94</sup> Band members traveled on snowshoes and carried light tents made of birch-bark, because they needed to move their camp regularly in order to capture large game. A leader directed their movements and met with his colleagues in the fall to determine where each band would go. Though everyone was expected to remain in their own quarters, one could go into the territory of a neighboring band or of an allied nation, if this became necessary to follow or find game; however, members of enemy nations would automatically be attacked.<sup>95</sup> The reason for this rule was simple: some winters, the ice or lack of snow allowed animals to run away very easily, threatening the bands with starvation, which was a very real possibility. These hunting districts had developed independently of the fur trade, contrary to what Leacock and Demsetz had assumed. As they were said to have been under the control of a family from time immemorial, they made possible the effective management of resources prior to the arrival of the Europeans.<sup>96</sup>

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*“Chevauchements” Territoriaux: ou Comment l’ignorance du Droit Coutumier Algonquien Permet de Créer de Faux Problèmes [Territorial “Overlaps” or How Ignorance of Algonquin Customary Law Makes Possible the Creation of False Problems]*, 46 RECHERCHES AMÉRINDIENNES QUÉ. [RAQ] 91 (2016) (Fr.).

93 Morin, *supra* note 89, at 68; Vincent, *supra* note 92; for very similar conclusions regarding the Wabanakis living in the forests north of the Kennebec River in New England (to give an approximate location), see CRONON, *supra* note 39, at 38-40, 58-59, 64, 105.

94 DANIEL FRANCIS & TOBY MORANTZ, *PARTNERS IN FURS: A HISTORY OF THE FUR TRADE IN EASTERN JAMES BAY 1600-1870*, at 14, 126 (1983); Leroux, *Structure Sociale*, *supra* note 92 at 108.

95 See also, Vincent, *supra* note 92, at 97-98.

96 Morin, *supra* note 90, at 63; Michel Morin, *Propriétés et Territoires Autochtones en Nouvelle-France II - La Gestion des Districts de Chasse [Aboriginal Properties and Territories in New France II – Management of Hunting Districts]*, 44

In this context, hunters belonging to the same nation dispersed widely over the territory within the district assigned to their family, but they retained a total freedom to pursue game if they were hard-pressed for food. This made perfect sense, since it minimized the risks of dying from starvation.<sup>97</sup> The right of allies to hunt on each other's territory achieved the same objective, as well as the duty to share food within a band. There were few incentives to overhunt large animals that remained difficult to catch and could not be stored or exchanged on a large scale (although their skins were traded). On the other hand, for spiritual reasons, it has been observed that hunters who encountered prey could not refuse to kill it, even if the carcass would be left to rot on the ground, because the spirit of this animal had offered itself to them.<sup>98</sup>

The increased demand for furs caused by the expanding trade with Europeans should, according to Demsetz, have led to the recognition of a form of ownership. Indeed, according to Bacqueville de La Potherie, in the Hudson Bay region and in the Saint Lawrence Valley, fur sites could be owned. Writing in 1721, he explained that an indigenous person who discovered a beaver abode could reserve it for himself.<sup>99</sup>

They put in place certain marks that indicate that it is already known. But if by chance a passing Savage should find himself hard pressed by hunger, he is allowed to kill the Beaver, on condition that he leaves the skin and the tail, which is the most delicate piece.

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RECHERCHES AMÉRINDIENNES QUÉ. [RAQ] 129, 131 (2014) (Fr.); *see also*, FRANCIS & MORANTZ, *supra* note 94, at 68, 96-97; Vincent, *supra* note 92.

97 John C. McManus, *An Economic Analysis of Indian Behavior in the North American Fur Trade*, 32 J. ECON. HIST. 36, 48-53 (1972); Leroux, *Structure Sociale*, *supra* note 92, at 110; in a different context, it has been argued that property appeared to minimize the risk of famines. Thomas K. Park, *Early Trends toward Class Stratification: Chaos, Common Property, and Flood Recession Agriculture*, 94 AM. ANTHROPOLOGIST 90 (1992); this paper appears in Garrett Hardin Papers Collection, *supra* note 44, at 2.

98 Morin, *supra* note 89, at 133-36.

99 1 LEROY BACQUEVILLE DE LA POTHERIE, HISTOIRE DE L'AMÉRIQUE SEPTENTRIONALE [HISTORY OF NORTH AMERICA] 106 (1997) (Fr.) (the original version reads: "Ils mettent quelques marques qui donnent lieu de croire qu'elle est déjà reconnue. Mais si par hasard un Sauvage qui passait par là se trouvait fort pressé de la faim, il est permis de tuer le Castor, à condition d'en laisser la peau et la queue, qui est le morceau le plus délicat."); 2 LEROY BACQUEVILLE DE LA POTHERIE, HISTOIRE DE L'AMÉRIQUE SEPTENTRIONALE [HISTORY OF NORTH AMERICA] 653 (1997) (Fr.); in 1745, a Hudson's Bay trader made a similar comment. FRANCIS & MORANTZ, *supra* note 94, at 96.

This statement is suspect, because it is not confirmed by other sources, which refer instead to the importance of hunting districts and to encroachments by neighboring nations.<sup>100</sup> Traditionally, hunters would capture the beavers that were found in the district that had been assigned to them in a given year.<sup>101</sup> However, this did not prevent the tragedy of the commons from occurring in some areas.

By the eighteenth century, in many areas north of the Saint-Lawrence River and around the Great Lakes, beavers had become extremely scarce or totally extinct. This could be due to many causes. The trade flourished following the peace treaties between the Haudenosaunee (called Iroquois in the sources), on the one hand, and the allies of the French, on the other, from 1667 to 1682 and from 1701 to 1759. During these periods, each nation was allowed to hunt in the territory of the other. In the absence of such a treaty, indigenous peoples insisted on the respect of their territorial boundaries.<sup>102</sup> According to Louis-Armand de Lom d'Arce de Lahontan (1661-1716), in 1684, south of the Great Lakes, the five Iroquois nations complained that the Illinois and the Oumami [Miami] breached the peace when they crossed their common "Frontiers" to hunt beavers on their lands and, "contrary to the custom of all the Savages [...] carried off whole Stocks, both Male and Females."<sup>103</sup> According to this source, strangers who hunted beavers were required to spare some animals that would later reproduce. Failure to do so would be a violation of the peace established between two nations and would jeopardize the mutual right of access that flowed from it. But even in time of war, the number of furs exported to Europe kept increasing.<sup>104</sup>

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100 Morin, *supra* note 89, at 133-34.

101 Cronon argues that in Northern New England, territories "became more and more fixed" because of the decline of the beaver hunt, but he immediately quotes a fur trader named Joseph Chadwick, who stated in 1764 that "their hunting grounds and streams were parcelled to certain families, time out of mind" and that they made it a rule "to hunt every third year and kill two thirds of the beaver, leaving the other third part to breed." CRONON, *supra* note 39, at 106.

102 Morin, *supra* note 89, at 67, 71-72; Morin, *supra* note 96, at 132-33; McManus, *supra* note 97, at 50; FRANCIS & MORANTZ, *supra* note 94, at 20, 98.

103 1 BARON LAHONTAN, *NEW VOYAGES TO NORTH AMERICA: CONTAINING AN ACCOUNT OF THE SEVERAL NATIONS OF THAT VAST CONTINENT; THEIR CUSTOMS, COMMERCE, AND WAY OF NAVIGATION UPON THE LAKES AND RIVERS; THE SEVERAL ATTEMPTS OF THE ENGLISH AND FRENCH TO DISPOSSESS ONE ANOTHER; AND THE VARIOUS ADVENTURES BETWEEN THE FRENCH AND THE IROQUESE CONFEDERATES OF ENGLAND, FROM 1683 TO 1694*, at 41 (London, Printed for H. Bonwicke et al., 1703).

104 ALICE JEAN LUNN, *ECONOMIC DEVELOPMENT IN NEW FRANCE, 1713-1760*, at 136 (1942); GILLES HAVARD, *EMPIRE ET MÉTISSAGES: INDIENS ET FRANÇAIS DANS LE PAYS*

Of course, conservation measures provide an antidote to the tragedy of the commons. Despite conflicting evidence, there is strong support for the view that prior to the arrival of Europeans, indigenous peoples used such methods, for instance sparing females or adult couples, or letting an area idle every other year. These strategies could be applied to large game and to fur-bearing animals.<sup>105</sup> According to a 1703 memoir, it was observed that, in the earlier days of the colony (i.e., during the first half of the seventeenth century, in the Saint Lawrence Valley), indigenous peoples never killed young beavers, and that only later were they induced to do so by the French.<sup>106</sup> French influence, it followed, also caused those indigenous peoples that were “domiciled” near the cities of New France, as well as some nations allied to the French, to exterminate beavers.<sup>107</sup> Other sources, however, indicate that, traditionally, Algonquian peoples spared young animals.<sup>108</sup>

Yet, in 1635, Father Le Jeune reported that in the Saint Lawrence Valley, indigenous peoples killed all the beavers that they found in a “cabin.”<sup>109</sup> Similarly, in 1751, Father Claude Godefroi Coquart wrote that the indigenous families settled near one specific post (Chicoutimi) “would travel ten leagues to kill a beaver a year old, summer or winter, if they could find it,” with the result that the area was “Drained of animals.”<sup>110</sup> He believed that if the beavers were left

D’EN HAUT, 1660-1715 [EMPIRE AND MISCEGENATION: INDIANS AND FRENCH IN THE UPPER COUNTRY, 1660-1715], at 71-72 (2003); FRANCIS & MORANTZ, *supra* note 94, at 33-34.

105 Morin, *supra* note 96, at 134-36.

106 *Mémoire que la Direction de la Compagnie de la Colonie Présente au Gouverneur Général Callière et à l’intendant Beauharnois* [Memorandum that the Direction of the Company of the Current Colony Submitted to the Governor General callières and to the Intendant Beauharnois], in 21 ARCHIVES NATIONALES DE FRANCE, COLONIES, SERIES C11A 132, 140 (1703) (Fr.), quoted in HAVARD, *supra* note 104, at 589.

107 *Id.* at 140v.; the same explanation had been offered around 1675. LOUIS NICOLAS, THE CODEX CANADENSIS AND THE WRITINGS OF LOUIS NICOLAS 329-330 (François-Marc Gagnon ed., 2011).

108 See the comments about a Cree Nation seemingly situated on the eastern side of James Bay in PIERRE-ESPRIT RADISSON, THE COLLECTED WRITINGS VOL I: THE VOYAGES, at 287-88 (Germaine Warkentin ed., 2012); LAHONTAN, *supra* note 103, at 41.

109 [Vol. VIII: Quebec Hurons Cape Breton 1634-1635] THE JESUIT RELATIONS AND ALLIED DOCUMENTS 57 (Reuben Gold Thwaites ed., 1897); see also FRANCIS & MORANTZ, *supra* note 94, at 128.

110 [Vol. LXIX: Travels and the Explorations of the Jesuit Missionaries in New France, 1610-1791] THE JESUIT RELATIONS AND ALLIED DOCUMENTS 111 (Reuben Gold Thwaites ed., 1899).

alone for some time, they “would multiply, and [...] become more abundant.” Furthermore, he did not mention a shortage of beavers near other posts that were located on the north shore of the Saint Lawrence River or inland.<sup>111</sup> It should be noted that in this area, epidemics were a regular phenomenon during the seventeenth, eighteenth and early nineteenth centuries.<sup>112</sup> Overall, the better view seems to be that after a series of disasters, namely severe population losses, warfare, and weather conditions that prevented the killing of large game, some indigenous peoples abandoned conservation measures in order to access European goods that had become a part of their way of life.<sup>113</sup> This would explain why their existence was not noticed at first by the French.<sup>114</sup> If that is the case, beavers became nearly extinct in some areas because indigenous peoples were forced to abandon their traditional conservation measures in the aftermath of colonization. Their inability to implement such measures did not stem from anything inherent to the commons, contrary to the assumptions of Hardin and Demsetz.

### C. Tragedy in the King’s Posts, 1698-1750

The history of the Tadoussac trading post illustrates well the effect of the fur trade and colonization on traditional rules ensuring the preservation of beavers. We will focus on Chicoutimi, Lake Saint John, Misstassini and Nekouban, located inland in an area starting near Tadoussac, at the mouth of the Saguenay River (downstream from Quebec City) and moving in a northwesterly direction towards James Bay (at the tip of Hudson Bay). Lessees enjoyed the exclusive right to operate these posts and no French or European could trade inside the

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111 *Id.* at 93, 109, 119; *see also* SERGE GOUDREAU, *L’EXPLORATION DE LA CÔTE-NORD ET DE LA RIVIÈRE SAGUENAY EN 1731 : LE JOURNAL DE VOYAGE DE LOUIS AUBERT DE LA CHESNAYE* [THE EXPLORATION OF THE NORTH SHORE AND THE SAGUENAY RIVER IN 1731: THE JOURNAL OF LOUIS AUBERT DE CHESNAYE] 32–34, 39, 42, 48, 58, 71, 77, 81, 82, 84, 89, 90, 92, 101, 109, 119 (2005) (Fr.); J.L. NORMANDIN, *L’EXPLORATION DU SAGUENAY PAR J.L. NORMANDIN EN 1732: AU COEUR DU DOMAINE DU ROI* [THE EXPLORATION OF SAGUENAY BY J.L. NORMANDIN IN 1732: IN THE HEART OF THE DOMAIN OF THE KING] 77, 95, 113, 114, 117 (Russel Bouchard ed., 2002) (Fr.).

112 NELSON-MARTIN DAWSON, *FEU, FOURRURES, FLÉAUX ET FOI FOUROYÈRENT LES MONTAGNAIS* [FIRE, FUR, PLAGUES AND FAITH STRUCK THE MONTAGNAIS] 37–39, 66–67 (2005) (Fr.); MICHEL LAVOIE, *LE DOMAINE DU ROI 1652-1859* [THE DOMAIN OF THE KING 1652-1859] 223 (2010) (Fr.).

113 When one is threatened with starvation, conserving resources cannot carry much weight. OSTROM, *supra* note 58 at 35.

114 For a similar explanation, see FRANCIS & MORANTZ, *supra* note 94, at 157.

limits of the “King’s Domain” without their permission. However, Abenakis and Hurons (also called Wendats), respectively domiciled near Three Rivers and Quebec City, could use the Saint Maurice River to access the area from the west; they were regularly induced to do so by rival French traders, well into the nineteenth century. Between 1700 and 1710, when the demand for beaver furs was almost nonexistent, some lessees encouraged these nations to kill as many moose as possible, thus depriving the Innus, and perhaps some Alonguins further west, of the most important source of food found in their territory.<sup>115</sup> As well, forest fires compounded the problem.

The managers of the posts, who were allowed to trade on their own account, but on a limited scale, were anxious to make up for their losses. They provided defective ammunition and necessaries for the winter hunt, and eagerly supplied brandy in exchange for furs.<sup>116</sup> The predictable result for the Innus was starvation and death, or the abandonment of the posts in favor of those run by other French or British traders.<sup>117</sup> In 1733, to remedy these problems, a French Intendant, Gilles Hocquart, suggested that in time of need, indigenous peoples should be able to obtain relief from strategically located posts.<sup>118</sup> As well, “foreign” indigenous peoples (from the Three Rivers or Quebec area) should be prevented from entering the “King’s Domain,” where the Innus lived. Similarly, peoples inhabiting the Domain should hunt only on “their lands.” If these rules were followed, “in each township” (i.e., hunting district), every “animal species” would be protected.<sup>119</sup> He added that no fur-bearing animals remained around Tadoussac, Chicoutimi and the Lake Saint John post.<sup>120</sup>

From 1719, François-Étienne Cugnet was superintendent of the four posts mentioned above; they were leased to him from 1737 to 1746.<sup>121</sup> He encouraged the “chiefs” to “remain on the lands which they inhabit, without allowing members of their bands to pass in other lands where the hunt might be more abundant, but which were inhabited by others, as this would have

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115 Gilles Hocquart, *Mémoire de Hocquart sur la régie du Domaine de l'Occident* [*Hocquart's Memoir of the Control of the Domain of the West*], in ARCHIVES NATIONALES DE FRANCE, COLONIES 318-381v, 352 (1733) (Fr.).

116 *Id.* at 353.

117 *Id.* at 353v.

118 *Id.* at 354.

119 *Id.* at 358.

120 *Id.* at 362, 363-63v.; the same story, with more details, is found in François-Étienne Cugnet, *Mémoire de François-Étienne Cugnet sur la traite de Tadoussac* [*François-Étienne Cugnet's Memoir of the Lease of Tadoussac*], in 121 ARCHIVES NATIONALES DE FRANCE, COLONIES, SERIES C11 A 239-46v, §239-39v (1746) (Fr.).

121 LAVOIE, *supra* note 112, at 126-153.

destroyed the hunt in a few years.<sup>122</sup> He told the Innus that to replenish the beaver stock, they should winter in a different portion of their lands every other year, refrain from killing young animals, and avoid capturing them during the summer.<sup>123</sup> The Innus well understood this, but they objected that “often hunger did not allow for such a delicate course of action.”<sup>124</sup>

Cugnet replied that in the future, they would find foodstuff in the posts in times of scarcity, as well as a shelter for elderly or infirm people.<sup>125</sup> The success of this strategy is apparently confirmed by the fact that the amount for which the King’s posts were leased increased from 1737 to 1749. After that, complaints about the disappearance of beavers declined. The lease system was continued until the 1860s; however, complaints resurfaced following the development of the lumber industry in the 1840s.<sup>126</sup>

In 1967, Demsetz assumed that in New France, members of an indigenous nation initially caught as many beavers as possible, until family territories were established: though less elaborate, Hardin’s assumptions were identical. Recent research has shown that within a national territory, hunting districts assigned to families from time immemorial maximized the chances of killing large game; their limits could be crossed in time of need by members of the same nation and by their allies. The existence of conservation measures was the subject of conflicting comments in the historical sources, but they seem to have been in existence since at least the early seventeenth century. In the area stretching from the Saint Lawrence to the James Bay area, at the beginning of the eighteenth century, they seem to have been abandoned in dire circumstances. Greedy lessees and neighboring nations had cleared the grounds of large game on which indigenous peoples depended for their survival. Brandy was provided to hunters instead of ammunition and necessities; this caused starvation and death in the wintertime.

In this context, there was an unremitting need to capture every animal available; preserving small animals and sticking to traditional hunting districts was not a realistic option. On the other hand, access to emergency relief during the winter in posts that were within reach of hunting districts allowed indigenous peoples to remain in their own lands and to spare some animals. Therefore, the tragedy of the commons seems to have occurred in areas where colonization and its aftermath caused the abandonment of conservation

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122 Cugnet, *supra* note 120, at 239v.

123 *Id.*

124 *Id.* at 229v.

125 *Id.*

126 LAVOIE, *supra* note 112, at 153-54, 207-13, 221-31; variations in the number of beavers in the King’s Domain do not seem to have been studied thoroughly.

measures. There was no innate inability of indigenous peoples to ensure the reproduction of game or fur-bearing animals.

## CONCLUSION

The metaphor of the commons used by William Foster Lloyd in his discussion of population growth served Hardin's purposes only too well. It demonstrated in vivid terms the need for managing resources that were perceived as unlimited, such as the ocean, the atmosphere and the carrying capacity of the Earth. Its simple arithmetic contributed to its phenomenal success. Hardin insisted that resources needed to be managed, whether through private appropriation, government regulations or international agreements. He did not go beyond the framework presented by Foster Lloyd. Had he done so, for instance by reading the works of illustrious political economists such as John Locke and Adam Smith, or jurists such as John Manwood and William Blackstone, he could not have missed the distinction between common ownership and open access regimes. Instead, he simply referred to indigenous lands as an unbounded wilderness placed at the disposal of frontiersmen.

Though he eventually acknowledged the existence of managed commons, Hardin had little interest in community rules pertaining to resource exploitation. In his eyes, these moral norms essentially depended on the good will of community members, which inevitably became ineffective above a certain level of population (around 140 people). At no point did he envision a legal system composed of customary rules, or in which collective decisions were considered to be mandatory, in large communities as well as in smaller ones. He also took economists to task for failing to include in their analysis the true environmental and social costs of public decisions, but he would always come back to his overarching concern, the threat posed by unabated population increase.

Hardin's arguments were similar to those presented by Harold Demsetz in 1967, although he does not seem to have read Demsetz's paper. Demsetz used the famous example of indigenous peoples living in Northeastern Quebec to show that property rules were invented to prevent the depletion of land resources. He assumed that family territories developed over time out of the commons and that crossing their limits without authorization was a form of trespass. This gave an incentive to hunters of the same family to preserve animals for the future. In reality, indigenous "nations" occupied a given area such as a hydrographic basin; they jealously controlled access to their territory. Allies were normally allowed to travel and hunt within it. As for family districts, they were already in existence at the beginning of the seventeenth

century. They allowed for the dispersion of hunters over a wide area during the winter, because at that time large game was scarce and difficult to catch. Territorial limits could always be crossed by other family bands or by allies during their hunts.

Seventeenth and eighteenth century sources offer conflicting views on the use of conservation measures by indigenous peoples living in the Saint Lawrence Valley or north of it, prior to the arrival of the French. The sparing of young beavers was apparently abandoned in times of prolonged crisis due to epidemics, warfare and bad weather conditions. In the King's Domain, the situation was exacerbated by lessees who encouraged neighboring nations to kill as many moose as possible, thus depriving the original inhabitants of their main source of food. However, when emergency relief became available in strategically located trading posts during the wintertime, most though not all indigenous peoples apparently succeeded in preserving the beaver population. Internally, a tragedy of the commons did occur when the customary system of management broke down because of the devastation provoked by the colonial enterprise, but it was restored to some extent later. In the end, the real tragedy of the commons may have been the occultation by Hardin of the important role played by collective norms.

