Wheat Kings: The Explanatory Value of the Staples Thesis in the Economic History of Canada

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Introduction

In the history of the Canadian economy, an emphasis may be placed on *staples* as economic trendsetters – namely, they dictate the economic 'tempo'. At its very core, the Staples Thesis contends that the economic path of Canada is explainable through the sequential export of key staples (i.e., natural capital dependent economic goods; e.g., fur, cod, wheat, etc.). Indeed, there might be numerous factors such as trade and linkages that may surround the focal-point of the staple but the staple is still considered to be *the* economic cornerstone. Is the Canadian economic story sufficiently told by the Staples Thesis? Through an examination of (a) the quiddity of the Staples Thesis, (b) Harold Innis' analysis of the leading cod, fur, and timber sectors in Canada, (c) W.A. Mackintosh's insights into the reign of wheat, (d) the role of linkages in John McCallum's amendment to the thesis, and (e) the various critiques mounted against the thesis, this paper strives to elucidate whether the Staples Thesis is truly applicable to the economic history of Canada or whether it is to be considered as economic *mythos*.

The Staples Thesis and Theories of Economic Growth

The position of the Staples Thesis among the various theories of economic growth and development such as Walt Rostow's or Karl Marx's stage theories of development, W.A. Lewis' intersectoral theory, the Harrod-Domar model, or even A.O. Hirschman's unbalanced approach – which shares *some* similarities courtesy of the role of linkages – is the specification of a particular economic narrative. A salient counterfactual emerges: 'what would have been the story of the evolution of the Canadian economy in the *absence* of key staples?'. Without the key staples (e.g., cod, fur, timber etc.), it is possible to argue that the development of the economy "would have remained far less assured" (Bertram 179). While the Canadian story remains rife with issues of vast geographies, colonial interests, and participation in an international economy, the staple remains the crux of the story. The staples themselves are natural capital dependent goods (i.e., based on a specific endowment of natural resources) which sustain the growth of the economy via exports. Each particular staple undergoes its period of specialization prior to its replacement by a subsequent staple – hence, the staples theory relies on the *sequential* export of staples. Furthermore, the exports are determined by – or rather 'at the mercy of' – external demand. The staples do not sustain the country's economy simply via domestic demand. Economic growth was dependent on an external demand for the particular staple. Thus, the staples thesis is underpinned by the notions that the country is 'gifted' (or cursed) with a "large initial endowment" of natural capital, the ratio of labour/physical capital is small compared to the endowments of natural capital, and there are minimal "institutional barriers" with adequate "property rights" conducive to economic operation (Olewiler 934–35). Further, Canada – from a colony to a unified national economy – was a "small open economy" which indicates that it had little impact on the international economy but nonetheless partook in trade (Olewiler 935). In the 'spirit' of the factor proportions theory, Canada was endowed with lots of natural resources and minimal labour, and consequently specializes in the natural capital-intensive goods – initially. Given the factor ratios, this positions Canada to have a lower opportunity cost in natural-capital dependent goods thus exploiting comparative advantage. The comparative advantage also depended on transport costs and the price of the staple on the international market.

Through linkages, the staples allow for the development of a broader and more diversified economy through investment. There are three main type of linkages: (1) Forward linkages (i.e., output utilization) where the "output of the export industry" is utilized as an input for new intermediate economic goods (i.e., processing of the staple; e.g., sawmills producing value-added 'deals' from timber) – which spurs investment for this new activity; (2) Backward linkages (i.e., input provision derived demand) where the generation of investment lies in the “production of inputs” that support the primary export (e.g., transportation for the staple) and; (3) “Final demand linkage” which stimulates investment in the production of “consumer goods for factors” involved in the staples “export” – determined by the extent of the market (Watkins 145). Thus, the staples themselves are not simply a directly productive activity as they create the impetus for new activities that are related to the original export. These staples are intended to be at the vanguard as economic trendsetters. The “export base” that the staples create is precessional to the “diversification” of the economy through its “spread effects” (Watkins 144). Thus, the linkages of the leading sector provide the opportunity for development in other areas of the economy. It is the export of the abundant staples that allow for the importation of sparse capital. Thus, from the largely exogenous demand for the staple, a country can import “scarce factors” leading to further growth and linkages to stimulate other areas of the surrounding economy while also removing some of the “domestic slack” (Watkins 144). Aside from the static and dynamic gains from staples trade, the ‘vent’ from trade allows for movement on the inside of the production possibilities frontier to a more efficient point of output (i.e., towards the frontier itself). As there is little domestic market, the vent allows the surplus staple to be sold in exchange for the import of scarce capital.

The sequential export of specialized staples entailed a regional characteristic to economic development. Regions and their growth (e.g., cod in Newfoundland, fur in New France/Lower Canada etc.) contribute to the full ‘Canadian’ economic history. The Staples Thesis underscores “regional growth” within an “international economy” (Bertram 162). Thus, it is not a fully unified account of the development of Canada but rather how each region’s specialization contributes to the economic growth in its respective turn. The Staples Thesis also claims explanatory value for the emergence of a new economy in a developing global economy. The "frontier economy" starts its endeavor with an endowment of natural capital, other factor endowments, social construct, and minimal institutional barriers that are "selectively" carried over from the "old world" identified as conducive for the progress of the economy (Drache xix; Watkins 149–50). It is not a theory of economic growth that is 'universally' applicable but a particular narrative for a particular form of new economy.

The metronome of the staple brings together various attributes into the economic purview. Indeed, the tempo depends on the "mode of production" of the staple which is not to be narrowly construed as it also includes "institutions" and "demographic effects" (Dow and Dow 1344). The Staples Thesis then permits the staple to be the focal point from which economic analysis emerges. The centrality of the staple enabled 'isolated' elements to be analyzed through the lens of the staple. The analyses brought forward include both fundamental market forces as well as government intervention. The Staples Thesis is broadly "*market driven*" as it focuses on the largely exogenous demand for the staple which, naturally, influences its price, and it examines the prices of the "inputs" into the staple itself to explain the process of economic growth (Dow and Dow 1344, Emphasis original). In addition to the pursuit of profit of "private capital" which makes its allocation of capital based on the expected return, there is also the decision making of the state in the development of social overhead capital (Dow and Dow 1345). Thus, while the attributes of the staples itself are crucial, there is still a large web of interconnections that set up the eventual export of the staple. The presence of the staple alone does not assure its export.

The role of social overhead capital plays an important role both in terms of linkages and the eventual transition from one staple to another. Indeed, replacement of one staple with another necessitates changes in both "intermediate goods" and "social overhead capital" – the latter of which often from government intervention (Bertram 163). Reminiscent of Hirschman's theory of unbalanced growth, there can be development via both excess and shortage. In the former, there is investment in an excess of social overhead capital which the directly productive activity can utilize. Once the directly productive activity attains a level of balance with the social overhead capital, then further investment in social overhead capital is needed and the cycle continues. In the latter (shortage), the investment in the directly productive activity of the staple creates a pressure to acquire more social overhead capital. Once the social overhead capital reaches the level of equilibrium, then further investment in directly productive activity is sought which creates further pressure. Social overhead capital – by its nature – is not limited to the staple itself. It permits other industry and diversification to emerge. In contrast with stage theories of economic development *à la* Rostow, the *sequential* export of staples does not lend itself to the eventual formation of a take-off stage. The absence of "discontinuities" between staples in the process of growth and diversification lends itself against the traditional notion of stages (Bertram 160). It is even thought that the emphasis on the "welfare" generated from activities associated for staples would "delay" the attainment of the "take-off stage" (Watkins 150). Thus, the stage theory serves antithetically to the Staples Thesis in this instance.

In a final moment of general exposition, the emphasis on natural capital dependent goods is suggestive of the resource trap where the intensity of a particular staple export would lead to a real increase in both wages and prices leading to the unviability of other industries. Indeed, despite the wealth-generation of the staple, if the "economic rent from natural capital" is not transmuted into other industry, then the risk of "Dutch disease" emerges stifling other industry and reduces entrepreneurship – the driving force of innovation for Joseph Schumpeter (Olewiler 928). Thus, as to be subsequently explained, the staples over the course of the history of the Canadian economy do not always lead to pure economic prosperity but the economy is nonetheless tied to the staples. The emphasis on the eventual switch of the leading staple indicates that there cannot be persistent profitability. Indeed, there are shifts in demand originating in "changes in taste" and "income-elasticity of foreign demand" in addition to the introduction of substitutes and "diminishing returns on the supply side" (Watkins 149). Thus, changes in fashion for pelt-based hats will lead to a change in the role of the fur staple. The fur-based hats are a superior good. Hence, an unprosperous – or seemingly bleak future economy as households are forward looking – will lead to a reduction in demand for luxury goods. Furthermore, the persistent flooding of the market with a particular staple will not lead to self-sustaining growth. Lastly, the role of foreign and domestic capital in economic growth is brought into focus by the staple. The amount of domestic capital available is based off the domestic propensity to save and the amount of savings is decided from the "production function of the staple" (Watkins 147). Thus, savings are necessary to replace capital stocks where $S = sY$ (i.e., savings is equal to the savings ratio multiplied by the income). Furthermore, investment – which is channeled from savings (i.e., $S = I$) – is needed for economic growth and it is represented by changes in capital stocks (i.e., $I = K_T - K_{T-1}$). Thus, the staple itself centres notions of linkages, labour, land, social overhead capital etc., but it remains the key area of economic analysis and it determines the economic tempo. The centrality of the staple converges its "significance for policy", linkages, economic tempo, and even strives to overcome itself in its replacement by another staple (Watkins 144). The history of the Canadian economy finds its narrative in the staple.

The Cod Fisheries

Cod, fur, and timber are all quintessential staples in the history of Canadian economic growth. With some overlap, each of these respective staples have their place in the staple narrative. The arrival of John Cabot in 1497 marked the discovery of abundant fish in Newfoundland – particularly cod – but not the gold and silver specie that was desired. In spite of the lack of gold and silver, cod represented the "the most promising source of early trade" (Innis, *Staples, Markets, and Cultural Change* 4). Furthermore, the sheer richness of these fisheries allowed for a significant allocation of resources solely to the endeavor of fishing (Innis, *Staples, Markets, and Cultural Change* 4–5). In this sense, the leading sector of fishing in Newfoundland responded to a certain level of demand of both the motherland (i.e., England) and international markets (e.g., Spain). Indeed, the large Spanish influx of gold and silver from the Americas presented an opportunity for England. It provided an opportunity to enter the "Spanish market", and, in the late 1500s post-defeat of the Spanish Armada, England concentrates its efforts in the Newfoundland fisheries (Innis, *Staples, Markets, and Cultural Change* 25). The 'fortunate' discovery of gold and silver by the Spanish in Peru and Mexico drove up both Spanish prices and wages. Consequentially, this resulted in uncompetitive Spanish goods compared to the English. Thus, the gold that arrived rapidly departed similarly to pay for imported goods. Furthermore, the English interest in fish for domestic consumption is indicative of an insufficiency in English fishing without the rich fisheries of Newfoundland. In conjunction with foreign demand stemming for religious reasons, it is possible to view the 'exogenous' aspect of demand for the staple in the international market.

While there are a various number of factors that surround the fisheries (e.g., bank versus coastal fishing, migratory versus residentiary fishing), the richness of the fisheries provided an abundant catch which necessitated additional vessels. The fisheries needed labour beyond that which was necessary for the operation of the vessels themselves and, further "sack ships" were required to bring the fish to market (Innis, *Staples, Markets, and Cultural Change* 139). These ships reduced the cost of provisions – a main cost alongside the capital cost of the ship and wages paid to the crews – which enabled laborers to remain over the course of the harsh Newfoundland winters (Innis, *Staples, Markets, and Cultural Change* 139). The growth of the (permanent) population of Newfoundland originates out of the economics of the staple and the colonial strategy of the English to mitigate a French presence. This culminates with the Newfoundland Act of 1699 which acknowledged these permanent residents. The development of Newfoundland after the growth of fisheries post-1730 led to higher population (and hence slightly more diversification). Despite the eventual downfall of the fisheries as a reliable staple due to the introduction of American vessels after the American War of Independence and reintroduction of French vessels after the Napoleonic Wars, cod was one of the key sequential exports. Even in the late 1800s, the development of fishing technique and the application of greater capital (as in the growth of the fisheries in the 1730s) led to a diversification of the fishing base from cod to other fish (Innis, *Staples, Markets, and Cultural Change* 51). Indeed, Innis' treatise *The Cod Fisheries: A History of International Economy* elucidates the impact of cod in the topics of monopoly, trade, empire, war (e.g., cod and American revolution), commercialism, and capitalism. Between Newfoundland and the other maritime colonies, the economic history seems to *necessitate* the mention of this staple. Especially for Newfoundland, the fisheries have a profound impact over a significant period.

In contrast with the "interior" whose economic history is told through a progression of staples, the coast is marked by a single industry – fishing (Innis, *The Cod Fisheries* 484). Especially in the markable "isolation" of Newfoundland which could not pivot into industries of agriculture and timber, the cod staple was the key cornerstone (Innis, *The Cod Fisheries* 484). While the story of fisheries can be analyzed *ad nauseum,* it is not unreasonable to identify their profound centrality in the economic story. The emphasis on the *geographic* component of history permeates the discussion of these essential commodities. In the case of cod, the "geographical background" of "climate", access to salt, drying/curing techniques, and richness of the fisheries were the "stabilizing factor[s] of supply" while the "stabilizing factors of demand" were the desire for the protein macronutrient, absence of refrigeration, and specific demand from Roman Catholics (Innis, *The Cod Fisheries* 485–86). The early economic story in the absence of the cod staple is inconceivable.

Fur

The fur staple has a slightly volatile history in the Canadian economy. Its market is afflicted by significant changes in supply and demand. As an inland staple, fur – courtesy of its value to weight ratio – was particularly profitable even at a "large scale" (Innis, *Staples, Markets, and Cultural Change* 5). Indeed, the fur trade is a prime example of the quintessential relationship between the motherland and the hinterland. The final product of fur – hats – are a luxury good (i.e., an income elasticity of demand > 1). As such, fur trade was an indication of the importance of the "consumption of luxuries" (Innis, *Staples, Markets, and Cultural Change* 6). The demand for fur was dependent on (a) changes in taste and (b) the current and anticipated economic conditions. In the case of the French, fur trade after the initial visits by Jacques Cartier and Samuel de Champlain was undertaken by successive chartered companies such as the *Compagnie de la Nouvelle-France* who were given trading rights (re: monopoly) in exchange for assuming responsibility for the financial costs of supposed settlement. Over its period in Canadian economic history, the fur trade is not a smooth and linear area of growth. It was afflicted with limitations in "geographic background" and issues of oversupply (Innis, *Staples, Markets, and Cultural Change* 6–7). After the assumption of the French government in the role of trading in 1663, the expansion of the fur trade and the increasing effectiveness of the trading lent itself to an oversaturated market (i.e., a glut; Innis, *Staples, Markets, and Cultural Change* 7). The flooding of the European market with furs led to the temporary cessation of active fur trade. The eventual expansion of the fur trade meant that the margin of a commercially viable operation was reached. The commercial viability was determined by both (a) transports costs and (b) demand. As long as the enterprise was profitable, then the margin was pushed further and further inland. As the fur trade was initially a trade strictly in beaver furs, the dwindling supplies of beaver required a persistent expansion into the frontier. The elimination of the beaver – particularly on the "easterly part of North America" meant plunging deeper into the interior to acquire the new furs (Innis, *Staples, Markets, and Cultural Change* 8; Innis, *The Fur Trade in Canada* 6). In order to conduct such business deeper and deeper into the interior, the fur trade expands into a more elaborate enterprise.

To continue the fur trade and maintain a commercially viable margin, capital was required. The longer travels turned the fur traded into a task of "organizing the transport of supplies and furs" which required "increasing capital investment and expense" that consequentially modified the existing "financial organization" (Innis, *The Fur Trade in Canada* 6; Innis, *Staples, Markets, and Cultural Change* 10). The artificial (i.e., government backed) monopolistic market of fur meant a sole company handled the export of the low-bulk high-value furs while bringing the necessary heavy provisions/supplies. The expansion of the fur trade by a chartered company was not particularly conducive to settlement and economic development. Higher costs opened up "competition from New England" in the case of New France and the transatlantic shipping emphasized the shipment of provisions in favour of developing local "agriculture" and any other form of "economic development" (Innis, *Staples, Markets, and*

Cultural Change 11). Furthermore, a "land-intensive" staple such as fur discourages the presence of other people engaged with fur which limits "immigration and settlement" (Watkins 147). Thus, the opportunity cost of not dealing in furs was significant which subsequently hinders the possibility of development in New France. In the case of New France, the relation between the new world and the old world is one defined by balance of trade and the fur trade. The combination of mercantilism and the fur trade means that the staple supplied the base material for the luxurious goods (i.e., hats) but this meant that the colony of New France was not competitive with the homeland industry (Innis, *Staples, Markets, and Cultural Change* 11). New France consequently did not capitalize on the linkage of the furs and no industry of processing the furs into hats emerged in the colony. The history of the fur trade is marked by some volatility and eventually finds its demise but represented a notable majority percentage of exports during its time. Indeed, the beaver finds its role solidified as a national Canadian (economic) symbol although it is no longer in the "coat of arms" (Innis, *Staples, Markets, and Cultural Change* 12). In spite of its volatility and lack of substantive contribution to the development in the New World, fur nonetheless provided the economic basis.

Timber

The lack of profit available in fur trading cleared a cart-track for timber. Initially, fur offered the greatest profits that were scalable to meet the demands of the European market, but the expansion of the beaver trade increased the opportunity cost of timber (Innis, *Staples, Markets, and Cultural Change* 5). Furthermore, at the end of the fur staple's lifecycle, the emergence of a new export was required (Innis, *Staples, Markets, and Cultural Change* 5). In contrast with the high-value/low-bulk furs, the relatively high-bulk/low-value timber meant that transportation costs were the primary driver for determining the commercially viable margin.

Timber does offer greater linkages through sawmills, shipbuilding, and sets the basis for the emergence of the pulp industry. Furthermore, broadly, timber provides a directly productive activity for farms at the margins. With the downfall of fur and the uptick of timber after 1812, the demand for timber was in part determined by the military needs of the British who were dependent on quality wood for masts and the general construction of vessels. The replacement of "wooden sailing vessels" by steam-power required an adaptation in the timber industry from square timber to 'deals' and exports to the USA also spurred the development of "canals and railways" (Innis, *Staples, Markets, and Cultural Change* 14–15). Indeed, despite the British providing a slightly protected market courtesy of differential duties, the export of smaller wood products – due to the depletion of the larger trees – to the USA was a new opportunity for the staple export. Furthermore, the directly productive activity of the timber trade demonstrates its relationship with the need for social overhead capital. While New Brunswick's timber industry was prominent, there were exports originating from Québec and Ontario. Following the law of supply, the increase in the price of timber indicates that the quantity of timber provided will also increase, and the production of timber increased as sawmills found their dwelling on river fall lines in New Brunswick, the "Great Lakes", and "Georgian Bay" (Innis, *Staples, Markets, and Cultural Change* 15). Thus, the lumber staple can be identified as spurring development in transportation, capital formation, linkages, and prompting the later directly productive activities of the pulp industry.

Wheat

The wheat staple is a story of geography, economics, frontier settlement, capital, markets, and pre-eminence. Akin to Innis, the pioneer upon arrival into the prairies is faced with some basic "physical facts" (e.g., the climate, "soil", "distance to markets") of geography that shape the way the staple – wheat – is utilized (Mackintosh, *Economic Problems of the Prairie Provinces* 1). On the economic front, there is the foreign demand, transport costs, and cost associated with farming amongst many other factors that influence the staple export endeavor (Mackintosh, *Economic Problems of the Prairie Provinces* 2–3). Over the course of the progression of the wheat staple, the physical facts remain constant while the economic factors are those that vary. The natural endowment was the starting point for subsequent development. Wheat is not a trivial staple. In the period between 1926-1930, Canada ranked at the top of per capita production with a bushels per capita of 47.3 and many farms in the prairies had a farm income greater than $3000 – with some reaching more than $5000/farm (Mackintosh, *Economic Problems of the Prairie Provinces* 6–7, Fig. 2, Table I). As wheat represented the dominant crop, the rise and fall of Western Canada was *heavily* dependent on wheat and its surrounding economic factors. In order for economic growth and development to occur from the wheat staple, the exports of wheat must result in the influx of capital. Luckily, the quantity of capital inflows was significant at close to a fifth of GNP in 1912 but Canada eventually reversed course to becoming an exporter of capital with a capital-inflow as percent of GNP of -4% in 1926 (Urquhart 33–34; Table 2.11) The initially favorable land/labour ratio sets a basic standard of living which can only be preserved if there is an influx of capital which can be used on "railways[…] and in public improvements of all kind" and if there is a continued demand for the wheat staple (Mackintosh, *Economic Problems of the Prairie Provinces* 3–4). Given the scarcity of labour, farming capital provided a high rate of return and technological progress increased agricultural efficiency. The demand for wheat is a product of the international economy. The European powers in their industrializing period necessitated a greater need for "agricultural" imports (Mackintosh, *Economic Problems of the Prairie Provinces* 13). In the instance of the wheat staple – as with other staples, the demand is largely foreign as there is not a reasonable domestic market to sustain the staple and these staples must have the capacity to reach the market economically. The staple as policy shaping emphasized the role of transportation costs. The "pioneer communities" tended to be in favor of policies that allow for the export of a profitable staple (e.g., railways) as the wheat staple is high volume and it has a long distance to reach its market (Mackintosh, *Economic Problems of the Prairie Provinces* 4–5; Mackintosh, "Economic Factors in Canadian History" 13). Thus, the wheat staple and its capacity to focus various factors positions it as the economic driver. Indeed, it drives "prosperity and stimulus" as well as "depression and discouragement" (Mackintosh, *Economic Problems of the Prairie Provinces* 8). The prairies had a geographical 'given' and wheat situated the economic factors.

A Modified Staples Thesis – Wheat in Ontario and Québec

The Staples Thesis' capacity to explain regional growth and development within international markets leaves an explanatory residuum – namely, the issue of non-staples producing areas. By emphasizing the distribution of linkages, the development of non-staple regions of the economy and disparities between local economies can still be explained courtesy of the Staples Thesis (McCallum 115). While the Staples Thesis primarily explains 'regional' aspects of growth, the presence of linkages enables other regions to 'capture' linkages. The capacity to capture linkages depends on the circumstances of the regions. The region with more favorable circumstances or "initial endowments" of economic factors such as "population", presence of "financial capital" and "entrepreneurial class" will receive, *ceteris paribus*, an inflow of linkages (McCallum 116). The combination of the staple itself in conjunction with these 'initial endowments' lay the groundwork for the appropriation of linkages. These initial endowments are involved in a dynamic process that will eventually modify the direction and intensities of the stream of linkages. The dynamic modified Staples Thesis does not entail that the region with the staple will *strictly* outpace 'non'-staple regions. Assuming two regions (a) and (b), if (a) has a larger "initial endowment" relative to (b) but the "characteristics of the staple" dictate that (b) will receive the greater flow of linkages, then the "endowment" of (b) could grow at a relatively greater pace than (a); consequently, a greater flow of linkages may go to (b) leading to a greater endowment than (a) (McCallum 116). The comparison between the two regions is consistent with the principle of comparative advantage as the initial endowments will influence the opportunity cost of producing various goods and the eventual development of the economy of a region is subject to change (i.e., a variation in endowment) which will eventually modify the respective opportunity costs. For the wheat staple – as it pertains to Québec and Ontario, the combination of the attributes of the wheat staple with the initial distribution of endowments dictated the flow of linkages. Ontario's position with an "entrepreneurial class […] independent of Montréal" amongst other factors was able to preserve linkages and, particularly Québec's cheap labour (courtesy of a surplus of labour) meant a movement of labour towards Ontario (McCallum 117). Following a market where "demand conditions" are "determined by distribution of linkages" and "supply conditions" are "initial endowments", Ontario – assuming a level of imperfect factor mobility – will see an increase in "per capital income" and "population" as it has a situation of greater demand (McCallum 117). Thus, the modification of the Staples Thesis purports to explain economic growth or development of different regions and the disparities between regional economies.

Criticisms of the Staples Thesis in its Canadian Application

Issues pertaining to the Staples Thesis can be found within the economic analyses of the staples themselves. The promise of growth and development from the staples and its linkages are not always substantial as the fur and cod staples as "leading sectors" did not stimulate "much permanent settlement" (Watkins 153). Indeed, staples could be positioned as *hindrances* over the course of Canada's economic history or even contributing to "failure of development" (Buckley 440). While these issues are certainly pertinent in order for the Staples Thesis to give a comprehensive account. There is an issue of methodology that proceeds the specifics. The Staples Thesis is construed as a clever story that explains the economic progression. By considering it as a "myth" (i.e., "not susceptible to disproof"), the Staples Thesis falls to the wayside as it cannot be "proved right or wrong" as it lacks any form of "empirical verifiability" which is not in line with the "cliometric" method (Aitken 98–99, 101). Instead, it served as a new lens through which to view problems as it situated and centered other analyses and "hypotheses" (Aitken 99). Without entering the domain of philosophy of economics, the capacity of the staples to center various factors appears to operate in its favour. The Staples Thesis with its emphasis on these key natural capital dependent goods views the economic story through the lens of these factors. By "specifying [these] determinants" in regards to the "economic opportunity", it is argued that the analysis should proceed by examining the events instead through "measurable dimensions" (Buckley 445). In the issue of empirics versus myth, the methodological critique is that measurement should be precessional to the selection of relevant factors. The selection of the determinants beforehand (i.e., the staple) is supposedly a form of perspectival captivity. Thus, in addition to the capacity of the Staples Thesis to provide a comprehensive account, its methodology is also problematized.

During the wheat staple's most prosperous phase and Canada's impressive improvement in real GNP per capita (1900-1910), there is concern over the importance of the share that wheat contributed to the rise in income per capita. Through the development of a few models, Gordon and Chambers (1966) suggest that during this period of prosperity, the contribution of the wheat staple to the real increase in per capital income of "23 per cent" is only "8.4 per cent" or "5.20 per cent" which represents only an additional "1.94 per cent" or "1.20 per cent" in income per capita between 1901-1911 (323, 328). Thus, if the Staples Thesis is to purport that those staples are to account for the development of the Canadian economy, then the lack of the wheat staple as a 'driver' – during arguably the most prosperous period – would operate against the Staples Thesis. Between the full-attribution and minimal-attribution of growth to the wheat staple, there lies a colloquial middle ground. Green and Sparks (1999) suggest that the impact of the wheat staple exceeds the "1.96%" figure which lends credence to the "traditional view of Mackintosh" (Green and Sparks 68). Therefore, even in the empirical analyses, the role of the wheat staple is not ostensibly clear.

In light of the possible overemphasis of the staple during its prime period, there is also the possibility that the Staples Thesis might fail to explain the *full* history of the Canadian economy. The economy of Canada prior to 1820 was inextricably tied to the staples, but post-1820, there was the emergence of new "sources of economic growth" (Buckley 439, 444). The emergence of timber – particularly in New Brunswick – and wheat – in Upper Canada and the Prairies – after the downfall of the fur trade appears to be in opposition with this time-frame. Even after 1820, there is still – seemingly – the link between the Canadian economy and staples. With the revision of the 'break-down' date of 1914, another one-hundred years is attributable to the role of staples – especially given the wheat boom and impressive period of growth (Watkins

142). Perhaps, it is possible to speculate the emergence of oil/petroleum/minerals as the new sources of Canadian economic growth in conjunction with a diversification of the economy. Between 1914-1945, a period of two wars and a Great Depression, the economic conditions were extremely varied. The success of wheat between 1922-1928 is exemplified by a production and world share of production of wheat of 400 million bushels and 11.8% respectively in 1922 to 567 million bushels and an 11.9% share in 1929 – with even greater significance with the inclusion of wheat flour (Mackintosh, *Economic Problems of the Prairie Provinces* 14–15; Table IV and Table V). With the subsequent depression occurring with a fall in wheat prices, the period up to WWII can still be explained courtesy of the wheat staple. With a little leniency for the wartime economy of WWII, and the discovery of ample oil in 1947, the Staple Thesis is not afflicted by too much discontinuity. While remaining a form of regional growth given the location of oil and natural gas in the provinces of Alberta and Newfoundland & Labrador, these 'new' staples provide the opportunity for new capital-intensive operations. In the case of Newfoundland, there is movement from the "labour intensive" fisheries to the "off shore oil sector" which is "capital intensive" (Olewiler 948). Post-WWII, the role of staples in the form of oil/natural gas and minerals could provide the next sequential export in the staples narrative. Given the emergence of a national economy, the role of oil and minerals as regional in nature provides opportunity for further staples analysis of the Canadian economy. The "aggregation at the national level" hides regional variation in growth (e.g., growth in the productivity of labour) but employing a modified staples-approach can help explain these variations (Olewiler 946). The capacity to capture benefits from linkages (e.g., pipelines, refineries etc.) all fall within the framework of the Staples Thesis.

The relationship between technology and the staple is additionally a matter of precession. The emphasis on a staples-based history may then be replaced by a "technological history" as "resources are a function of technology" and consequently, technology is more determinative (Watkins 141; Buckley 440, 443). It could be argued that technology and techniques have significant implication for the *development* of the staple (e.g., mechanization in wheat). As the thesis operates within the international economy, a critique of the Staples Thesis and its key points is the absence of information on the conditions of the success and failure of respective staples in developing the economy through diversification, import of capital, per capita increase in income etc. It is suspected that the "dependence" on foreign capital hinders the development of a "robust" entrepreneurial class and the international demand for natural capital dependent goods will result in the depletion of natural capital – in the long-run (e.g., the decimation of the cod fisheries; Olewiler 935). If it is not the depletion of the resources, then the growth of the extensive margin will result in the diminishing marginal productivity of the land. Furthermore, there is the possibility of the above-mentioned Dutch disease or "staples trap" where the lack of "domestic development" and crowding out of other industry can prove as an extreme hindrance to growth (Watkins 150–51). If the wealth generated from the export of the staple is insufficiently transformed, then the export-led mindset will lead to a stifling of growth although the reasons for this (non-)transformation may not appear abundantly clear in the Staples Thesis. As the Staples Thesis could be a means of centering various analyses, the avoidance of the staples trap via transformation requires an efficient set of institutions. Institutions are not always efficient as they may persist as "inimical to sustained growth" through a hindrance of the transformation process (Watkins 151). Indeed, the persistency of institutions does not imply their efficiency. Thus, the critiques can be broadly summarized under three principal categories:

(1) methodological, (2) comprehensiveness of the account, and (3) the explication of the success and failure of particular staples.

Interpreting the Staples Thesis

The explanatory power of the Staple Thesis appears to hold for the history of the Canadian economy. The sequential staples of fish, fur, timber, wheat, and oil are all central to the Canadian narrative. The capacity to tell the story of the Canadian economy *without* staples would be a challenging task. The "diversity of institutions", role of government and "private enterprise", and role of European markets all stem from role of the cod fisheries and the subsequent staples (Innis, *Staples, Markets, and Cultural Change* 21). Originally, as a small colony with a rich endowment of natural resources, economic growth and failure of growth (i.e., the shortcomings of robust settlement or significant linkages) were tied to the staple. The prosperous nature of the staple was shared with various degrees. Despite Innis' analysis indicating the "instability" of "fur and fish", Mackintosh holds the importance of the staple in freeing the colony from "pioneer existence" which allows the colony to enter the global stage (Olewiler 935; Mackintosh, "Economic Factors in Canadian History" 5). Indeed, given the small open economy of Canada with its modest market, the staple and its export served as the economic motor, but this scale of the economy leads to possible failures. The scale of the Canadian economy in the context of the international economy is relatively inconsequential. By inconsequential, it is meant that Canada has "no market power" as they are "price-takers" (Olewiler 935; Chambers and Gordon 318). The staple could be presented in a favourable light in its emancipatory function, or in a negative light as the small economy put Canada in a position of risk. Nonetheless, success and failure were tied to the staples.

Conclusion

In conclusion, through an examination into (a) the nature of the Staples Thesis, (b) Innis' analyses of the cod fisheries, the fur trade, and the role of timber, (c) Mackintosh's emphasis on the role of wheat, (d) McCallum's modified Staple Thesis and, (e) the critiques of the Staples Thesis, the explanatory role of the Staples Thesis in the economic history of Canada has been interrogated. The Staples Thesis is consistent with the Canadian economic story. It retains a significant explanatory power both in the concrete productivity of the staples and it serves to focus a variety of different economic factors. The role of cod, fur, timber, wheat, and, eventually, oil, is fundamentally tied to the economic story from the establishment of New France and Newfoundland to a full national economy. The prosperity and hardship in the Canadian story depended on the respective success and failure of the staple. In view of this, the role of "luck" is undoubtedly "a neglected factor in Canadian economic history" (Watkins 157). The staples provided no certainty of success but were explanatorily relevant over the course of the history of the Canadian economy.

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