Come all you good people, I’ll sing you a song,
About the poor people, how they get along;
They fish in the spring, finish up in the fall,
And when it’s all over they have nothin’ at all.
One evening in early March 1936 a very frustrated Sir John Hope Simpson sat down at his writing desk in the little office next to his bedroom in the Newfoundland Hotel and wrote a letter to his son, Ian. In it, he vented about his job as Commissioner of Natural Resources in the recently organized Commission of Government. Sworn in on 16 February 1934, it was comprised of six British-appointed Commissioners — three from the United Kingdom, and three from Newfoundland — with the Governor acting as chairman. The Commission of Government aimed to resolve Newfoundland’s immediate fiscal crisis and to bring the economy out of the Great Depression, following the relinquishment of self-rule in 1933. As Commissioner of Natural Resources, Hope Simpson — a seasoned British administrator, with over 20 years’ experience in the Indian Civil Service — was charged with governing and modernizing Newfoundland’s key resource industries: fishing, pulp and paper production, and mining. This was a daunting task that demanded a gruelling work schedule, a real intellectual and physical challenge, especially for someone on the verge of retirement. “I am tired frequently,” he wrote to his youngest daughter Betty on 16 June 1935, “... I almost said ‘generally,’ and that would be true at the end of the day.”

In his letter to Ian, Hope Simpson complained that Newfoundlander refused to acknowledge that living conditions in Newfoundland would
continue to be deplorable until circumstances improved in the country’s primary industry: the export of salted and dried cod to Southern Europe and Latin America. For most of the nineteenth century and early twentieth century, the country’s saltfish trade was organized around the credit system. Under this mode of production, fishing families spent their spring and summer catching and curing cod, with the necessities of fishing and living supplied by merchants on credit. Known locally as “making fish,” the labour process entailed removing fish from water, by hook, line, or trap, and removing water from fish, by sun, salt, wind, and weight. In the fall, merchants would “break the price,” determining the price for both supplies and saltfish, and settling their accounts with fishers. In a good year, fishers would repay the supplies in full, or even in excess, with the products of the season’s labour. In bad years, fishers would accrue debts, to be repaid, one hoped, by the next season. It is in this context that one ubiquitous outport saying takes on a profound resonance, resigned, but cautiously optimistic: “We must live in hopes, supposing we dies in despair.”

Hope Simpson viewed this mode of organizing the economy as inefficient and demoralizing for fishers and merchants alike. In his letter, he argued that the credit system was an inherent barrier to modern industrial progress for two reasons. First, it encouraged the “extreme individualism” of the merchant-exporter, which limited the government’s ability to regulate production and marketing for the common good. “The St. John’s merchants are a reactionary crowd,” he noted in a different letter. “They see no further than the ends of their noses, and have no interest outside their own profits.” The second reason was that it encouraged too many people to remain engaged in the fishery. He proved his assertion by a “simple arithmetical exercise.” Dividing a generous estimate of the profit received by producers from the annual export of saltfish (£240,000) by the number of people engaged in the fishery (34,000) yielded an annual profit of £7.10 per producer. Although this “impossible figure” was bolstered by the sale of other products and extra-economic subsistence practices, “the standard of the average fisherman’s life is deplorable.”
For Hope Simpson, raising the industry’s productivity — by reducing the number of fishers and increasing the amount of fish produced — was vital for overcoming poverty in the outports. Yet, he felt, it was consistently stifled by the conservatism of both the mercantile-cum-political elite and the toiling masses. “When I argue along these lines,” he groused, “people think I am mad.” Despite this local entrepreneurial inertia, Hope Simpson and the Commission of Government wanted to place the industry on a modern and scientific basis by bringing an entirely new mode of production into existence through legislation, one based on cash transactions, a division of labour between fishing and processing, standardized output, government inspection, and co-operative marketing. They were engaged in an effort to reorganize entirely the production and marketing of saltfish in Newfoundland.

But in his letter to Ian, Hope Simpson identified a curious solution to this problem of industrial organization: “. . . what is required is not knowledge of fishing, but knowledge of arithmetic and the application of a little common sense” (emphasis added). The industry had been “so pampered and so spoon-fed” over the past two decades that they could not recognize the absurdity in the present order of production and marketing. “Fishing,” he wrote, “is the local fetish.” The methods had been sanctioned by centuries of practice, “and so have proved that they are inevitable and right.” Hope Simpson, in contrast, argued that rational production and industrial efficiency required the abstract calculation of modern science, not the practical, embodied knowledges of fishing peoples. But when championing this line of thinking, he noted sardonically, “I am regarded as still less sane.”

Concealed by his administrative mindset as simply “a little common sense,” Hope Simpson’s private letter articulated two opposed forms of knowledge and expertise — “knowledge of fishing” and “knowledge of arithmetic” — engaged in a conflict over the future of the saltfishery. The former was qualitative, embodied and “sanctioned by 300 years of use.” It emerged through the sensuous, practical activities of fishing people and was passed down generationally. Located in the dory and on the stage
head, the knowledge of fishing was attuned to dynamic uncertainty of fish, weather, and sea. The latter was quantitative, abstract, and quintessentially modern. It emerged in the laboratory, classroom, and government office, and was located behind a desk. It was replicated through the practices of institutional authority and expertise, and it sought to domesticate so-called nature through the model, map, and mathematical equation.

As a veteran British civil servant, Hope Simpson erred on the side of arithmetic.

I.
As jarring and novel as Hope Simpson thought his division between fishing and arithmetic was in Commission-era Newfoundland, it had far deeper historical-geographical roots than he acknowledged or recognized. The quantitative perspective on fishing encapsulated in Hope Simpson’s pithy opposition had been fomenting in Western networks of science, industry, and government since at least the mid-nineteenth century. Despite nineteenth-century English biologist Thomas Huxley’s famous 1883 assertion that fish stocks “in relation to our present modes of fishing . . . are inexhaustible,” they were increasingly being recognized as quite the opposite, and for a very simple reason: they were being exhausted. They were being exhausted. The technical intensification and spatial extensification of fishing effort in Western large-scale fisheries had led to palpable marine fisheries crises in Great Britain, Norway, Canada, and the United States. These crises inspired new levels of state intervention into fishing, and galvanized a new scientific interest in understanding, predicting, and controlling the dynamics of fish populations and ocean processes through the collection of fishery statistics. When British fishery researcher John Cleghorn coined the term overfishing in 1854, a new knot was tied between fish populations and human activity, to be unravelled by emergent practices of quantitative science.

Read any history of fisheries science and you will notice a steady proliferation of increasingly complicated mathematical formulae. The incessant “mathematization” of fisheries science may in part reflect a
deeper and more granular understanding of the ocean and fish life, but it definitively exposes the ever-more deeply rooted conception of nature as mechanical and predictable and knowledge as quantitative and scientific. In this context, Hope Simpson’s opposition between practical and arithmetical knowledge takes on a new relevance. The very framework of his argument highlights a foundational shift in capitalist world history. It articulates an epochal transformation in the historical-geographical relationship among knowledge production, the environment, and capitalism in the global fishing industry.

*Fishing Measures* is the story of the troubled and messy emergence of arithmetical expertise in Newfoundland’s saltfish economy between the late 1880s and the late 1930s. The title plays on the double etymological roots of *measure*, as both the process of ascertaining the size or amount of something and as a plan or course of government action. This book documents a variety of innovations, schemes, and failed proposals that aimed to reform and modernize the country’s saltfish industry in fundamentally novel fashion: through the application of quantified forms of scientific measurement. From artificial propagation, to scientific analyses of ocean currents and fish migrations, to improved methods of fish and by-products processing, these scientific, technological, and organizational innovations were framed as a panacea to the troubles in the country’s saltfish trade.

Students of Newfoundland history will know that most of these schemes — perhaps more accurately described as half measures — did not result in placing the country’s saltfishery on a sound economic footing. But, as we will see, the politicians, merchants, scientists, reporters, and fishers advocating for and against them did succeed in an important and under-acknowledged way. They succeeded in introducing and legitimizing a new form and location of fisheries expertise and authority: from the knowledge of fishing to the knowledge of arithmetic, from the dory to the desk. This was an early and underappreciated moment in the development of modern fisheries management. *Fishing Measures* tells the story of that shift, and in doing so points to how that very opposition might be overcome.
But first we must set the theoretical grounds for the critique by delving into a subterranean strand of Marxist political economy. It begins, like Marx, with the commodity.

II.

Of all Marx’s contributions, and there are many, perhaps the most radical and profound concept is that of commodity fetishism. Introduced at the end of the long first chapter on the commodity in Volume 1 of Capital, Marx makes the stunning insight that, under capitalism, humans experience the world as comprised of disconnected things, as commodities, as objects. But this “thing-ness” masks the social relations behind their production and reproduction. Commodities are the products of the “expenditure of human brain, nerves, muscles, and sense organs” on the material environment, but they appear as “autonomous figures endowed with a life of their own, which enter into relations both with each other and with the human race.”¹² The commodity-form is thus fetishistic — mysterious, fantastical, ghostly — and this is an inherent feature of capitalism, “which attaches itself to the products of labour as soon as they are produced as commodities, and is therefore inseparable from the production of commodities.”¹³

A subterranean strand of Marxist political economy, known as “form analysis,” has built upon Marx’s reflections on commodity fetishism to develop a nuanced, subtle reading of the historical-geographical dynamics of capitalism. This school is rooted in Marx’s more open and exploratory analysis in the Grundrisse, his notebooks from the winter of 1857–58. Intended as his preparatory studies for Capital, the Grundrisse der Kritik der politischen Ökonmie (Outlines of the Critique of Political Economy) differs from Capital in key ways: it is more deductive and abstract; it uses less illustrative material; and it features numerous digressions that were excised from the final product.¹⁴ Roman Rosdolsky (1898–1967), a Ukrainian Marxist scholar and revolutionary, described the Grundrisse’s German publication in 1939 as a “veritable revelation,” which “admitted us, so to speak, into Marx’s economic laboratory, revealing all the ingenuities, all the winding paths of his methodology.”¹⁵
Form analysis builds on Marx’s thinking in the *Grundrisse* on fetishization, reification, and alienation as rooted in the commodity-form. Situated in the traditions of Critical Theory, Open Marxism, and Neue Marx-Lektüre, form analysis has flowered in Latin America with the work of Enrique Dussel and scholars working in the Centro para la Investigación como Crítica Práctica in Buenos Aires, under the directorship of Juan Iñigo Carrera. Martín Arboleda offers a master class in *Planetary Mine*, his study of the novel politics and territorialities of global resource extraction. For these thinkers, the fetishistic commodity structure is not simply a problem for economic theory; rather, it is “the central, structural problem of capitalist society in all its aspects.” Like the chapter on Being, Non-Being, and Becoming in *Science of Logic* for Hegel, Marx’s section on commodity fetishism in *Capital*, “contains within itself the whole of historical materialism.” It is, as Isaak Rubin argues, the “basis of Marx’s entire economic system.” This perspective is unconventional, even strange, but it has profound implications for thinking about Hope Simpson’s opposition between the knowledge of fishing and arithmetic.

For Marx, commodity fetishism is grounded in the contradictory unity between use-value and value at the core of the commodity. The commodity, at first blush, appears as “an extremely obvious, trivial thing.” It is an object, produced by human labour, that satisfies a human want, need, or desire. It has a use-value. Humans, through practical, sensuous activity, transform the raw materials they find in their environment through social knowledge into use-values. But, under capitalism, the commodity turns out to be a “very strange thing, abounding in metaphysical subtleties and theological niceties.” As an object produced for exchange, not use, it requires an equivalence that is detached from its material use-values. Commodity exchange on the market requires an exchange-value, some kind of socially acceptable quantity that can be compared between commodities and “that transcends sensuousness.” The common element cannot be a “geometrical, physical, chemical or other natural property.” Exchangeability itself, therefore, implies a more abstract concept: value. If one disregards all physical, sensuous properties
of commodities, then one remains: “they are merely congealed quantities of homogeneous human labour.”

The commodity, for Marx, embodies a **contradictory unity** between use-value and value. It is a material, concrete expression of the law of value. Marx explains this through the example of a table (or, for that matter, we can add, a desk). The form of wood, he argues, is obviously transformed when a table is made out of it, but it remains wood, an ordinary, sensuous thing. But as a concrete embodiment of value, as a commodity, it sheds its material form. “It not only stands with its feet on the ground,” Marx writes, “but, in relation to all other commodities, it stands on its head, and evolves out of its wooden brain grotesque ideas far more wonderful than if it were to begin dancing of its own free will.”

In the section on fetishism, Marx grounds the contradictory unity of use-value and value embodied in the commodity in practical, sensuous human activity: in labour. But commodity-producing labour under capitalism is peculiar. It, too, is contradictory and double-sided. Marx distinguishes between *concrete labour*, which produces use-values, and *abstract labour*, which produces value. These are not two different activities or sorts of labour, but two aspects of the same labour performed in commodity-determined capitalist society. Commodities as use-values are material, and the labour that produces them is sensuous and physiological. It is *concrete*. However, as values, commodities are produced by *abstract labour*. They are purely social: immaterial, but historically determinate and real. “Not an atom of matter enters into the object-ness of commodities as values,” he writes. “In this it is the direct opposite of the coarsely sensuous object-ness of commodities as physical objects.”

For Marx, the commodity is not a transhistorical object, but a historically specific objective *form*: “a structuring and structured form of social practice that constitutes a radically new form of social interdependence.” People relate to one another through commodities. They subsist on commodities, and their own labour-power is itself a commodity they sell for wages. But it is a fetishized or reified form. The social relations behind its production are masked; they “acquire a ‘phantom objectivity,’ an autonomy
that seems so strictly rational and all-embracing as to conceal every trace of its fundamental nature: the relation between people.”

Marx’s idiosyncratic, dialectical method is the fulcrum upon which form analysis turns, revealed in his notebooks and fulsomely, systematically expounded in *Capital.* Reminiscing on his life’s work in old age, in his *Marginal Notes on Adolph Wagner* (1880), Marx reflected on his method of critiquing of political economy:

> In the first place, I do not start out from concepts, hence I do not start from the “concept of value,” and do not have “to divide” these in any way. What I start out from is the simplest social form in which the labour-product is presented in contemporary society, and this is “the commodity.” I analyse this, and indeed, first in the form in which it appears.

The commodity-form, in this framework, is the simplest determination of value-form, the structured and structuring “core” of capitalist social relations. From this simple determination, Marx unfolds his analysis of the structuring forms of capitalist social relations: value, labour, money, capital, class, etc. The unfolding of these increasingly complex determinations strives towards the “reproduction of the concrete by way of thought,” or the meaningful theoretical reconstruction of capitalism as a way of organizing social relations.

Marx described his method as “rising from the abstract to the concrete.” His critique of political economy begins with the commodity, “the simplest social form of the product of labour in present day society” or the concrete embodiment of the abstract value-relation. The law of value is the “essence” behind the “appearance” of wealth as an immense accumulation of commodities under capitalist social relations. But Marx goes deeper, to explain the appearances themselves, to examine the “intermediate links, or mediations, which enable essence and appearance to be reintegrated in a unity once again.” Marx did not ontologically presuppose the essence.
behind the appearance, nor did he confer upon essence the determining role in human history. He merely grasped the bifurcated nature of social reality under capitalism, as an effect of the unfolding of the law of value in historically determinate forms or modes of existence. The very division of essence/appearance is itself an outcome of commodity fetishism. His dialectical method grasped the progression from the abstract to the concrete as “a movement from the parts to the whole and from the whole to the parts, from the appearance to the essence and from the essence to the appearance, from the totality to the contradiction and from the contradiction to the totality, from the object to the subject and from the subject to the object.”

Form analysis, like Marx’s later works, begins from a specific starting point: the commodity. Marx struggled to figure it out. He begins his August 1857 draft of Capital in the Grundrisse from a very different starting point: “The object before us, to begin with, material production. Individuals producing in society — hence socially determined individual production — is, of course, the point of departure.” Through the drafting process, he decided on a different point of departure. By 1859, when he published A Contribution to the Critique of Political Economy, which presaged Capital in key ways, he started with the commodity. His famous first line of Capital — “The wealth of societies in which the capitalist mode of production prevails appears as an ‘immense collection of commodities’; the individual commodity appears as its elementary form” — was hard fought. This starting point was not arbitrary, and it was not chosen a priori, before the analysis. It is not logico-deductive — that is, it does not begin with first principles from which his analysis is derived — but is curiously reflexive and immanent. The point of departure is validated retroactively by the argument as it unfolds. Form analysis centres the contradictory form of the commodity as the structuring core of capitalist social relations, a determinate mode of existence of capital that structures the higher-order concepts of Marx’s analysis. As historian Moishe Postone contends, “What appears as an ‘a priori construction’ is a mode of argument intended to be adequate to its own historical specificity.”
Marx recognized the potential misreadings and misrepresentations that this method might allow: “If this is done successfully, if the life of the subject matter is now reflected in the ideas, then it may appear as if we have before us an *a priori* construction.”38 This is central to Marx’s idiosyncratic method and mode of argumentation, and has been fundamentally misunderstood and lost over time, which helps explain the rigid, stultified, deterministic readings of Marx that have so muddied his legacy. Without an eye to his dialectical method and writing style, his open thinking can be coagulated, reduced to the strict teleologies of base-superstructure. As Marx famously said to his son-in-law Paul Lafargue, whose newly formed Parti Ouvrier left the Old Moor unimpressed: “*Ce qu’il y a de certain c’est que moi, je ne suis pas marxiste.*”39

The section on commodity fetishism encapsulates Marx’s idiosyncratic, dialectical method and his overarching analysis of capitalism. But Marx recognized the challenge in adopting it. “If I state,” he argues,

that coats or boots stand in a relation to linen because the latter is the universal incarnation of human labour, the absurdity of the statement is self-evident. Nevertheless, when the producers of coats and boots bring these commodities into a relation with linen, or with gold or silver (and this makes no difference here), as the universal equivalent, the relation between their own private labour and the collective labour of society appears to them in exactly this absurd [fetishized] form.40

Without reckoning with commodity fetishism, the world appears as disconnected and fragmented. Reality is thus comprised only of immediate experience; commodities exist as things. The table or the desk appears as objective form (“standing on its feet”), but this veils their reality as concrete modes of existence or reified forms of contradictory social relations under capitalism (“standing on its head”). As Czech philosopher Karel Kosik notes, fetishism allows people to “use money and carry out the most
complicated transactions with it without ever knowing, or having to know, what money is.”

Marx’s method begins by showing that those things we encounter in our everyday lives are actually reified products of social relations, concrete forms of the contradictory core of the commodity. This is often derided as *economic determinism*, as a process of abstraction that views the “superstructure” as determined by the “base.” But this critique, argues Hungarian Marxist György Lukács, is “itself the product of the habits of thought and feeling of mere immediacy where the immediately given form of the objects, the fact of their existing here and now and in this particular way appears to be primary, real and objective, whereas their ‘relations’ seem to be secondary and subjective.” Marx’s method starts with the assumption that social relations are real and objective, historically determinate (not simply determining), and the product of the contradiction inherent in practical, sensuous activity under capitalism. It’s systemic, structured, totalizing qualities are not presupposed ontologically, but a product of the determinate forms of social practice. They are historically specific. They are an outcome of the contradiction between use-value and value.

Marxist form analysis entails abandoning the view that objects are simply things, rigidly opposed to one another. “It is necessary,” writes Lukács, “to elevate their interrelatedness and the interaction between these ‘relations’ and the ‘objects’ to the same plane of reality.” This framework has risks. Perhaps it bends the stick back too far, but, as Neil Smith reminds us, “without bending the stick, it is impossible to tell whether it is bent back too far.”