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Sean Cadigan

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Résumé de l'article

Le déterminisme associé à l'émergence du capitalisme et à la surexploitation impitoyable de la nature durant l'expansion coloniale européenne colore une bonne partie de l'écologie historique de l'Amérique du Nord. Le fait que des pêcheurs terre-neuviens du XIXe siècle étaient tenté de réglementer l'exploitation des ressources marines collectives laisse supposer que certains colons européens étaient également capables d'une gestion écologique et non capitaliste des ressources. Constatant l'épuisement des micro-stocks de morue, les pêcheurs protestèrent contre les nouvelles techniques de pêche, parfois en détruisant le nouveau matériel, parfois par des attaques anonymes contre les propriétaires du matériel. Les protestations étaient pour les pêcheurs un moyen de prévenir l'épuisement des ressources marines par une exploitation de plus en plus capitaliste des pêcheries.

Vers la fin des années 1840, les actions menées en revendication de mesures de conservation devinrent mieux organisées politiquement grâce au leadership de William Kelson, un agent de commerce. Quoique Kelson fut conservateur et paternaliste, ses critiques contre l'usage débridé de la technologie dans l'industrie de la pêche étaient potentiellement radicales. Kelson voulait préserver le droit d'accès coutumier et équitable aux ressources en poisson pour les populations de son temps et celles à venir. La sauve garde de droits équitables constituait, à bien des égards, le fondement d'une économie morale et écologique qui allait à l'encontre des valeurs d'individualisme et d'accumulation de biens matériels sur lesquels s'appuyait cette économie capitaliste encore toute jeune.

ARTICLES

The Moral Economy of the Commons: Ecology and Equity in the Newfoundland Cod Fishery, 1815-1855

Sean Cadigan

ECOLOGICAL HISTORY has been less than flattering in its portrayal of the impact of European peoples on the Americas. Older views of the supposed superiority of European migrants have given way to seeing them as one group of organisms among many in a global ecology. Rather than being superior, Europeans simply proved to be the most pestilential and pestiferous of peoples. Their arrival 'decimated' and 'demoralized' pre-contact indigenous societies.[1] The preoccupation with broadly comparing Europeans' and First Nations' ecological relationships creates a sense of determinism about the emergence of capitalism in colonial society, although the literature has developed the importance of social relationships and culture as well as pests, plants, and animals to European expansion. Europeans' Christian cosmology, market values, and systems of property rights proved much more ecologically destructive than the spirituality, subsistence-orientation, and

[1]Alfred W. Crosby, *The Columbian Exchange: Biological and Cultural Consequences of 1492* (Westport, Connecticut 1972); Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900* (Cambridge 1986); Crosby, *Germs, Seeds and Animals: Studies in Ecological History* (London 1994).

Sean Cadigan, "The Moral Economy of the Commons: Ecology and Equity in the Newfoundland Cod Fishery, 1815-1855," *Labour/Le Travail*, 43 (Spring 1999), 9-42.

gift-giving exchanges of the First Nations. In the long run, Europeans could only bring to America the capitalist commodification and subordination of nature.[2]

Europeans were capable of more than abusing the natural world in the interest of the accumulation of wealth and imperialist expansion. British and French colonial officials and scientists, who abhorred the deforestation of tropical islands, developed an environmentalist ethic based on a mix of French physiocracy, Protestant edenistic thinking, and various forms of non-European spirituality and ecological knowledge.[3] Even more important has been the class-based opposition to the commodification and subordination of nature associated with capitalism. Rural resistance movements have appeared to protest the subversion of various forms of non-European community management of common resources by conservation in the service of capitalism.[4] The attempts of fishing people to regulate common-property marine resources in Newfoundland suggests that some European settlers were also capable of non-capitalist forms of ecological management. The recent collapse of northern cod (*Gadus morhua*) stocks and other marine species in the North Atlantic might appear superficially to support the view that these settlers were capable only of ruthless natural resource exploitation.[5] Such a view, in the guise of the 'tragedy of the commons' view popularized by Gordon and Hardin, has been at the ideological core of Canadian fisheries management.[6] The impossibility of enclosing fish as private property forced exploitation without regard for conservation to avoid the problem of rent dissipation. This 'tragedy of the commons' view ignores the manner in which the history of marine-resource

[2]William Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England* (New York 1983), 76; Timothy Silver, *A New Face on the Countryside: Indians, Colonists and Slaves in South Atlantic Forests, 1500-1800* (Cambridge 1990), 190; Carolyn Merchant, *Ecological Revolutions: Nature, Gender, and Science in New England* (Chapel Hill and London 1989). In addition to the authors cited above see also Donald Worster, *The Wealth of Nature: Environmental History and the Ecological Imagination* (New York 1993).

[3]Richard H. Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600-1860* (Cambridge 1995).

[4]Richard H. Grove, "Colonial Conservation, Ecological Hegemony and Popular Resistance: Towards a Global Synthesis," in John M. MacKenzie, ed., *Imperialism and the Natural World* (Manchester and New York 1990), 15-50; Madhav Gadgil and Ramachandra Guha, *This Fissured Land: An Ecological History of India* (Delhi 1992), 124-64.

[5]Farley Mowat, *The New Founde Land: A Personal Voyage of Discovery* (Toronto 1990), 229; Chad Gaffield and Pam Gaffield, in their edited collection *Consuming Canada: Readings in Environmental History* (Toronto 1995), cite approvingly an excerpt from Mowat's *Sea of Slaughter* (Toronto 1984), 178-96.

[6]H. Scott Gordon, "The Economic Theory of a Common-Property Resource: The Fishery," *Journal of Political Economy*, 62 (1954), 124-42; Garrett Hardin, "The Tragedy of the Commons," in John Baden and Garrett J. Hardin, eds., *Managing the Commons* (San Francisco 1977), 16-30.

depletion has been more related to the capitalist subordination of small-scale, non-capitalist fishers' "over-riding ethos to conserve."[7]

Newfoundland fishing people's ability to define access to marine resources as a right laden with moral responsibilities is part of a long Anglo-American tradition of popular regulation of access to the commons. In 18th and early 19th-century England, for example, rural people developed a variety of practices to prevent over-grazing of common pastures, to ensure the overall health of herds using the commons, and to provide equitable access to other forms of common property such as forest waste. Communities appointed officers to monitor compliance with such customary rules, and could even rely on the judicial system for their enforcement.[8] The tragedy of the commons has really been an impoverished historical perspective about the relationship between fishing people and the eco-systems in which they have lived. While the critics of 20th-century fisheries regimes have amply demonstrated the contemporary flaws in the application of open-access models to the behaviour of fishers, the rich heritage of fishing people's regulation of marine common property needs to be explored.[9]

[7]Bonnie J. McCay and James M. Acheson, "Human Ecology and the Commons," in McCay and Acheson, eds., *The Question of the Commons: The Culture and Ecology of Communal Resources* (Tucson 1987), 1-36; quote from John J. Van West, "Ecological and Economic Dependence in a Great Lakes Community-Based Fishery: Fishermen in the Smelt Fisheries of Port Dover, Ontario," *Journal of Canadian Studies*, 24, 2 (Summer 1989), 96.

[8]David Ralph Matthews, *Controlling Common Property* (Toronto 1993); Bonnie J. McCay, "The Oceans Commons and Community," *Dalhousie Review*, 74, 3 (Fall/Winter 1994-95), 310-39; J.M. Neeson, *Commoners: Common Right, Enclosure and Social Change in England, 1700-1820* (Cambridge 1993), 110-59.

[9]This impoverishment has continued in the literature that has proliferated in response to the collapse of cod stocks in the North Atlantic. These works focus on the role of 20th-century state policies and fish corporation strategies in the over-exploitation of the fisheries. None of these works acknowledge the 19th-century antecedents of the ecological crisis of the 20th century. Some works tend to decry the present crisis as the outcome of a long historical process occasioned by European expansion into the North Atlantic. Others tend to associate ecological collapse with recent industrialization of the fisheries through the introduction of offshore draggers and the factory processing of frozen fish. While romanticizing small-scale fishers as the victims of industrialization and modernization, these latter works rarely delve into the complexities of their social and ecological history. The view of Europeans as remorseless, undifferentiated predators can be found in Mark Kurlansky, *Cod: A Biography of the Fish that Changed the World* (Toronto 1997). A more sophisticated attempt to take the side of fish against people is Michael Berrill, *The Plundered Seas: Can the World's Fish be Saved?* (Vancouver 1997). The problems of state policy and the growth of the corporate offshore industry in the 20th century are examined in D.H. Steele, R. Andersen, and J.M. Green, "The Managed Commercial Annihilation of Northern Cod," *Newfoundland Studies*, 8, 1 (1992), 34-68; Raymond A. Rogers, *The Oceans are Emptying: Fish Wars and Sustainability* (Montreal 1995); and Rogers, "Sustainability and the Dis-integration of

The "tragedy of the commons" explanation cannot account for the manner in which early nineteenth-century fishers began to protest against the introduction of new fishing technology in response to localized exhaustion of cod stocks. Some of these protests involved the destruction of newer equipment, while others were anonymous assaults on the equipment's owners. All the protests represented attempts to regulate access to marine resources to forestall their depletion by the further capitalization of the fishery. For these fishers, the desire to preserve a customary and equitable right of access to fish for all implied a need to conserve that marine resource for future generations. The preservation of equitable access may be seen as an ecological norm of a moral economy that ran counter to the individualistic and accumulative values of a nascent local capitalist political economy.[10] The exertion of this moral economy had a political dimension. William Kelson, a merchant's agent, led public demands that the Newfoundland government ban capital-intensive fishing technologies. Kelson's support of the resistance to new fishing equipment, while drawing on older conservative, paternalistic accommodations, resembled newer forms of rural radicalism.

The Moral Economy of Fishing Communities

European settlement proved disastrous for the Beothuk just as it had for First Nations elsewhere. The Beothuk were hunter-gatherers who depended on access to marine resources such as seals, sea birds, and fish. The absence of large herbivores besides caribou limited the total Beothuk population, which over-wintered in the interior, to probably no more than 5,000 people. Such a small Beothuk population combined with the relative scarcity of fur-bearing animals and the concentration of European settlement on the coast to make early settler attempts to develop a fur trade with the First Nation a failure. The Beothuk had no reason to trade for European ironware and nets in any event. The migratory nature of the early fishery included the seasonal abandonment of fish flakes, stages, and dwellings. Such facilities, to the Beothuk, were a store of immensely valuable iron nails which could be worked into useful tools. Over the long term, Beothuk scavenging threatened the infrastructure of the European cod fisheries, and encouraged permanent settlement as more fishing servants over-wintered to guard premises. While English

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Conservation and Development in the Northwest Atlantic Fishery," *Journal of Canadian Studies*, 31, 1 (Spring 1996), 7-24. Twentieth century ecological issues are further addressed in some of the essays in James E. Candow and Carol Corbin, eds., *How Deep is the Ocean?* (Sydney 1997), but there is nothing on earlier periods. More popular descriptions that tend to romanticize the small-scale inshore fishery are Cabot Martin, *No Fish and Our Lives: Some Survival Notes for Newfoundland* (St. John's 1992); and Pol Chantraine, *The Last Cod Fish: Life and Death of the Newfoundland Way of Life* (Montreal and Toronto 1992).

[10]This argument draws on E.P. Thompson's definition of the moral economy in, "The Moral Economy of the English Crowd in the Eighteenth Century," in *Customs in Common: Studies in Traditional Popular Culture* (New York 1991), 185-258.

settlers pursued no policy of extermination against the Beothuk, the settlers were merciless in their reprisals against Beothuk scavenging. Increased conflict between such servants and the Beothuk led the latter to retreat to the interior, especially as the British developed ancillary salmon and seal fisheries that pushed the Beothuk even further inland. By the late 18th-century British settlement on the north-east coast had cut the Beothuk off almost completely from marine resources, and led to an unprecedented reliance on the caribou hunt. The bulk of the Beothuk's food requirements came from the sea; the hunt proved insufficient to sustain the Beothuk population. European diseases, especially tuberculosis, aggravated severe cultural dislocation and malnutrition. The last of the Beothuk perished in 1829.[11]

European settlers, in the shadow of the Beothuk tragedy, developed a more conservative use of natural resources as part of a larger retreat from capitalist production in the fisheries between 1810 and 1815. The British migratory industry had given way to that conducted by residents during the French revolutionary and Napoleonic wars. Great Britain excluded Newfoundland residents' French competitors from the fishery for the duration of these wars, as well as the Americans during the War of 1812. The disappearance of Newfoundland's main competitors, and Great Britain's invasion of the Iberian Peninsula, which secured favourable markets, meant unprecedented high prices for Newfoundland fish. While migratory British merchants and fishing people could not conduct their trades safely in times of transatlantic naval warfare, high fish prices allowed resident fishers, known as planters, to give better wages to servants from Great Britain who came to work in the resident industry. The end of war-time monopoly and high prices in 1815 saw immigration collapse, and population developed slowly by natural increase thereafter.[12]

Merchants and planters responded to the post-1815 depression by withdrawing from direct production of salt fish by wage labour, restricting credit, and putting most servants out of work. Fishing people struggled to survive in a sub-arctic, cold-ocean coastal ecology. Newfoundland's comparatively shallow and infertile soil, limited boreal woodlands, and short, wet, and cold growing season made it a great place to fish, but a miserable place for much other commercial activity. These ecological factors meant that local agriculture remained largely confined to the

[11]Ralph Pastore, "Fishermen, Furriers, and Beothuks: The Economy of Extinction," *Man in the Northeast*, 33 (1987), 47-60; Pastore,"The Collapse of the Beothuk World," *Acadiensis*, 19, 1 (Fall 1989), 52-71; Peter Pope, "Scavengers and Caretakers: Beothuk/European Settlement Dynamics in Seventeenth-Century Newfoundland," *Newfoundland Studies*, 9, 2 (1993), 279-93; Ingeborg Marshall, *A History and Ethnography of the Beothuk* (Montreal and Kingston 1996), *passim*.

[12]Sean T. Cadigan, *Hope and Deception in Conception Bay: Merchant-Settler Relations in Newfoundland, 1785-1815* (Toronto 1995), 24-50. John Mannion and Gordon Handcock, "Origins of the Newfoundland Population, 1836," in R. Louis Gentilcore, ed., *Historical Atlas of Canada, II: The Land Transformed, 1800-1891* (Toronto 1993), plate 8.

production of hardy root crops such as potatoes and turnips, and the keeping of a few pigs, goats, sheep, and poultry for household use. There is no evidence to support the notion that fish merchants otherwise opposed agricultural development to preserve their hegemony against the emergence of a landed gentry.[13]

Colonial authorities limited rights to enclose scarce farm land because of the popular reaction against post-1815 credit restrictions by merchants. Unemployed fishing servants responded to such restrictions in a manner reminiscent of the popular disturbances and crowd behaviour associated with bread riots and other popular disturbances in France and England. The servants organized roving collectives that searched out food wherever merchants might be hoarding it. These collectives seized only enough food to subsist, and asserted their belief in a customary right to food at fair prices. The social unrest that ensued forced the state to encourage an old tradition of supplementary, but essentially subsistence farming. Supplementary farming would help fishing people to establish their own household production in the fishery as garden produce would help fill shortfalls in provisioning caused by credit restrictions. Newfoundland governors recognized early a moral right of access to land by preventing members of the colony's professional bourgeoisie in St. John's from enclosing large tracts of land at the expense of fishing people's requirements for their subsistence.[14]

Early settlers preferred to establish their own household production rather than to continue under the direct supervision of merchants as wage labourers. Such producers were independent, insofar as their economic activity involved an extremely limited division of labour. Settlers were exploited by merchants as members of a subordinate class in outport society, but merchants did not organize production directly. The household was, however, the basic economic and social unit, and what division of labour did exist was governed by the patriarchal structure of the household. Households furthermore engaged in a wide range of production, of which the production of salt fish as a commodity for the market was only one activity. Outport households engaged in other production such as supplementary farming to satisfy their needs and limit the amount of credit they required from merchants in exchange for fish and seal products. Such needs might often be met

[13]J.H. McAndrews and G.C. Manville, "Ecological Regions, ca AD 1500," and "Descriptions of Ecological Regions," in R. Cole Harris, ed., *Historical Atlas of Canada, I: From the Beginning to 1800* (Toronto 1987), plates 17-17A; Peter Crabb, "Agriculture in Newfoundland: A Study in Development," vol. I, unpublished PhD. thesis, University of Hull, 1975, 41-51. Gary E. McManus and Clifford H. Wood, *Atlas of Newfoundland and Labrador* (St. John's 1991), "Climate," plate 6.

See Gerald M. Sider, *Culture and Class in Anthropology and History: A Newfoundland Illustration* (Cambridge 1986), 110-15, for the argument about mercantile opposition to agriculture. For a rebuttal of Sider's interpretation see Sean Cadigan, "The Staple Model Reconsidered: The Case of Agricultural development in Northeast Newfoundland, 1785-1855," *Acadiensis*, XXI, 2 (Spring 1992), 48-71.

[14]Cadigan, *Hope and Deception*, 57-61.

by exchange in the informal markets of the local community, but considerations of kin and community rather than reference to the local merchant generally governed such exchanges.[15]

The desire of fishing people for a competency independent of fish merchants was the basis of their moral economy. Newfoundland settlers drew on the customs and traditions of their southeast Irish and southwest English homelands to enforce community norms and values. One such custom was mummering, a yule-tide ritual of disguise and procession. Mummering could often become very similar to charivaris when fishing people used their disguises to harass those who might offend local values. Other acts of outrage and occasional violence greeted merchants' credit restrictions. Often fishing people acted individually by assaulting merchants or their agents, but occasionally their protests assumed much more collective and political dimensions that drew on the rural rebellions and radicalism of late 18th-century England and Ireland. Merchants' price manipulations of their accounts in truck were often the target of direct sanctions by fishing people. Early settlers had been accustomed to fish merchants extending them credit in good years and bad in exchange for a stable supply of staple commodities. Merchants' post-1815 credit restrictions proved particularly offensive by undercutting the ability of fishing households to balance delicately commercial and subsistence production in the maintenance of their competency.[16]

[15]Patricia A. Thornton, "The Transition From the Migratory to the Resident Fishery in the Strait of Belle Isle," in Rosemary E. Ommer, ed., *Merchant Credit and Labour Strategies in Historical Perspective* (Fredericton, NB 1990), 138-66; Cadigan, *Hope and Deception*, 37-80; Sean Cadigan, "Whipping Them into Shape: State Refinement of Patriarchy among Conception Bay Fishing Families, 1787-1825," in Carmelita McGrath, Barbara Neis and Marilyn Porter, eds., *Their Lives and Times: Women in Newfoundland and Labrador* (St. John's 1995), 48-59.

The entrenchment of household production by family labour took place earliest in the longest settled parts of Newfoundland. Conception Bay and the southern shore of the Avalon peninsula were the demographically most mature areas in which families had become well enough established to be able to supply enough labour for household fish production. Bonavista, Trinity, Placentia, and St. Mary's Bays, more remote areas additionally disturbed by conflicting Anglo-French exploitation, would not reach the demographic point at which families could supply their fishing households with enough labour until the 1850s, and the remainder of the island (held by the French) would not do so until the 1870s. See Michael Staveley, "Population Dynamics in Newfoundland: The Regional Patterns," in John J. Mannion, ed., *The Peopling of Newfoundland: Essays in Historical Geography* (St. John's 1977), 49-76.

[16]On competency see Daniel Vickers, "Competency and Competition: Economic Culture in Early America," *The William and Mary Quarterly*, 3d Series, XLVII (January 1990), 3-29. Bryan D. Palmer, "Discordant Music: Charivaris and Whitecapping in Nineteenth-Century North America," *Labour/Le Travailleur*, 3 (1978), 5-62; Herbert Halpert, "A Typology of Mumming," and G.M. Story, "Mummers in Newfoundland History: A Survey of the Printed

Household competency demanded more than the popular negotiation of credit or government relief. Communities developed practices to ensure that all households gained access to enough resources to maintain themselves, as in the case of the government-recognized right of all households to land for gardens. Fishing people's moral economy of access denied anyone the right to take more than their fair share of local resources, or to damage resources so badly that they would not be available to future generations. In an effort to maintain a sustainable dynamic equilibrium with local resources working-age people moved from long-populated areas to settlement frontiers within Newfoundland, and eventually from the colony as a whole, to counterbalance high birth rates. As populations grew to levels that threatened the ability of all to survive, many left to ensure their families' successful reproduction over time. Young families would leave their original communities to find new places from which to fish. They would eventually allow only as many others to marry into their communities as the local ecology would support. Any other potential settlers would have to move on.[17]

The extremely limited potential for commercial farming meant that the interior woodlands beyond the Newfoundland coast did not experience the assault that forests elsewhere in North America faced as a result of European settlement. The coastal forests backing their settlements had always provided fuel and material for the buildings, boats, and fish flakes that outport people required to live and work. In the 17th and 18th centuries such exploitation does not appear to have been unsustainable, except for the unintentional problem of forest fires. As permanent settlement increased through the late 18th and early 19th centuries, however, coastal forests rapidly disappeared as people cut wood for fuel or building materials in the fishery. The interior forests remained commons as did the rich carpets of blueberry and partridge berry plants that grew as successor species to the coastal trees. The impact of fishing people on the terrestrial landscape was otherwise limited to the fishing flakes and stages cluttering the shoreline with small vegetable gardens in the rear. A few livestock wandered about, often yoked so that they would stay out of the gardens, but free to forage elsewhere. Footpaths twisted here and there, with

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Record," in Halpert and Story, eds., *Christmas Mumming in Newfoundland: Essays in Anthropology, Folklore and History*, 2nd ed. (Toronto 1990), 34-61, 165-85. See also Gerald M. Sider, "Christmas Mumming and the New Year in Outport Newfoundland," *Past and Present*, 71 (1976), 102-25. On the popular regulation of truck see Cadigan, *Hope and Deception*, 83-122. See also Linda Little, "Collective Action in Outport Newfoundland: A Case Study from the 1830s," *Labour/Le Travail*, 26 (Fall 1990), 7-35.

[17]Patricia A. Thornton, "Dynamic Equilibrium: Settlement, Population and Ecology in the Strait of Belle Isle, Newfoundland, 1840-1940," 2 vols, PhD thesis, University of Aberdeen, 1979; Thornton, "Newfoundland's Frontier Demographic Experience: The World We Have Not Lost," *Newfoundland Studies*, 1, 2 (1985), 141-62. See also Alan G. Macpherson, "A Modal Sequence in the Peopling of Central Bonavista Bay, 1676-1857," in Mannion ed., *Peopling of Newfoundland*, 102-35.

European transplants such as dandelion growing along their edges.[18] As fishing halted for the winter, and without much livestock to look after on the coast, many fishing people migrated into the interior for the winter just as had the Beothuk. Over-wintering further inland provided settlers with better access to firewood, as well as caribou to hunt, and small game to trap.[19]

The Moral Economy and Mercantile Capitalism

Their own values about competency did not solely determine how fishing people exploited the natural world. The fishing industry had long been integrated into global capitalist markets. Such integration, through intermediate fish merchants, introduced disequilibrium into the seasonal round of fishing people. Cod had not proved to be the divinely inexhaustible resource that 19th-century commentators had suggested.[20] Population growth and greater exports of salt fish appeared initially to have gone hand in hand. Such conditions did not continue. As the

[18]C. Grant Head, *Eighteenth Century Newfoundland* (Toronto 1976), 245; A.K. Dyer and A.W. Robertson, "Forestry," *Encyclopedia of Newfoundland and Labrador, Volume Two* (St. John's 1984), 300-301; Karyn Cooper, "Alien Anthropophytic Vegetation of the Avalon Peninsula," in A.G. Macpherson and J.B. Macpherson, eds., *The Natural Environment of Newfoundland Past and Present* (St. John's 1981), 251-65.

Late 19th-century colonial adventures in industrial diversification through railway, mining, timber, and eventually pulp-and-paper manufacturing did lead to such an assault. See James Hiller, "The Origins of the Pulp and Paper Industry in Newfoundland," *Acadiensis*, 11, 2 (Spring 1982), 42-68; Sean Cadigan, "A Shift in Economic Culture: The Impact of Enclave Industrialization on Newfoundland, 1855-1880," paper presented to the Atlantic Canada Studies Conference, Moncton, 1996; Cadigan, "The Problem of Sustainable Coastal Resource Management in Nineteenth-century Rural Newfoundland: Moral Economy vs. Capitalist Economy," paper presented to the conference on "Ethics and Natural Environmental Change: Recognising the Autonomy of Nature," Sir Wilfred Grenfell College, Corner Brook, NF, 1997.

The impact of European settlement on forests elsewhere is well examined in Silver, *New Face on the Countryside*. Another excellent source is Gordon G. Whitney, *From Coastal Wilderness to Fruited Plain: A History of Environmental Change in Temperate North America from 1500 to the Present* (Cambridge 1994). The Canadian standards are A.R.M. Lower, *The North American Assault on the Canadian Forest: A History of the Lumber Trade Between Canada and the United States* (Toronto 1938) and Graeme Wynn, *Timber Colony: A Historical Geography of Early Nineteenth Century New Brunswick* (Toronto 1981). See also the essays in L. Anders Sandberg, ed., *Trouble in the Woods: Forest Policy and Social Conflict in Nova Scotia and New Brunswick* (Fredericton 1992).

[19]Philip E.L. Smith, "In Winter Quarters," *Newfoundland Studies*, 3, 1 (1987), 1-36.

[20]Lewis Amadeus Anspach, *A History of the Island of Newfoundland* (London 1819), 399; William Epps Cormack, "On the Natural History and economical Uses of the Cod, Capelin, Cuttle-Fish, and Seal, as they occur on the Banks of Newfoundland and the Coasts of that Island and Labrador," *Edinburgh New Philosophical Journal*, 1 (April-July 1829), 32-41; John McGregor, *British America*, vol. 1 (London and Edinburgh 1833), 102-03.

resident population grew, nearly doubling from 21,975 in 1805 to 40,568 in 1815, so did fish exports, from 625,519 quintals in 1805 to 1,182,661 quintals of salt fish in 1815 [see Figure 1].[21] The Newfoundland population climbed steadily through 1857, but exports of fish did not. At first glance, the data in Figure 1 seem to suggest that fish exports fell as did the price of fish after 1815. It might therefore be tempting to suggest that the post-1815 collapse of fish prices explain the falling off in exports. But exports began to recover in 1836, about a decade before fish prices recovered, and by 1857 fish exports had climbed past their 1815 levels, although prices had not reached their 1815 maximum average levels. Merchants responded to falling prices by asking the imperial British government for assistance through subsidies and tariff negotiations with the governments of Newfoundland's fish markets. While the Colonial Office did little to help the Newfoundland industry, it insisted that people involved in the trade must keep exports up. Colonial officials reported that Newfoundland residents had tried to make up for the declining value of their product by increasing the volume sold. Increased effort as a response to falling prices, suggested the Colonial Office, might eventually allow Newfoundland producers to drive their French and American competitors out of the trade by undercutting their prices. There is little evidence to suggest that Newfoundland fishing people or merchants curtailed catches or exports in response to falling prices, but rather that effort increased as prices fell.[22]

If cod were inexhaustible, then Newfoundland's total exports should have followed the same growth trend as the colony's population. The lack of employment opportunities outside of the fishery meant that the increasing population represented increasing fishing effort. Only 3,024 (or 14 per cent) of the 21,977 people enumerated as having occupations in the census of 1845 worked in areas outside of the fishery. By 1857 the proportion of those employed in all of Newfoundland who did not work in the fishery dropped to 11 per cent, or 4,693 out of 43,271.[23] The inability of salt-fish exports to grow as steadily as the Newfoundland population implies that a serious ecological imbalance between fishers and cod had developed. The result of this disequilibrium appears to have been the depletion of some cod stocks in the waters off the coasts inhabited by Newfoundland settlers.

Evidence from the diaries and letters of Slade and Kelson, a Trinity Bay merchant firm, suggest that fishing people in its area encountered such depletion

[21]All of the data for Figure 1 is taken from Shannon Ryan, "Fisheries, 1800-1900," *Encyclopedia of Newfoundland and Labrador, II* (St. John's 1984), 144-155, and Ryan, *Fish Out of Water: The Newfoundland Saltfish Trade 1814-1914* (St. John's 1986), 261. One quintal equalled 112 lbs.

[22]Centre for Newfoundland Studies, Memorial University of Newfoundland, Colonial Office Papers 194 (Hereafter CO 194), Microfilm reel B-692, vol. 69, 1824, ff. 472-85; Horton papers on the Newfoundland Act, 1824, "Inquiry into the present state of the trade and fisheries of Newfoundland," nd.

[23]Newfoundland, *Census Returns*, 1845, 1857.

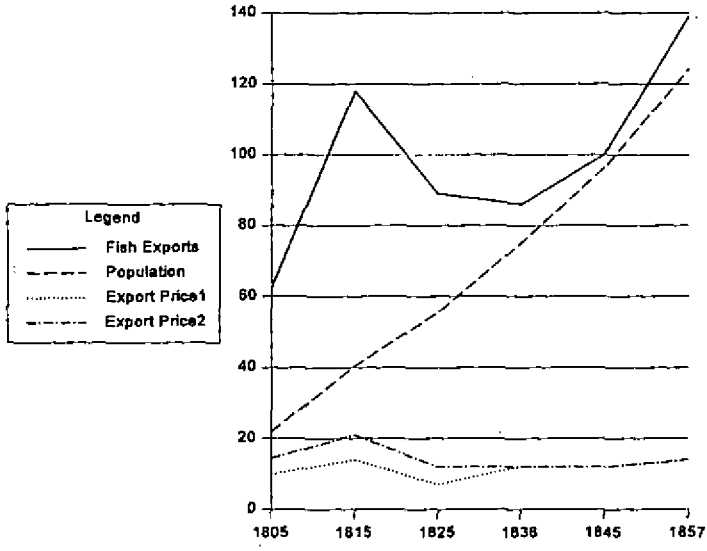

Figure 1: Newfoundland's Salt-Fish Exports in Cwts. (1 = 10,000), Population (1 = 1,000), and Minimum (Export Price 1) and Maximum (Export Price 2) Average Prices (in shillings), 1805-1857.

in the early 19th century.[24] William Kelson, the firm's managing agent at Trinity, made almost daily observations about weather, trade, and fishing conditions from 1815 to 1852. The agent's diaries usually first mentioned fishing from early to late June depending on weather, and continued until the fishing season ended sometime in September. In almost every year in that period, the number of days Kelson

[24]Slade and Kelson was one of the many incarnations of the second largest fish merchant's firm in Trinity Bay in the first half of the 19th century, and the major competitor of the firm of Garland's. Both had their headquarters in Trinity. Robert Slade founded the firm in 1804, and expanded to Catalina in 1813, Heart's Content in 1817, and Hant's Harbour in 1835. From 1804 to 1822 the firm was called "Robert Slade," from 1822 to 1837 "Slade and Kelson," from 1837 to 1850 the "Executors of the late Robert Slade Sr.," and from 1850 until its insolvency in 1861 "Robert Slade and Company." The agent who oversaw the operation from 1809 to 1851 was William Kelson. Kelson advocated the firm carefully watching the amount of credit it extended to clients so that they would not carry too great a load of bad debt. Under Kelson's care, the firm gained most of the business of Catalina and Bird Island's fishing people, and established a thriving business with people across the bay in the New Perlican area. See W.G. Handcock, "The Merchant Families and Enterprises of Trinity in the Nineteenth Century," St. John's, Unpublished ms., 1981, 90-95.

observed fishing to be very bad exceeded by far the number of days in which fishing appeared to be good [see Figure 2].[25]

Kelson appears to have recorded more observations on fishing conditions in years when fishing conditions seemed particularly bad - especially from 1825 to 1835. Kelson reported in 1830 most "distressing & disheartening circumstances:" fishing people in many parts of Trinity Bay had only caught between a quarter and a third of the 1829 catch due to the scarcity of fish. The agent reported that fishers had various explanations for the scarcity, "some declaring that there is [sic] large quantities of fish on the ground, but that it will not take the bait, & others, that they see no fish at all."[26] While Kelson held out some hope that the remainder of the 1830 fishing season might improve, he was disappointed. 1830 proved a near-disaster for the firm, and a crisis of much greater proportions for the people who caught fish for a living. So many of Slade and Kelson's clients had not been able to turn in a single fish at the end of the 1830 season, that Kelson argued the firm would have to cut their credit. Such failures in 1830 repeated what had been happening for the past several years, and the firm could not survive if it continued to extend credit to fishing people who could not return at least some fish to meet their debts. In future, only planters who actually caught and traded fish would get credit.[27]

Kelson's 1830 letters explained the poor years in the Trinity Bay fishery in terms of poor catches. His diary observations suggest that the primary reason for

[25]Figures 2 and 3 are based on evidence I compiled by reading the Slade and Kelson diaries for the entire period. Using a database program called Paradox, I then entered systematically any reference to fishing conditions by day, month and year. The figures likely provide an even more optimistic scenario than prevailed at the time because I counted as good days any observation that indicated good fishing at even one location in Trinity Bay. The records are located in Maritime History Archives, Memorial University of Newfoundland (Hereafter MHA), Slade Collection, Box 1A-2.

[26]MHA, Slade and Kelson, Trinity, Letterbook, 1830-1831, 2.01.001; Slade and Kelson to Robert Slade Sr., Trinity, 6 August 1830. In the same letter Kelson suggested that the extreme shortfalls in catches was the reason why the firm had to restrict as much as possible credit to their clients. Kelson determined only to allow further credit to his best clients, and even then only three-fifths of the credit they used to get. The firm would not abandon its other clients, but could not survive if it continued to give credit to people who caught no fish. Slade and Kelson would continue to give bread and molasses to the cut-off clients, and pressure government to relieve their distress. It is worth noting here that Slade and Kelson, five years later, had still not turned out to starve clients carrying bad debts as has been suggested by Sider that they did in 1825. Even with shortfalls in fish to trade, the firm even in 1830 was not willing to abandon its clients, but could not see how it could stay in business by extending credit to those who could make no return. See Gerald M. Sider, *Culture and Class in Anthropology and History: A Newfoundland Illustration* (Cambridge 1986), 58-73.

[27]MHA, Slade and Kelson, Trinity, Letterbook, 1830-1831, 2.01.001; Slade and Kelson to Robert Slade, Trinity, 16 August 1830.

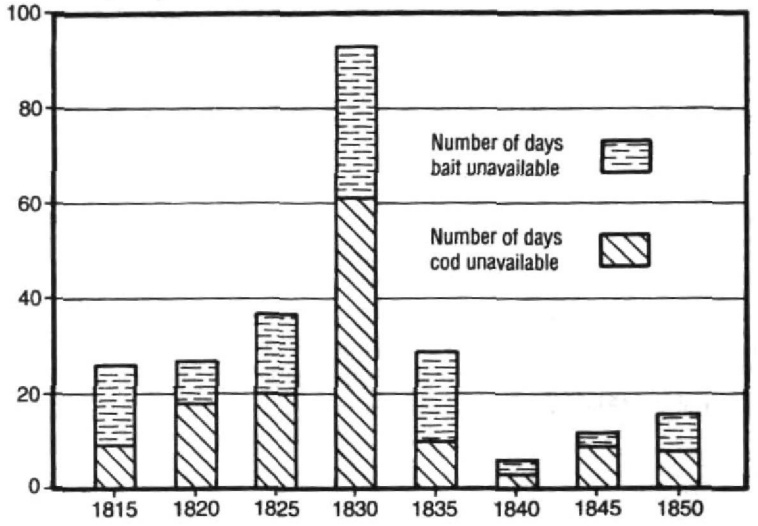

Figure 2: Observations on fishing conditions by five-year Intervals: Slade-Kelson diaries.

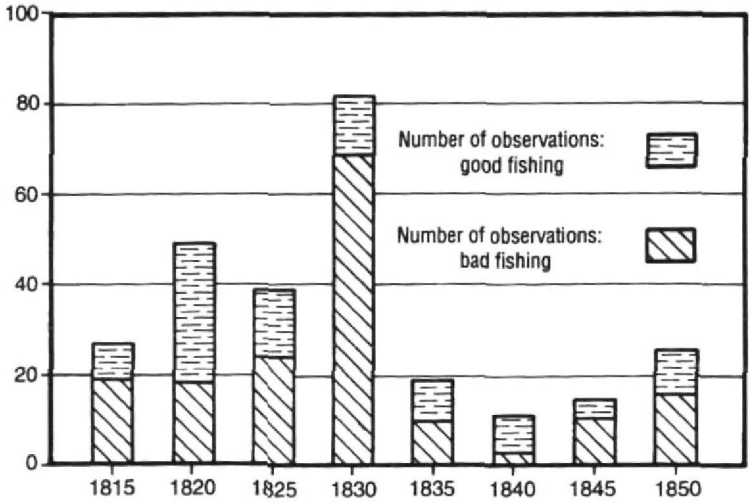

Figure 3: Fishing conditions by five-year Intervals: Slade-Kelson diaries.

their disappointed efforts was that, according to reports by the firm's clients and employees, there was simply no fish to be found in the bay [see Figure 3]. The only other major reason given for poor catches was that often, even when fishing people knew that cod were on the fishing grounds, there was no caplin (*Mallotus villosus)*, or other marine species used as bait, available to enable them actually to catch the cod. The much lower number of recorded observations in the Slade and Kelson diaries through the 1840s and 1850s might mean that fishing conditions had begun to improve, but it is more likely that Kelson began to give up making any observations in disgust at the persistence of poor fishing. In 1847, for example, there are only four observations about fishing conditions. Kelson made them in June, reporting a "good prospect of fish," but made no others throughout the rest of the summer. The first comment on the following year's fishery by Kelson, however, was that the 1847 fishery had failed, forcing him to cut credit to the firm's clients. Fishing people begged the governor for enough relief to allow them to begin fishing in 1848.[28]

Newspaper accounts, like the evidence from the Slade and Kelson diaries, support the argument that the inshore fishery was failing generally in the first half of the 19th century. In 1829, Chief Justice R.A. Tucker reported a bad fishery for the entire island. A Conception Bay newspaper, the *Carbonear Sentinel*, wrote in 1838 of a general collapse in the fishery during that and the previous few years. While the 1839 fishery improved, the paper reported in 1843 that "the Cod fishery in this Bay has been bad." In 1846, another paper, the *Weekly Herald*, reported a general failure of the fishery in Conception, Trinity, and Bonavista Bays. Only the Labrador fishery seemed to be doing well. The *Weekly Herald* reported further poor inshore fisheries in 1847, 1852, and 1853.[29]

By "bad," Kelson's observations and the newspaper accounts most likely reflected the depletion of local cod stocks. The possibility of such exhaustion should come as no surprise. Medieval fishers had often caught fresh-water fish species at rates beyond the ability of their ecosystems to sustain. On the Pacific coast of the Americas, pre-European contact peoples harvested fish at rates comparable to the European settlers who followed them. These First Nations may have occasionally over-fished, although they tended to adjust effort to sustain fish stocks. Later European and Asian settlers cared less about sustainability. Their fishing effort, combined with the impact of mining and agriculture on riverine ecosystems, had

[28]MHA, Slade Collection,, Box 2, Executors of Late Robert Slade Sr., Diary, 1846-1848, 3.01.005, 1 June 1847, 24 May 1848.

[29]*The Public Ledger*, (Hereafter *PL*) St. John's, 24 July 1827, 9 October 1829; *The Carbonear Sentinel*, 13 July 1837, 11 August 1838, 2 July 1839, 16 June 1840, 8 August 1843; *The Weekly Herald*, Harbour Grace, 11 February, 5 August 1846, 27 January, 15 September, 6 October 1847; 23 August 1848; 25 July, 19 September 1849; 27 October 1852; 20 July, 14 September 1853.

led to the depletion of salmon stocks and some marine mammal species by the mid-19th century.[30]

In Newfoundland, the total volumes of cod catches were falling off in long-settled areas such as Trinity or Conception Bays. The Newfoundland fishery of the first half of the 19th century was a "northern" cod fishery. Northern cod ranged from the southern coast of Labrador down along the Northeast Newfoundland Shelf to the northern half of the Grand Banks. The fishing effort of people such as the clients of Kelson's firm probably resulted in localized scarcities of distinct sub-components of this northern cod stock. A variety of tagging experiments, genetic studies, and examinations of spawning distributions and fishers' local ecological knowledge have established the existence of such sub-components. Settlers largely fished bay stocks that spawned and over-wintered inside bays such as Trinity Bay. By the mid-19th century, declining catch rates inside such bays forced settlers out to exploit other stocks in headland waters off places such as Cape Bonavista. Other components included migrant cod that remained offshore in winter, but moved inshore to feed in the late spring and early summer. Finally, settlers did not exploit the non-migratory resident stocks of the offshore banks.

Before 1855, settlers relied on bay and headland sub-stocks whose probable low numbers made them vulnerable to over-exploitation. Although census data do not permit analysis for the pre-1845 period, studies have demonstrated that the harvesting capacity in the northern cod fishery doubled between 1845 and 1884, and remained constant after the latter date. Total catches of northern cod actually decreased by over 30 per cent despite increased fishing effort. There is no evidence to suggest that unusual non-anthropogenic environmental or ecological factors such as weather or predation by seals caused this decrease. If the size of inshore cod stocks had been constant during the 19th century, then the dramatic expansion in harvesting capacity and fishing effort should have resulted in stable, if not increasing, catches.[31]

[30]Richard Hoffmann, "Mediaeval Cistercian Fisheries Natural and Artificial," in Léon Pressouyre, ed., *L'espace cistercien* (Paris 1994), 401-14; Hoffmann, "Environmental Change and the Culture of Common Carp in Medieval Europe," *Guelph Ichthyology Reviews*, 3 (May 1995), 57-82; Hoffmann, "Economic Development and Aquatic Ecosystems in Medieval Europe," *The American Historical Review*, 101, 3 (1996), 631-69; Arthur F. McEvoy, *The Fisherman's Problem: Ecology and Law in the California Fisheries, 1850-1980* (Cambridge 1986), 21-86.

[31]Jeffrey A. Hutchings, "Spatial and Temporal Variation in the Exploitation of Northern Cod, *Gadus morhua*: A Historical Perspective from 1500 to Present," in Daniel Vickers, ed., *Marine Resources and Human Societies in the North Atlantic Since 1500* (St. John's 1995), 41-68; Sean T. Cadigan and Hutchings, "The Ecology of Expansion: the Case of the Labrador Fishery," paper presented to the Canadian Historical Association, June 1997. Far from their predation exerting pressure on cod stocks, seal herds off the Newfoundland and Labrador Coasts were experiencing a similar over-exploitation by the industrialization of the industry throughout the 19th century. See Shannon Ryan, *The Ice Hunters: A History of Newfoundland Sealing to 1914* (St. John's 1994), 111-16.

The pressure from government officials and merchants for greater volumes of saltfish to compensate for the post-1815 collapse in its value provided further opportunity for the over-exploitation of sub-components of the northern cod stock. Fishers, like other pre-industrial rural people, could not prevent completely commercial inroads on the moral economic regulation of access to the commons. The attempt to produce more of the staple commodity led to the adoption of fishing practices that could not be considered compatible with the moral values of competency. The moral economy was not static; as a small number of fishing people tried to compete for more of increasingly scarce fish by adopting new technology, other fishers began to agitate against the inappropriateness of such adoption.[32]

Most fishing people had relied on baited hand lines. Fishers held one end of a line in one hand. They dropped the other end, to which they fastened a hook baited with caplin or squid, into the water, pulling it up and down to attract cod. Jiggers were baitless versions of the hand line. Lead moulded around two hooks in the shape of a small fish would be used on the end of a line lowered into the water by fishing people. Fishers jigged the lures up and down to attract cod, although the jigger would hook fish anywhere on their bodies. Older than hand lines, but not widely used before 1820, were cod seines, which lowered the amount of labour required to catch a given amount of fish. A cod-seine crew of about six people would tow large nets up to 600 feet long, with a 4 to 5 inch mesh, to encircle and capture whole schools of cod. By the mid-19th century, some Newfoundland fishing people were also using longline trawls, often called bultows. These trawl lines consisted of buoyed, set lines strung out in the water from which hung many smaller lines at intervals all baited often with hundreds of hooks. The success of trawl lines lay in the fact that they could be set in the water, and left to fish unattended.[33]

By the early 1840s, observers indicated that some fishing people were relying more on cod seines. These nets became the first technology to be opposed by residents in the fishery as ecologically unsound because they captured juvenile as well as mature fish.[34] Many local fishing people began to oppose jiggers for

[32]I have based this interpretation partially on K.D.M. Snell, *Annals of the Labouring Poor: Social Change and Agrarian England, 1660-1900* (Cambridge 1985), 99-179; and James M. Acheson, "Anthropology of Fishing," *Annual Review of Anthropology*, 10 (1981), 293-4.
[33]Jeffrey A. Hutchings and Ransom A. Myers, "The Biological Collapse of Atlantic Cod off Newfoundland and Labrador: An Exploration of Historical Changes in Exploitation, Harvesting Technology, and Management," in Ragnar Arnason and Lawrence Felt, eds., *The North Atlantic Fisheries: Successes, Failures and Challenges* (Charlottetown 1995), 56; Storey, Kirwin and Widdowson, *Dictionary of Newfoundland English*, 73-4, 106-07, 460: Catharine F. Horan, "Fisheries," *Encyclopedia of Newfoundland and Labrador*, vol. II (St. John's 1984), 165-66.
[34]Anspach, *History*, 408-30; Cormack, "Natural History," 34-5; D.W. Prowse, *A History of Newfoundland from the English, Colonial and Foreign Records* (London 1896), 341-43;

wounding more fish than they caught, and seines as being too expensive to be equitably employed. A cod-seine fishery "requires more capital to commence with than the mere boat and hooks and lines of the common fishermen." Poorer fishing people envied the merchants and few better-off planters who could afford the seines. Some went "so far as to say that all nets should be prohibited, as destroying the chance of the poorer class." Seines should be banned because their more efficient catches left less fish for the handliners.[35]

A clear split had emerged between those who could afford to use a number of more efficient technologies during the 1840s and those who could only afford hand lines. The census of Newfoundland for 1845 (the only one for this period which disaggregated seines from the more general category of "nets and seines") reveals that the ownership of cod seines was not widespread. The low number of seines per household in the district of St. John's might have simply reflected the greater number of households there which were not involved in the fishery. The district of Fortune Bay, however, had a population almost completely dependent on fishing for livelihoods, but had the same low rate of 1 seine for every 100 households [see Table 1]. Bonavista had the highest rate of seine ownership, although it was still low at 15 seines for every 100 households, and the remaining districts ranged from 6 to 9 seines for every 100 households.

The existence of a few planters who could afford to use cod seines does not indicate much class differentiation among fishing people. While most planters responded to credit restrictions by reducing their operations and retreating into household production, a few enjoyed some success in expanding their operations by assuming more mercantile roles in shipping and servicing the Labrador fishery. Along the way they invested in more capital-intensive equipment such as cod seines, although this was no guarantee of success in the planters' depressed industry.[36] Even towards the end of the 19th century, despite the expansion of a variety of means of catching fish, most planters were those of "small means, and are simply more enterprising fishermen who own a 'fishing-room' with a few boats and seines. They engage a number of hands for the season and the fish are made on their own premises."[37]

Fishing people who were unhappy about the use of cod seines by better-off planters and merchants were not always content to criticize the use of these nets.

Hugh Murray, *An Historical and Descriptive Account of British America*, vol. II (New York 1842), 100-01, 125-26; Hutchings and Myers, "Biological Collapse of Atlantic Cod," 1995, 69-71.

[35]J.B. Jukes, *Excursions In and About Newfoundland During the Years 1839 and 1840*, 1842, vol. I (Toronto 1969), quotes from 228-9, 230-31.

[36]Cadigan, *Hope and Deception*, 37-50; see especially the statements of the insolvent accounts of planters John Meany and John Way, 47-8.

[37]Moses Harvey, *Newfoundland As It Is in 1899: A Hand-Book and Tourists' Guide* (London 1899), 201.

In 1845 some planters at Bay Bulls, on the southern shore of the Avalon Peninsula, decided to employ cod seines. Newspapers reported that the early fishing season around the entire island had been very bad. But late in July cod and caplin had appeared in the waters around Bay Bulls in great abundance. To the frustration of local fishing people, the cod would not take bait, supposedly because they had recently fed on caplin. Those planters who had the nets decided that they should use their cod seines, but fishing people who used baited hand lines, the great majority of those at Bay Bulls, "conspired to prevent those who had Cod Seines from using them!" Although the newspaper accounts printed few details, the handliners perpetrated "several most unwarrantable acts" to keep the seines out of the water. The press condemned these actions, stating that "we have been informed that never, in any previous year, would the catch of fish in Bay Bulls be near so great, if the Cod-seines *were allowed* to be used."[38]

Table 1
Cod Seines by Households: Newfoundland, 1845

District	# of Households	# of Cod Seines	Seines by Household
Bonavista	1039	155	0.15
Twillingate/Fogo	988	93	0.09
Trinity Bay	1363	114	0.08
Placentia/St. Mary's	960	76	0.08
Conception Bay	4196	313	0.07
Burin	634	43	0.07
Ferryland	780	47	0.06
St. John's	4410	30	0.01
Fortune Bay	721	8	0.01
Total	15091	879	0.06

Source: Newfoundland, *Abstract Census and Return of the Population, 1845.*

Little evidence exists about the motivations of the Bay Bulls handliners who prevented the use of cod seines. In England, rural people often vandalized or destroyed fences and other structures and equipment that symbolized landlords' enclosure of the commons. Such actions joined rumour mongering, newspaper advertisements and letter campaigns, as well as more conventional political activity such as petitioning, in the popular enforcement of the moral economy. Fishers

[38] *The Morning Courier*, (Hereafter *MC*) St. John's, 30 July 1845.

similarly inhibited the use of cod seines as a protest against the gear as a violation of a common right of access to fish. As in the case of the rural English poor, most fishing people had few means of recording their reasons for posterity. We must turn to their more articulate contemporary champions to understand the actions of fishing people. The English poor had their Cobbett; outport fishers had William Kelson.[39]

Kelson may have stood with poor handliners against the introduction of more capital-intensive technologies because of the unequal reciprocities implicit in the paternalistic truck relationships between merchants and fishing people of the time.[40] Although Kelson recommended credit restriction on the part of Slade and Kelson as a response to declining catches in Trinity Bay, his letters indicated that he was appalled at what might happen to clients whom the firm cut off. No simple benevolence underlay Kelson's concerns, for he personally had to live with the consequences of credit restrictions far removed from the colonial authorities in St. John's. In 1830, Kelson wrote that one planter, who could not get the credit to which he was accustomed, told the agent that "he with others *would fight for it*! - that they would have *Bread* or *Blood*!" Kelson encouraged the colonial government to provide relief, but clearly had a worrisome problem on his hands, although no violence materialized in this specific instance.[41]

Kelson initially took up the cause of the opponents of newer fishing technology by writing to colonial newspapers under the pseudonym "Trinitarian of the Old School." He wrote in 1845 that seining might be causing cod scarcities by driving the fish away. Kelson suggested further that seines usually caught smaller juvenile fish before they had time to breed, and produced an inferior cure due to their size. Larger fish tended to be glutted with recently eaten caplin when taken from the nets, and had a softer flesh not yet strengthened by digested nutrients that also did not cure well. The result was that the overall quality and price of Newfoundland fish in the market suffered. Finally, Kelson argued that it was not right to encourage any technology except that "which enables all the planters, *large* and *small*, to engage in it, and to stand an equal chance ... *that is the hook and line fishery*." Most planters and other fishing people could not afford to buy seines or hire the labour to work them, and those that did often blocked access to good fishing grounds with their nets.[42]

[39]Neeson, *Commoners*, 267-80; Ian Dyck, *William Cobbett and Rural Popular Culture* (Cambridge 1992), 3.

[40]On paternalism in the fishery see Cadigan, *Hope and Deception*, 100-20; on Kelson see Ellen M. Dinn and Carla S. Krachun, "Kelson, William," *Encyclopedia of Newfoundland and Labrador, III*, (St. John's 1991), 164.

[41]MHA, Slade and Kelson, Trinity, Letterbook, 1830-1831, 2.01.001; Slade and Kelson to Robert Slade, Trinity, 8 October 1830.

[42]*PL*, St. John's, 29 July 1845.

The editor of the paper with which Kelson corresponded disagreed. He argued that the prevailing wisdom was that cod seines, along with trawl lines recently being introduced into the fishery, were the only means by which the Newfoundland fishing industry could recover from shortfalls in catches. Acknowledging that the poor fishing people felt threatened by these more capital-intensive means of fishing, the editor nonetheless argued that their poverty was not a sound justification for preventing the well-off few from bettering themselves further:

> The comparatively wealthy planter has a right to make use of his means in the augmentation of his capital by every fair and honourable process; and we think it would be difficult indeed to show that because he takes the fish with which the coasts of the island abound in the only ways in which, at certain periods, it *can* be taken, he acts in the slightest degree unfairly towards those who are not possessed of the means of adopting a similar course.[43]

The editor conceded that seines should not be used if handlining was successful on a particular fishing ground, and suggested that poorer fishing people pool their resources to buy seines. Finally, a legislated minimum mesh size in the seine netting was essential to ensure that juvenile and small fish not be taken.

Kelson could not agree with the use of seines. Only the handliners, argued the correspondent, took cod in season when it had firm flesh and a full liver. Fish taken in seines was soft, discoloured and often bad tasting. The resulting poorer cure was the main reason why the reputation of Newfoundland fish was losing ground to that of Scandinavian fish.[44] Kelson persisted in his opposition to seines and jiggers, and began to write under the name of "Izaak Walton."[45] Kelson's choice of this new pseudonym suggests that his support for the handliners was similar to the English Tory rejection of industrial capitalism and the subjugation of the commons. Country Tories particularly reacted to the apparent social instability of the time by imagining the pre-industrial capitalist English past as a paternalistic idyll. While liberal Tories embraced the new political economy of capitalism, country Tories feared its individualistic and competitive market-driven elements, and longed for a mythic pastoral 'good old days.' Machines, many Tories felt, disrupted the old order, violated the ability of the land to provide for all, and supplanted the need for hired labour. Uprooted and marginalized, the lower orders might well rise against society itself in revolution - they might demand bread or blood.[46] Gentry literature of the period became much more preoccupied with the pastoral theme, and with

[43]*PL*, 9 August 1845.
[44]*PL*, 12 August 1845.
[45]Kelson acknowledged being both "Trinitarian" and "Walton" in *PL*, St. John's, 20 January 1857.
[46]Neeson, *Commoners*, 22.

standing approvingly a bucolic pre-industrial landscape alongside the perceived alienation from nature represented by industrial capitalism.[47]

While much of the renewed pastoral tradition was agrarian, 19th-century writers rediscovered pastoral works about fishing. The author of one of these works was Izaak Walton, the anti-Cromwellian royalist who published *The Compleat Angler* in 1653. *The Compleat Angler* was at once a practical exposition on fresh-water fishing, a tribute to the English countryside, and a praise of the English people. Walton combined detailed descriptions of fish, bait, and lures with an arcadian view that nature expressed a sacred order that, like the social order, people should tamper with cautiously. Walton imbued simple hook and line fishing with an almost religious quality, partially drawing on a sport-fishing literary tradition going back to the medieval period. This tradition recommended fishing as a contemplative exercise that revealed the mysteries of divine will in a natural order.[48] Kelson appears to have associated more machine-like gears with a violation of the divine in nature. By assuming the mantle of an old authority on the fishery, Kelson reinforced his own. But the guise of Izaak Walton also represented his fear of the social disorder associated with capitalist development and its poorly understood violation of nature.[49]

A distaste for the manner in which unbridled colonial expansion had seriously undermined the ecosystems of many overseas possessions marked some British Tories. Influenced by Huguenot and physiocratic thinking about the natural world as a pattern of divine order, these Tories had supported conservation measures for forests in the British Caribbean in the late 18th century.[50] In the last years of his life, Kelson wrote that humanity knew too little about "the awful and majestic sublimity" of a divinely ordered nature to tamper with it lightly or in ignorance.[51] The agent knew that he restricted credit because of an apparent and alarming lack of cod on the fishing grounds habitually resorted to by local fishing people. Kelson felt that it was more important to establish why the fish had become scarce, than to use new technologies that were more efficient in catching the cod. Kelson also appears to have decided that some of these newer methods, like the seines and

[47]Maxine Berg, *The Machinery Question and the Making of Political Economy, 1815-1848* (Cambridge 1980), 253-68; Raymond Williams, *The Country and the City* (London 1973), 13-34, 127-41.

[48]Richard C. Hoffman, "Fishing for Sport in Medieval Europe: New Evidence," *Speculum*, 60, 4 (1985), 877-902.

[49]Margaret Bottrall, *Izaak Walton* (London 1955), 7-36; John R. Cooper, *The Art of the Compleat Angler* (Durham, NC 1968), 30-76; W.J. Keith, *The Rural Tradition: A Study of the Non-Fiction Prose Writers of the English Countryside* (Toronto 1974), 6-34; Izaak Walton, ed. by Jonquil Bevan, *The Compleat Angler 1653-1676* (Oxford 1983); Keith Thomas, *Man and the Natural World: A History of the Modern Sensibility* (New York 1983), 243-68.

[50]Grove, *Green Imperialism*, 151, 265-79.

[51]*PL*, St. John's, 20 August 1861. Kelson died in 1866.

jiggers, were partially responsible for the disappearance of cod. Finally, these gears represented the violation of a divine natural order that deprived many of the means of making a living, and therefore threatened the social order.

Kelson's defense of the rights of the poor against new fishing technology, and his insistence that the colonial legislature protect those rights, made him more than a simple conservative reactionary. His post-retirement fascination with the possibility of a transatlantic telegraph cable, and his tinkering with perpetual motion machines, suggest that Kelson believed that there was a positive role for technology in society. The old agent embraced the notion popular among the 18th-century British intelligentsia that humanity could progress by observing scientifically the natural world to understand its divine nature.[52] Kelson's advocacy of the poor suggested additionally that his thinking had developed along lines similar to the rural radicalism of William Cobbett. Kelson's idealization of the old handline fishery constituted a rejection of the prerogatives of private capital. He would not accept the reorganization of marine-resource exploitation to benefit fewer people. Kelson defended cod fish as a common wealth, and a moral right of access to that wealth existed for all of the fishing people of Newfoundland.[53]

Kelson openly condemned the use of cod seines as the means by which a few better-off planters were attempting to enrich themselves while most fishing people fell into poverty. The merchant agent declared instead that "the plan I advocate is, 'live and let live' for all, both young and old, big and small, rich and poor, can engage in the hook-and-line fishery, in catching fish fairly, in proper season, and in curing or making it well." Kelson argued that his 41 years of experience in the fishery rendered him better qualified to comment on the fishery than any newspaper editor, and he insisted that there must be an immediate ban on cod jiggers and seines, as well as a legislative inquiry on the matter.[54] He applauded the fishing people of Bay de Verde who had banded together to prohibit the use of seines in their community, and argued that the people of Old and New Bonaventure in Trinity Bay had destroyed their fishing grounds by using seines.[55]

Rather than accept Kelson's advice, some planters began to adopt inshore trawl lines as well. These planters did so because, although fish exports had begun to recover, catches in long-fished waters in places such as Conception Bay had not improved. The recovery in exports probably reflected the colony's growing population moving into new fishing areas. But the use of new harvesting technology was another way in which planters could respond. In Conception Bay during the fishing season of 1845, for example, "the fish has been very scarce this summer; in fact scarcer than ever known." Planters from Harbour Grace, named Hierlihy, however,

[52]David Spadafora, *The Idea of Progress in Eighteenth-Century Britain* (New Haven and London 1990).
[53]Dyck, *Cobbett*, 123-56.
[54]*PL*, 5 September 1845.
[55]*PL*, 19 September 1845.

found that their own catches improved by using trawl lines. Between 16 July and the end of August they caught "2,700 fish, on a much larger size than the run which the hand lines take." The Hierlihys only hauled the set trawls twice a day, but reported that they could have caught more fish if they had hauled and rebaited their lines more often.[56]

The editor of the Harbour Grace *Weekly Herald* was so impressed with these new trawl lines that he printed detailed instructions for his readers about how to construct them. Believing that trawl lines were destined to become the favoured means of fishing among the most successful planters, the editor decided to list the trawls' advantages as labour-saving devices. One or two fishers could set hundreds of hooks with bait that fished unattended. The editor felt obliged to suggest that such baited trawl lines would cause greater numbers of cod to appear inshore. His logic followed the general understanding of the time that cod appeared or disappeared with their prey such as caplin, or other bait fish. The reason for the editor's obligation was a popular objection to the trawl lines based on the threat their greater efficiency posed to cod stocks, not simply to the lines' cost. The newspaper reported that fishing people at Bryant's Cove had forced planters who used trawl lines to haul them out of the water when, "to the astonishment and mortification of the objecting parties, the whole of the fish (on which however they had hitherto been doing a little) immediately disappeared."[57]

J.G. Hierlihy was so satisfied with the new trawl lines that he wrote to the *Weekly Herald* the next year explaining how he and some neighbours had set 20 trawl lines in the water with about 4,000 baited hooks. In the third week of July they caught between four and eleven puncheons of fish per trawl line, while handliners caught almost nothing. Hierlihy offered to instruct anyone who might want to make their own trawl line, claiming that "Fishermen, - Your object is to catch as much fish as you can, with the least degree of labour and expense, let not then, an old fashioned prejudice prevent your doing so."[58]

No great enthusiasm met Hierlihy's offer, although continual reports of poor catches by those using hand lines with baited hooks led to more pressure from the press for the adoption of the trawl lines. In commenting on a poor fishery in Trinity Bay in 1846, the *Weekly Herald*'s editor condemned most fishing people for refusing to try the inshore trawl lines. While a few had "condescended" to use the trawl lines, the editor remarked that he found it "strange that sensible men would allow themselves to be so duped by an old-fashioned prejudice as to discountenance the use of this excellent contrivance! But so it is. Nothing will go down here but the old jig-jog [handline] method. 'Grandfader' for ever!!"[59]

[56] *The Weekly Herald* (hereafter *WH*), Harbour Grace, 3 September 1845.
[57] *WH*, 10 September 1845.
[58] *WH*, 29 July 1946.
[59] *WH*, 15 July 1846.

As in the case of the use of cod seines, popular opposition to the trawl lines emerged almost immediately. In Bryant's Cove, someone tried to destroy the trawl lines as they were set in the water in 1846. The attempted sabotage led a local newspaper editor to praise the trawl lines, and remark that "like every thing else that comes into collision with established customs (however ridiculous these customs may be) the bultow has had to make head way against a torrent of prejudice." While only twenty of the bultows had been set in local waters, this editor looked forward to their future, more widespread use.[60] Despite this editorial endorsement, opposition to the trawl lines continued to grow, and unidentified assailants beat some of the Bryant's Cove planters who used the fishing gear later in the summer.[61] Proponents of the trawl lines, as well as cod seines, grew frustrated at the opposition. One such person wrote to the press under the name of "Isaac the Second," believing that "Izaak Walton"'s writings about the economic and ecological damage promised by the new equipment were inflaming popular opinion. "Isaac the Second" condemned "Izaak Walton"'s views as backward and anti-progress. Ridicule should be "Walton"'s lot, claimed the second writer, because "he will have no more fish taken with the cod seine."[62]

So effective was the harassment of the trawl liners that in January 1847 J.G. Hierlihy and 79 other planters and fishing people petitioned the Newfoundland General Assembly for some sort of mediating legislation to alleviate the tension although without much success. The petition recounted Hierlihy's experiments in 1845, and stated that over 75 had been used in Bryant's Cove and Harbour Grace waters that year. Rumour began to circulate that the trawl lines were taking what little fish was available, and that handliners should take the trawls out of the water if they were to catch any cod. To prevent any further interference with set trawl lines, the petitioners asked that the Assembly divide community fishing grounds into two parts, one each to be used exclusively by handliners and trawl liners. Furthermore, trawl lines should always be set at parallels to take as little room as possible on fishing grounds. Finally, a person familiar with trawl lines should be appointed by government in every community to ensure the enforcement of their proper use, and to instruct any who might ask.[63]

Although the introduction of new harvesting technologies and expansion into new fishing areas appear to have contributed to a slow recovery of fish exports by the late 1840s, fish prices had not recovered dramatically. Newfoundland had fallen

[60] *WH*, 29 July 1846. The newspaper gave the last names of some of the Bryant's Cove planters who had used trawl lines: Coughlan, Hearn, Robinson, Chippet, and Parsons.

[61] *WH*, 5 August 1845. The newspaper account stated that two unnamed people received fines in the Court of Sessions at Harbour Grace for the assault. I have been unable to find any such record of conviction in the records of that court held by the Provincial Archives of Newfoundland and Labrador.

[62] *WH*, 16 December 1846.

[63] *WH*, 20 January 1847.

into a profound economic crisis that exhausted the colonial government's resources, placed severe stress on truck practices that had all but destroyed the local credit system, and threatened residents on a number of occasions with famine.[64] Accepting that Newfoundland had few resources outside of the fishery that could be developed, the local press could only suggest that fishing people redouble their efforts to catch fish, to make up in volume the low value of the commodity they traded to merchants. "Go determinedly to work," recommended one paper. "Set to at once. Catch fish how you can, and when you can (lawfully of course). Never mind talking about what you did last year, or what you didn't do, or what you wish you had done, but commence operations at once. Get your bultows to rights - ply your herring nets, and prepare your hooks and lines, aye and cod seines too, if you have them."[65] The writer of these sentiments noted that the fishing season was short, and that the greatest amount of fish possible had to be caught during it. The solution was to intensify effort largely by using trawl lines and cod seines.

Not all agreed that the solution to problems in the fishery lay in the use of new technologies. In the last week of June 1847, a group of people working under the cover of darkness destroyed six to eight trawl lines that had been set in the waters of Bryant's Cove. Harassment of planters using the trawl lines kept up over the summer, leading seventeen planters to offer a reward of fourteen pounds "TO ANY PERSON or persons who will give such information as will lead to the CONVICTION of the parties who CUT THE BULTOES at Bryant's Cove or Harbour Grace, this season."[66]

More frustrating than popular resistance to technological innovation was the unwilling suspicion on the part of the press that this protest might be right. Newspapers tried to maintain their enthusiasm; the *Weekly Herald*, for example, in relating that the Conception and Trinity Bays fisheries had been very bad, continued to hope that increased use of trawl lines, just then being introduced at Trinity, would lead to a more successful autumn fishery. But the paper commented at the end of 1847 that, although a few merchants and planters were doing well, the district of Conception Bay as a whole had not really improved for all the new means of catching fish introduced. Nothing seemed to change one basic condition: "the population of the bay is annually increasing ... [but] the waters thereof are becoming less productive, and the machinery with which the voyages are prosecuted is increasing in expense."[67]

Kelson maintained his opposition to using anything but handlines with baited hooks in the cod fishery. He continued to argue that all the other technologies simply reflected the desire of the wealthy to take a greater share of a scarce resource for themselves at the expense of the poor. The agent was unremitting in declaring

[64]Cadigan, "Staple Model Reconsidered."
[65]*WH*, Harbour Grace, 19 May 1847.
[66]*WH*, 30 June, 28 July 1847.
[67]*WH*, 28 July, 1 December 1847.

his views that the shortage of cod in the longest-settled parts of Newfoundland was the result of too much fishing with more efficient gear types such as seines, and he felt that even cod jiggers were a problem because they often damaged cod without catching them. The people of Trinity and English Harbour, claimed Kelson, had all but wiped out the fish that used to appear in local waters by their use of cod seines. He did not claim that the seines had taken all of the cod from the waters, but rather that the noise of using them frightened fish that usually migrated inward out into deeper water. Kelson continued to state that seines "destroy vast quantities of the young fish," and did not accept the argument that seines were necessary for returning catch levels to what they had been twenty or thirty years ago because there were enough handliners around now to catch the fish, if the cod was there to be caught. Kelson recommended that all fishing communities voluntarily ban cod seines.[68]

Kelson took a more leading role in the opposition to cod seines and jiggers in 1849. He argued that the increasing poverty of outport people could be traced to the use of such gear. To assure Newfoundlanders generally "that the opinion that I have expressed on the existing mode of prosecuting the cod fishery is not merely that of an old, obscure, humble individual, but the settled conviction also of hundreds, if not thousands, of experienced fishermen" Kelson informed the public that he had decided to circulate a petition against seines and jiggers that had garnered "ten yards of signatures." By June Kelson reported that he had 1,700 signatures and had sent the petition to the government in the colonial capital.[69]

In April 1849, the MHA for Trinity, Thomas B. Job, presented the petition of William Kelson and others from Trinity and Bonavista Bays asking for legislation to prevent damage to the Newfoundland fishing industry by cod seines and jiggers. While the Assembly appointed a select committee chaired by Job to consider the petition, and asked Governor LeMarchant to have magistrates collect evidence on the issue, it took no further action.[70] Kelson commented that the governor's actions had doomed his petition. Most of the magistrates he knew of in Trinity and Bonavista Bays always sided with the interests of the wealthy, and explicitly favoured the use of cod seines. These magistrates would determine who they took evidence from, and would not listen to Kelson's supporters.[71]

Kelson was not to be deterred. At the end of the fishing season in 1849 he wrote about how a number of communities in Trinity Bay and Bonavista Bay which had come to rely on cod seines had experienced extreme shortfalls in catches. Other communities which did not use cod seines had much better seasons. The result for the people in communities which used the seines was an inability to pay off debts

[68]*PL*, St. John's, 14 May, 3 August, 12 October 1847.
[69]*PL*, St. John's, 26 January, 12 June 1849.
[70]Government of Newfoundland, *Journal of the House of Assembly of Newfoundland*, 1848/1849, 4, I, 209, 221, 252-5.
[71]*PL*, St. John's, 13 July 1849.

to merchants, and the threat of starvation in the coming winter.[72] In reaction to this failure in the fishery, over 500 fishermen walked from all over the coast of Trinity and Bonavista Bays to attend a protest meeting organized by Kelson in Trinity during October. Ninety six of them were examined by the magistrates, who found only three willing to support the use of seines. A St. John's paper printed an address from William Kelson to the mass meeting in which the agent claimed responsibility for organizing the affair.[73] Kelson appears to have practiced what he preached. The diaries of his firm never report that it used seines or jiggers after 1845.

Kelson told the fishing people who attended the 1849 meeting that there were four reasons why they must oppose the use of cod seines. First, the intrusiveness of the technology drove cod offshore. Second, in consequence, more fish would be caught if the seines were not used. Third, handliners could not compete on the fishing grounds with those who used cod seines, and they could not afford the more expensive technology. Finally, although those using seines often caught more fish, that cod was smaller, and produced a much worse cure than that of the handliners. The pro-cod seine editor of the Harbour Grace newspaper ridiculed Kelson, stating that no one knew why cod moved to or from the shore, but that cod disappeared cyclically due to some natural law. In an allusion to earlier protests against the mechanization of production, the editor argued that to object to cod seines was simply to repeat the time-worn objection to the introduction of any machinery such as steam engines, spinning jennies, or threshing machines into modern Anglo-American industry. If the fish caught by seines was inferior than that of the handliners, nothing could be done. "Half a loaf" was, after all, argued the editor, "better than no bread." Cod seines were a "necessary evil." To oppose them, as did Kelson and his followers, was simply to want to "go back once more to the days of our ancestors, put on with all speed our bear skin coats, and with bows and arrows in our hands betake ourselves to the forests. It won't do, honest Izaak .... You are too late for the age by at least half a century."[74]

The destruction of trawl lines, the assaults on their owners, and the obstruction of cod seines do call to mind the much more famous English Luddite protests against the introduction of machinery to the textile industry. But we can go too far with the comparison. The reaction against cod seines, jiggers and trawl lines in Newfoundland was not so organized as that of the Luddites, and did not provoke the same state reaction. Yet Newfoundland fishing people, like the Luddites, rejected blind faith in technology as a neutral or progressive force in capitalist development.[75]

[72] *PL*, 23 October 1849.
[73] *PL*, 2 November 1849.
[74] *WH*, 14, 21 November 1849.
[75] Malcolm I. Thomis, *The Luddites: Machine-Breaking in Regency England* (Newton Abbot, Eng., 1970), 43-51; Frank Peel, *The Risings of the Luddites, Chartists and Plug-Drawers*, 1880 (London 1968), 25-26; J.R. Dinwiddy, *From Luddism to the First Reform*

The main difference between the Luddites and the resistance against new fishing gear, however, was the ecological concern that pervaded the latter. The fishing people who tried to prevent the use of new gear knew that problems in the inshore fishery were due to the cod being simply not available in the same numbers as they had been. Some fishing people appear to have believed that new gear types would only worsen the problem by increasing pressure on the fish. Others, as did Kelson, believed that new methods such as seines and trawl lines were directly responsible by scaring off or diverting the migratory habits of cod. Considering the manner in which contemporary science and management failed to avert the present crisis in the fishery, fishers' and Kelson's less than perfect understanding of fish ecology is not surprising. What is amazing was the recognition by fishing people and more prominent spokespersons like Kelson that cod were an exhaustible resource, that they were becoming scarcer in inshore waters, and that fishing people had no other resource that they could earn a living from. The cod fishery should be engaged in equitably so that all people had a chance to earn a living. The opposition to seines, jiggers and trawl lines consequently was a reaction against technologies that allowed those with more property than others to garner more of an increasingly scarce, poorly understood resource for themselves to the detriment of most outport people.

Open Access as State Policy

Over the next three years Kelson, as "Izaak Walton," kept up his opposition to the use of cod seines, although the Newfoundland government took no action to investigate reasons for the reported shortages of cod, or to regulate access to the fishery as had been demanded by Kelson and others.[76] Newfoundland fisheries policy since the establishment of representative government in 1832 had considered the problems of the fishery as being market ones: low prices and too many competitors who enjoyed unfair advantages in terms of bounties and tariff protection denied the Newfoundland industry by imperial British trade policies. The Newfoundland government was proactive in the adoption of more efficient gear types. Official support for new technology, especially trawl lines, stemmed from the manner in which Newfoundland's main competitor, France, had successfully employed bultows in a reinvigorated migratory fishery on the Grand Banks off Newfoundland after 1815. The Newfoundland government had hoped through the early 1830s and 1840s that the British government might provide like bounties to Newfoundland merchants so that they might outfit banking vessels with the more expensive bultows, rather than using handlines. When British authorities did not respond to colonial pleas for assistance, the local government established a three-

Bill (Oxford 1986), 21-22. For a fine summary of the inaccurate uses of the term "Luddites" see F.K. Donnelly, "Luddites Past and Present," *Labour/Le Travail*, 18 (Fall 1986), 217-21.

[76]*PL*, St. John's, 2, 13 November 1849; 19, 22 March, 7 May, 25 June 1850; 26 December 1851; 23, 30 April, 18 June, 17 September 1852.

year bounty of its own to encourage the use of bultows in 1845. Although the bounty failed because of its small size and limited nature, the attempt demonstrated the Newfoundland government's commitment to technological expansion rather than some form of stock conservation as demanded by popular protest about trawl lines and cod seines.[77]

The colonial government's encouragement of bultows in the bank fishery suggested that it wanted to follow a policy of shifting the areal focus of exploitation of cod stocks to an offshore fishery because it knew that something was amiss inshore. St. John's newspapers actually encouraged the Newfoundland government to institute a bounty because of the impact of developments in the inshore fishery on Newfoundland's fish markets. "The Shore fish are not only scarcer than formerly," wrote one paper, "but smaller, and the foreign markets, where we found a ready and remunerative price for our fish, are now annually stocked with French fish, which, being of a larger size than that which we export, injures our sales, and will command a better price, as soon as they shall take the same pains to cure it, as we take with ours. Hence the necessity, for some impetus to our fisheries is quite palpable."[78]

The Newfoundland government's attempt to encourage the use of bultows in the bank fishery reflected in part its knowledge of the successful catches by the trawl lines used in Conception Bay, even as the overall catch of the old inshore areas appeared to be "less than one fifth of the average quantity caught twenty five years ago."[79] The Bounty Act came into effect despite warnings from merchants such as Robert Pack of Carbonear, who testified before a select committee of the House of Assembly in 1845, that the use of bultows on the Grand Banks represented a new, more intensive exploitation of the largest cod which congregated there. These Pack believed to be the "mother fish" of all other cod. Thomas Job of St. John's agreed, stating that "I have heard it stated by some of the oldest fishermen that this mode of fishing is destructive of the species by taking the female fish before spawning." Other St. John's merchants supported Job. Nicholas Mudge, for example, condemned the bultows as being destructive of "mother fish," and hoped that the British imperial government would prevent the French use of the gear. But in light of British inattention and lack of care about the situation in Newfoundland, merchants such as he had to try to compete on as equal a footing as possible to get the biggest and best fish possible for market. The attitude of Mudge and his fellow merchants, like that of the Newfoundland government, appears to have been that,

[77]Sean Cadigan, "A 'Chilling Neglect': The British Empire and Colonial Policy on the Newfoundland Bank Fishery, 1815-1855," paper presented to the annual meeting of the Canadian Historical Association, Montreal, 1995.
[78]*The Morning Courier* (hereafter *MC*), St. John's, 18 July 1845.
[79]*MC*, 22 May 1847.

if the cod were going to be destroyed, it might as will be by Newfoundland interests as by competitors such as the French.[80]

The chair of the committee, Patrick Morris, acknowledged that there was a problem with the availability of cod in inshore waters. But his later writing on the subject implied that the Newfoundland government could only solve the problem by meeting the colony's competitors on equal terms in the bank fishery, and driving them out. Foreign fishing on the banks supposedly had created the shortage of cod inshore. Morris suggested that the deployment of so many bultows by the French in offshore waters prevented the migration of cod into inshore waters fished by Newfoundlanders. Morris's suggestion was more fanciful than likely. The sub-components of the northern cod stocks that most Newfoundlanders fished did not rely on recruitment from stocks in offshore waters for their reproduction.[81]

Blaming problems with the availability of fish in inshore waters on foreigners rather than on native Newfoundlanders catching too much suited Kelson's opponents. The *Public Ledger*, for example, argued that there was no point trying to restrict effort in the inshore fishery. "Now, we believe that all experience has shown," argued the paper's editor, that the French "with the use of their bultows, ... take the 'mother fish' on the Banks, and so cut up, and almost totally annihilate, our shore catch."[82] In a new take on the migratory habits of the cod, a supportive correspondent of the *Ledger*'s editor argued that, far from cod seines and jiggers posing a problem, they at least allowed Newfoundland planters to catch the fish inshore before it returned to the offshore banks where the Americans and French were bound to catch it anyway.[83] The newspaper agreed with the St. John's Chamber of Commerce that the low value of fish encouraged Newfoundland fishing people to catch too much, and that something must be done to drive the French out of the bank fishery so as to restrict the supply of fish and raise the price. But the *Ledger* would not admit that Newfoundlanders could be possibly over-fishing inshore. The editor accepted the Chamber's call for a complete ban on trading bait to the French, not because that would reduce the supply of fish in the market, but rather because "with the bait procured from us they proceed early to the banks, grind and scatter the herring and caplin, and keep the fish, by feeding them, from coming in on the coast."[84]

[80]Government of Newfoundland, *Journal of the General Assembly of Newfoundland*, 3, III, 1845, appendix, report and evidence of the Committee "appointed to enquire into the state of the Fisheries on the Banks and Shores of Newfoundland," 22 April 1845, 203-249.
[81]Patrick Morris, *A Short Review of the History, Government, Constitution, Fishery and Agriculture of Newfoundland in a Series of Letters Addressed to the Right Honourable Earl Grey, Her Majesty's Principal Secretary of State for the Colonies* (St. John's 1847), ix.
[82]*PL* St. John's, 20 February 1849.
[83]*PL*, 12 November 1850.
[84]*PL*, 19 March, 27 July 1852.

Foreign fishing became a popular explanation for the scarcity of cod in inshore waters during the 1850s. In a lecture well-hailed by the St. John's press in 1853, Matthew Warren again blamed the French bank fishery for spreading so many bultows offshore as to cause "the scarcity of fish of late years in Conception and Trinity Bays, and on the Southern coasts of this Island." Warren did not blame foreigners completely for problems in the fishery, and congratulated "Izaak Walton" for so long condemning "this injurious mode of fishing."[85] William Kelson responded in a public letter from Trinity by declaring that "bultows, codseines, and jiggers, ought for ever to be abolished from our waters, and the good old system of angling, or enticing with the baited hook and line, fully and completely re-established."[86]

Not every commentator perceived that Warren blamed Newfoundland inshore fishing people and foreigners for over-exploiting cod, but they avidly seized on his warning that the use of bultows on the banks — largely a foreign problem — was the real threat: " that this bultow system must be excessively injurious to the shore fisheries, not perhaps of Newfoundland only, but in all the seas washing the eastern parts of America, seems credible; the great Banks on which the destruction is carried on being the principal breeding place of the cod."[87] Although those interested in the Newfoundland industry such as Warren and Kelson were urging others in the fishery to take more seriously the problem of possible over-exploitation of cod stocks, their international competitors continued in the belief that the ocean's fish were an inexhaustible storehouse of food. An American investigator in 1853, for example, claimed that "there are fish enough in the American seas for all who speak the Saxon tongue - for all of the Saxon stock."[88]

Such rhetoric left Kelson nonplused. The old merchant agent had before him the spectacle of growing numbers of people in the Trinity area depending on relief because they could not catch enough fish by handlining to make a living. Kelson demanded without success a three year ban on the use of cod seines and jiggers. He was not naive enough to think that this alone would solve income problems in the fishery. Through 1854 Kelson also suggested that the Newfoundland government must carefully regulate the curing of fish. With government support, he thought, Newfoundland might be able to produce a high quality salt fish that could fetch a higher price supplying the tables of the British working class than it was now getting in old markets supplied by the French. Sadly, Kelson had to publish equally

[85]Matthew H. Warren, *Lecture on Newfoundland and its Fisheries Delivered ... Before the Mechanics' Institute at St. John's, 14th March, 1853* (St. John's 1853), 13-15, 18.
[86]*PL*, St. John's, 1 November 1853.
[87]*The Morning Post*, St. John's, 8 October 1853.
[88]Lorenzo Sabine, *Report on the Principal Fisheries of the American Seas: Prepared for the Treasury Department of the United States* (Washington 1853), 300.

throughout the whole period his regrets that government chose to do nothing to so assist the fishery.[89]

Conclusions

Kelson gave voice to a moral economy of fishing people that was conscious of both equity and ecology. He explicitly opposed the use of cod seines and jiggers because they threatened the ability of the great mass of outport people, those who relied on handlining, to make a living. Better-off planters who could afford the more expensive gear might be able to catch more and more of an increasingly scarce resource, leaving little behind for other fishing people, and forcing them into inescapable debt and possible starvation. Kelson's arguments anticipated much more recent concern about the manner in which capitalist technological innovations have contributed to the erosion of living standards for all those except a tiny bourgeoisie, the increase of social disorder globally, and the development of a hegemonic commitment to economic growth disassociated from any concern for ecological viability.[90]

The growing poverty Kelson associated with more capital-intensive fishing gear undercut the ability of fishing people to maintain for long their opposition to the spread of the technologies without state support. The Newfoundland government, backed by the colonial press, chose to interpret the problems of the Newfoundland fishery in terms of foreigners, and defined solutions in terms of the need for the introduction of more technology rather than conservation and a more equitable distribution of effort and earnings. Despite their own commitment to equilibrium with local resources, fishing people's struggle to survive in a cold-ocean coastal ecology meant that they could not escape integration into staple production for external markets. That coastal ecology could not support much import substitution in vital areas; fishing people continued to require access to merchant credit, especially for capital goods. Not all merchant agents shared Kelson's reluctance to restrict credit. The need to avoid credit restriction limited fishers' ability to resist adopting new gear, or going to work for those who did, as merchants increasingly tied the availability of credit to new equipment's greater productivity. This pattern of brief, intense opposition, followed by resignation to new fishing technology, continued through the end of the 19th century.[91]

[89]*PL*, St. John's, 27 December 1853; 16, 23 May, 20 June, 25 July, 15, 22 August, 27 October, 19 December 1954.

[90]David F. Noble, *Progress Without People: New Technology, Unemployment, and the Message of Resistance* (Toronto 1995), 3-19; John Ralston Saul, *The Unconscious Civilization* (Concord, ON 1995); Kirkpatrick Sale, *Rebels against the Future: The Luddites and their War on the Industrial revolution, Lessons for the Computer Age* (Reading, Mass. 1995).

[91]Sean T. Cadigan, "Failed Proposals for Fisheries Management and Conservation in Newfoundland, 1855-1880," in Dianne Newell and Rosemary Ommer, eds., *Fishing Places, Fishing People: Issues in Small-Scale Fisheries* (Toronto 1998, forthcoming), ch. 8.

The problem of population growth and technological development continued to plague the fishery, and Newfoundland society generally. By the end of the 19th century, cod traps and gill nets had joined cod seines, jiggers and trawl lines in the arsenal which fishing people used yearly to assail cod stocks. Despite this, and with a tripling of population since 1825, catches continued to stagnate, or even fall off. While "the most serious signs of exhaustion" continued to be in inshore waters, even the waters of the Grand Banks, recently resorted to anew by a Newfoundland banker fleet, seemed to have less fish. Commentators observed that people fished seemingly without regard for the ability of the cod to regenerate itself.[92] There are no hard and fast objective data obtained by scientific methods to prove that cod had become scarcer in the period, but the drop in salt-fish exports, the observations of the Slade and Kelson diaries, and numerous newspaper observations in the period all point to such a dearth in the first half of the 19th century. The reluctance of the Newfoundland state, the press, and merchants generally (with the notable exception of Kelson) to accept the alternate political economy implicit in the reaction against new gear and the worry over what was happening to cod inshore was part of a more general inability to see that Newfoundland's marine environment required development strategies that were different than those being used in the industrial capitalism that emerged in other parts of the Anglo-American world. From at least the 1840s fishing people and William Kelson had been warning, to little avail, that the association of technology and progress could not help people facing problems caused by the shortage of fish in the unique ecology of that coastal environment.

The moral economy was self-serving as far as the human population of Newfoundland's coastal eco-systems was concerned. This self interest is, however, entirely the point. Newfoundland settlers' complete dependence on the resources of those eco-systems provided them with practical, if imperfect, knowledge about their local ecology. The need to protect the future availability of marine resources further led many people to value a conservative approach to their exploitation of fish. While their economic activity appears to have inadvertently led to over-exploitation of cod, outport people reacted with a precautionary conservationism based on the premise that it would be wrong to engage in even more harmful activity that would jeopardize the future availability of resources which their families and communities required for survival. Fishing people's moral economic regulation of access to the cod fisheries experienced a downward spiral of popular protest against, and then resignation to, marine-resource degradation. Such resignation was not simply the inevitable outcome of European settlement, but rather of the capitalist organization of fish marketing and the development goals of the colonial state.[93]

[92]Harvey, *Newfoundland As It Is*, 144-46. See also J.G. Millais, *Newfoundland and its Untrodden Ways* (New York 1907), 151-52.

[93]For similar arguments see Christopher L. Dyer and James F. McGoodwin, "Introduction," and Eugene N. Anderson, "Fish as Gods and Kin," in Dyer and McGoodwin, eds., *Folk Management in the World's Fisheries: Lessons for Modern Fisheries Management* (Niwot, CO 1994), 1-9,139-53.

Capitalism has not completely triumphed as the commitment to popular regulation of marine resources in the east-coast fisheries continues. The challenge now will be whether or not such commitment can be incorporated into the Canadian government's regulation of the fisheries.[94] The long-term tragedy of the commons has been the manner in which the dynamic of capitalist expansion eroded older moral economic cultural traditions that, as much as capitalism itself, were part of rural Newfoundland's European heritage.

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[94]For more long-term perspectives on the capitalist invention of open access in the Atlantic Canadian cod fisheries see Anthony Davis and Leonard Kasdan, "Bankrupt Government Policies and Belligerent Fishermen Responses: Dependency and Conflict in the Southwest Nova Scotia Small Boat Fisheries," and Gene Barrett and Anthony Davis, "Floundering in Troubled Waters: the Political Economy of the Atlantic Fishery and the Task Force on Atlantic Fisheries," *Journal of Canadian Studies*, 19, 1 (Spring 1984), 102-24, 125-37. See also Gary Burrill and Ian McKay, "Introduction: 'The Tragedy of the Commons' or the Common Tragedies of Capital?" and Rick Williams, "The Poor Man's Machiavelli: Michael Kirby and the Atlantic Fisheries," in Burrill and McKay, eds., *People, Resources, and Power: Critical Perspectives on Underdevelopment and Primary Industries in the Atlantic Region* (Fredericton 1987), 61-73; E. Paul Durrenberger and Gísli Pálsson, "Ownership at Sea: Fishing Resources and Access to Sea Resources," *American Ethnologist*, 14, 3 (1987), 508-23; Rosemary Ommer, "One Hundred Years of Fishery Crises in Newfoundland," *Acadiensis*, 23, 2 (Spring 1994), 5-2.