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Aller au sommaire du numéro

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Résumé de l'article

L'industrie céréalière des Prairies a été largement analysée au niveau de son impact économique, mais elle mérite également d'être examinée à fond comme une institution sociale qui a été influencée par des facteurs sociaux et politiques. Parmi ceux-ci, se situe en tête le conflit entre les producteurs des Prairies et les marchands de céréales qui a conduit à une segmentation de l'industrie en propriétés privées et en coopératives de production. De plus, l'intervention politique accrue a également conduit à la croissance d'un large segment contrôlé publiquement.

Tous les segments de l'industrie sont en train d'être affectés à long terme par des tendances à la consolidation, la bureaucratisation et l'application de l'informatique de pointe. Ces activités sont orientées davantage vers la stabilité plutôt que vers une croissance rapide de l'économie de Winnipeg. Elles indiquent aussi l'émergence d'une division du travail où les organisations urbaines remplissent une variété d'activités de service au profit de la production géographiquement dispersée de l'hinterland.

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Résumé/Abstract

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The prairie grain industry has been extensively analyzed in terms of its economic impact but it also deserves scrutiny as a social institution which has been influenced by social and political factors. Chief among them is the conflict between prairie producers and private grain merchants which has led to the industry being divided into privately-owned and producer cooperative segments. In addition, extensive political intervention has led to the growth of a substantial publicly controlled segment.

All segments of the industry are being affected by long term trends toward consolidation, bureaucratization and the application of advanced information technology. These activities point more to stability rather than rapid growth for Winnipeg's economy. They also indicate an emerging division of labour in which urban based organizations perform a variety of service activities for a geographically dispersed production hinterland.

Expectations of expanded activity in the production, transport and handling of prairie grain, juxtiposed against the recent decline in grain prices and yield, have focused attention on the relationship between agriculture and economic development in Western Canada. The possibility of significant changes in the agricultural sector holds particular significance for Winnipeg which, despite its loss of preeminence in such fields as finance, insurance and wholesale trade remains the nerve centre of the Canadian grain industry.[1] The question is: how has the grain industry evolved and what forces have shaped its evolution? As well, what is the impact of the changing grain industry on Winnipeg as an urban centre?

For most commentators on this problem, impact has usually meant economic impact. This is certainly true for the "post-staples" approach argued by Philips and Hum.[2] In their view, Winnipeg's urban economy has been too heavily dependent on the development of prairie agriculture. This was especially true during the phase of "cyclonic" growth of both Winnipeg and the wheat economy in the first quarter of this century. It has been sadly true over the past half-century as the Western wheat staple has carried Winnipeg's economy through a long tunnel of stagnation and relative decline from which it has yet to emerge.

Urban History Review/Revue d'histoire urbaine, Vol. XVI, No. 1 [June/juin 1987]

This approach is essentially derivative of the original "staples" perspective associated with the work of economic historian Harold Innis. Regional communities are seen as entirely dependent on the rise and decline of key staple exports. Exogenous forces control the urban landscape. The danger in this approach is its economic and geographical determinism. Social factors, on the other hand, which have placed a leading role in western regional development are de-emphasized.[3]

An alternative perspective termed "resource growth and evolution" is somewhat less pessimistic and deterministic. This is the approach taken in the 1984 Economic Council of Canada study, *Western Transition*.[4] In this formulation, resource exports give a region an initial economic thrust but prosperity can be sustained over time by a strategy of diversification out of the early resource dependence. Economic development includes not only the growth of manufacturing industries, but, more important, the emergence of new forms of advanced service and information industries, especially those which involve computer applications. These activities characteristically occur in cities.

This perspective also has its limitations.[5] Clearly Winnipeg's grain industry, similar to the petroleum industry in Calgary, supports the development of local expertise in advanced services, notably data processing, communications, finance, research and accounting. In this way, a major resource industry can provide the economic foundation for a rich diversity of service activities in a regional metropolis. However, this is far from an automatic process. Social and political factors intervene to shape the process of urban diversification, supporting it or thwarting it in the process. These social and political factors and their implications for the industry and region involved must be identified.

Social Organization and Segmentation

It is the contention of this paper that the development of the grain industry cannot be explained by economic factors alone. Perhaps to an unequal degree among Canadian industries, the grain trade has been subject to the interplay of social and political processes.[6] Social movements, political interventions and public policies have all played a major role in its evolution. The industry is not a seamless web. Instead, it is segmented and its segmentation reflects the residues of both past and ongoing political and social conflicts. Social segments represent important differences in political purpose and economic organization among grain industry participants. These institutional differences have not disappeared over time but have crystallized and evolved. As Suzanne Berger suggests: "Even when the reasons which once prompted recourse to a given institution disappear, the institution or practise itself remains and structures subsequent development."[7]

Segmentation in the grain industry is rooted in the conflict between agricultural producers and commodity merchants. Agriculture remains distinct from the dominant form of industrial organization in which large, centralized, multilocational and multinational concerns control both the production and distribution of basic resource or manufactured products. Agricultural production, instead, is carried out by a relatively large number of small, competitive, geographically dispersed independent commodity producers. Distribution, on the other hand, is generally controlled by a small number of large mercantile organizations which trade agricultural commodities worldwide while, at the same time, supplying producer goods and financial services to the agricultural sector.[8]

Agriculture harkens back to an earlier era of industrial organization in which mercantile control preceeded industrial control and production was "put out" among a large number of small scale producers. The lines of conflict are likely to run between producers and mercantile interests rather than between management and labour, as is the case in the industrial mode of organization. This conflict has a geographical dimension as well. Cities such as Winnipeg are the headquarters of the commercial, transportation and financial concerns which service the rural hinterland. Geographical divisions reinforce economic conflicts between producers and distributors.

Mercantile interests seek to consolidate their hold on the distribution system while extending their control over production through vertical integration.[9] This means increased control over the supply of producer input — seeds, fertilizers and chemicals — and the credit to pay for them. These goals are justified in the name of economic efficiency: the production of the highest possible output of tradeable commodities at the lowest possible cost. The preference is for larger production units, larger and more specialized farm machinery, and a reliance on greater inputs of producer goods, such as chemicals. Agriculture, in this view, must move toward an industrial form of organization based on technological efficiency and market forces. Production must conform to the requirements of the distribution system.

Farmers, on the other hand, have sought to defend their position as independent commodity producers by wresting control of the means of distribution from mercantile interests. Cooperatives have been a potent weapon. While cooperative farming *per se* is of little significance in western Canadian agriculture, producers' cooperatives have played a major role in enabling farmers to exert market power and realize economies of scale in the distribution of their commodities and the supply of producer goods and services. Paradoxically, farmers have created large, quasi-monopolistic organizations in order to preserve their status as small, independent producers.[10] The continued existence of producers' cooperatives has blocked the efforts of mercantile interests to expand their control over production at the same time as the world market realities have placed sharp limits on the extent of producers control over distribution.

Politics have also played a major role in grain industry segmentation. At various times provincial and federal governments have intervened in the industry, sometimes to favour agricultural producers — as in the 1930s — or more recently to favour grain trade interests. The government role in the grain industry has been much more than a mere buffer between mercantile and producers interests. The federal government, in particular, has pursued its own agenda. According to Suzanne Berger, "The state does not simply constrain, reward and protect those groups it discovers before it. Instead, politics molds and channels social and economic processes."[11] Since the National Policy of the late nineteenth century, the federal government has looked at the Canadian grain industry as a key source of export earnings in world markets as well as an engine of economic development for the whole nation.[12] Despite changing fortunes in western agriculture as well as the development of new resource industries, the perception of the grain industry as a national resource remains intact.

Finally, an overarching trend toward bureaucratic consolidation is impacting all segments of the grain industry, partially blurring the distinctions among private companies, cooperatives and government agencies. The industry is increasingly dominated by large-scale agribusinesses and agri-bureaucracies characterized by heavy reliance on centrally coordinated information and communication systems. These organizations have growing influence over many key aspects of the grain industry including the physical production of grain as well as its storage, distribution and marketing. Grain companies have evolved from their beginnings as commodity merchants or producer cooperatives to become diversified and vertically integrated agricultural service suppliers. At the same time, government agencies have become specialized suppliers of advanced services to the industry in the area of marketing, research and information processing, supplanting traditional commodity exchanges, merchants and brokers.

Developments in the grain industry may be representative of wider social and economic trends in which the organization of key economic processes comes to be dominated by broadly based suppliers of services rather than goods.[13] Urban work is more likely to be transactional and intangible, rather than the direct production of goods.[14] As manufacturing declines as an urban activity, city economies are increasingly dependent on large service producers able to draw on and coordinate networks of geographically dispersed suppliers of goods. Many goods producers will continue to find a niche as suppliers of particular commodities to the service companies but they will be smaller than the latter as well as economically more vulnerable to risk. The transition to a service based economy means that service producers will form the dominant core of the economy while goods producers will make up the periphery.[15]

Jane Jacobs has envisioned such an eventuality in the city economy of the future: "Manufacturing work will, I think, no longer be the chief activity around which other economic activities are organized, as it is today and as the work of merchants once was. Instead, services will become the predominant organizational work, the instigators of other economic activities, including manufacturing."[16]

A good example of this tendency is the rise of the Japanese trading houses or *sogo shoshi* with their vertical integration, their expertise in banking, finance and marketing, and their ability to draw upon products made by thousands of manufacturers, many of them very small and dependent.[17] Much of the resilience of the postwar Japanese economy has been attributed to the synergy between the giant conglomerates and their efficient networks of subcontractors.

A similar pattern of dualism can be found on the prairies where the activities of 150,000 geographically dispersed grain producers are channeled through eight major urban-based grain companies and a handful of government grain agencies.[18] The risks involved in agriculture have discouraged large grain companies from undertaking the actual production of grain. Instead, the flexibility of independent commodity production is combined with the efficiencies of large-scale handling and marketing organizations. The latter organizations, however, dominate the industry while the farmers remain dependent and vulnerable to risk. Just as agriculture is becoming "industrialized" so other industries may move toward the combination of small-scale production and large-scale marketing and coordination characteristic of agriculture.

Thus, the evolution of Winnipeg's grain industry reflects not only purely economic forces, such as world market trends, but also the social and political dynamics of its internal segmentation and organization. This process will now be discussed in more detail, beginning with the most historic segment.

The Mercantile Segment

The mercantile segment of Winnipeg's grain industry derives its origins in Winnipeg's rise to prominence as a grain trading centre in the late nineteenth and early twentieth centuries.[19] At its core are a small number of family-owned firms founded by merchant families during this early period and still largely controlled by them. They established the pattern, now the industry norm, of combining country and terminal storage and handling operations with merchandising, all supervised through the urban head office.[20] Firms within this segment are unique for their tradition of family

TABLE 1

Manitoba's Ten Leading Companies Ranked by Sales Volume, 1984

Company	Annual Sales 000's	Total Employment and Manitoba Employment	Rank by No. of Manitoba Employees
1. Hudson's Bay Co.	$4,370,528	44,000 3,500	3
2. Great West Life Assurance Co.	$2,331,793	2,970 1,552	5
* 3. James Richardson and Sons Limited	$1,479,800	3,326 724	12
* 4. United Grain Growers Limited	$1,158,158	1,859 710	13
* 5. Cargill Grain Co.	$1,111,960	1,150 350	24
6. Westfair Foods Ltd.	$ 888,704	4,177 2,147	4
7. InterCity Gas Corp.	$ 657,000	3,000 473	18
* 8. Parrish and Heimbecker Limited	$ 650,000	1,500 150	51
9. The Investors Group	$ 623,800	1,787 648	15
*10. Manitoba Pool Elevators	$ 588,905	1,176 784	10

*Involved in Grain Industry

SOURCE: *Manitoba Business* (August 1984): 7.

ownership,[21] their large size relative to other Manitoba firms and their prominence within the Manitoba economy. All of the four largest privately owned grain handling companies maintain head offices in Winnipeg. Grain companies accounted for five of the ten largest Manitoba-based corporations in 1984, three being privately owned while two were producer cooperatives.

The largest in terms of grain handling capacity of all the privately owned firms is James Richardson and Sons and its subsidiary, Pioneer Grain. Pioneer Grain with 238 elevators having a capacity of just under one million tonnes scattered throughout the prairies is the fourth largest grain company in Canada overall, handling about 9% of the prairie crop.[22] James Richardson and Sons is the third largest Manitoba-based company in terms of revenues and has over 700 employees in the province. It represents an unbroken tradition of family control since it was founded by James Richardson in Kingston, Ontario in 1857 and relocated to Winnipeg later in that century.

The number two private grain handler is Cargill of Canada, subsidiary of the Minneapolis-based agribusiness giant. It is the sixth largest grain handler in Canada overall with 146 elevators across the prairies with a capacity of approximately 500,000 tonnes, handling about 7% of the

TABLE 2

Grain Industry Consolidation 1971-1984

Licenced Country Elevators by Companies

Private Companies	**1971**	**1984**
Cargill Limited	—	146
Ellison Milling and Elevator Co. Ltd.	18	—
Federal Grain Limited	1,092	—
InterOcean Grain Co. Ltd.	25	—
National Grain Limited	308	—
Parrish and Heimbecker Ltd.	62	47
N.M. Paterson and Sons Ltd.	94	77
Pioneer Grain Co. Ltd.	435	235
Scottish Cooperative Wholesale Society Limited	9	—
Other Licensed Companies	14	24
Subtotal	2,057	532
Per cent of Total	42%	27%
Producer Cooperatives		
Alberta Wheat Pool	504	331
Manitoba Pool Elevators	314	161
Saskatchewan Wheat Pool	1,181	598
United Grain Growers	793	345
Subtotal	2,791	1435
Per cent of Total	58%	73%
TOTAL	4,849	1967

SOURCE: *Grain Elevators in Canada*, Winnipeg: Canadian Grain Commission, 1971-2 and 1984-5.

prairie crop.[23] In terms of revenues, Cargill is the fifth largest Manitoba-based corporation and has 350 employees in the province. Although Cargill only acquired its Canadian grain handling capacity in 1974, it continues a tradition of participation in the Canadian grain industry on the part of Minneapolis merchant families stemming from 1893. In that year, the Peavey interests of Minneapolis founded the Northern Elevator Company. Over the years, the Peavey and associated Heffelfinger interests acquired six other grain companies which, along with Northern Elevator, were merged into National Grain by 1940.[24] When Cargill bought National Grain in 1974, it meant that the Cargill and McMillan families of Minneapolis, owners of Cargill, bought out the Peavey and Heffelfinger families, originally of the same city. In effect, one line of American ownership replaced another.

The same pattern of family ownership can be found in N.M. Patterson and Sons and Parrish and Heimbecker, the seventh and eighth largest grain handling firms, respectively. N.M. Patterson was founded by Norman Patterson in 1908 and is today still controlled by the Patterson family. The firm maintains 77 elevators having a capacity of almost 240,000 tonnes and has extensive interests in Great Lakes shipping. Parrish and Heimbecker was founded in 1909 by William Parrish and Norman Heimbecker. Both families have continued to retain control over the 47 elevators with capacity of 230,000 tonnes which the firm posesses.[25] The latter firm is also the eighth largest Manitoba-based corporation in terms of revenues.

The large size of some of the private grain companies should not obscure the fact that they have undergone a process of consolidation and loss of market share to the farmer-owned grain companies. The four major private companies of today are what remains of literally dozens of grain companies in business during the interwar and early postwar periods. The consolidation process reached its height in 1972 when the Searle family who controlled Federal Grain, then the largest private grain company — which had itself absorbed Searle Grain and Alberta-Pacific Grain only five years before — sold its over one thousand elevators to the three provincial pools and withdrew from the grain business.[26] The results were dramatic. Before the sale the farmer-owned grain companies handled 58% of the prairie crop.[27] After the sale they handled 80% leaving the private companies with only 20%, a proportion which has held ever since. The private trade, once dominant, is now the subordinate segment of Canada's grain handling system.

For the second institutional pillar of the mercantile segment, the Winnipeg Commodity Exchange, the picture is similar. Once the premiere wheat futures market in the world, the Grain Exchange, as it used to be known, played an important role in extending Winnipeg's financial hinterland across the prairies and indeed throughout the world — certainly to Europe where the bulk of Winnipeg's grain was sold. It also played a leading role in facilitating the development of the financial services industry in Winnipeg with important spinoffs for banking, finance, insurance, brokerage and consulting services.[28] This central focus went into abrupt decline beginning in 1943 when trading in wheat futures was suspended and the Canadian Wheat Board was given sole marketing authority for wheat. In 1949 the monopoly powers of the Wheat Board were extended over sales of barley and oats.

Today, the Commodity Exchange remains distinctly subordinate to the Wheat Board as a marketer of Canadian grain. For the crop years 1976/7 to 1980/1, an average of 61% of Canada's production of the five major grains — wheat, oats, barley, flax and canola — was sold through the Wheat Board as compared to 14% through the private trade.[29] This is 14% figure is significantly below the 24% of the prairie crop that is disposed of in on-farm use or farm to farm sales.[30] The Wheat Board also makes less use of the

FIGURE 1. The Commodity Exchange Tower, Portage and Main, Winnipeg. Photographer Peter Tittenberger.

Commodity Exchange as part of its marketing program. In the 1950s and 60s, a high proportion of Wheat Board sales were made through the mediation of the private trade. Today, 70-80% of Wheat Board sales are direct — without mediation.[31] These are largely government to government sales to clients in communist and third world nations. The growing significance of grain sales handled through government agencies or through multinational grain companies like Cargill or Continental with their direct links to overseas buyers has come at the expense of commodity exchanges in general.[32]

The current strength of the Commodity Exchange is as a cash and futures market for domestic feed grains and oilseeds, especially canola. In 1974 the federal government ended the Wheat Board's monopoly of wheat, oats and barley to be used as feed grains for domestic consumption. The Exchange responded by developing new contracts for feed wheat, oats and barley.[33] Approximately 67% of the oats and 24% of the barley but only 3% of the wheat entering Canada's primary elevator system is now sold on the open market.[34]

The success of the Exchange has, however, been much more closely tied to the growth in demand for oilseeds which are sold entirely on the open maket. Between 1974-1984, canola production almost tripled, from 1.1 to 3.1 million tonnes, becoming Canada's third largest grain export, while flaxseed production practically doubled from 350 to 694 thousand tonnes.[35] The Exchange moved to develop its strength in oilseeds by opening a futures market in canola (formerly rapeseed) in 1963. This move paid off in 1973 when a prairie-wide plebiscite of producers voted 54% against making the Wheat Board exclusive seller of the canola crop.[36] In this case the Exchange and the private trade had the backing of the then federal minister in charge of the Wheat Board, Otto Lang, who was sympathetic to their interests.[37]

Trading in canola is central to the continued health of the Exchange, accounting for approximately 50% of its trading volume.[38] Growth in demand for oilseeds and domestic feed grains enabled the Exchange to increase its trading contracts from just under one million in 1973/4 to 2.2 million in 1979/80, levelling off to just over 2 million in 1983/4. Similarly, annual trading volume increased from $5.8 billion in 1977/78 to $10.75 billion in 1983/84.[39] Membership in the Exchange has held at a fairly steady 330 members, a figure that has changed little since 1970, although it is about 100 fewer than that which prevailed throughout the period 1940-60.[40] It has also become slightly more localized: 73% of the membership originated from Winnipeg in 1983, up from 68% in 1970 and 71% in 1960. The Exchange did, however, raise its profile in Winnipeg by moving into posh new quarters in the Commodity Exchange Tower and computerizing its floor trading system.

Despite some successes, the Winnipeg Commodity Exchange reproduces in microscosm a more general failing of the Winnipeg financial services industry: a difficulty in diversifying from its grain base. The loss of a futures market in Canada's overwhelmingly dominant grain export, wheat, in 1943, weakened the financial power and expertise of the Exchange and thus precluded the development of the speculative liquidity necessary to successfully branch out into new commodities and financial instruments.[41] The Exchange functions mainly as a cash grain and hedging mechanism for a few commodities — notably feed grains and oilseeds. In this limited capacity it lacks the speculative magnetism of a major money market centre.

Certainly there have been efforts to diversify. The first efforts involved other agricultural commodities — beef futures in 1967, potatoes in 1968 and corn in 1974. These markets never developed and were eventually closed. More significant were the Exchange's ventures into gold and financial futures. In 1972 it opened the world's first gold futures market and in 1979 the world's first exchange-traded options market for gold. In 1981 a new division, The Canadian Financial Futures Market was created with contracts for silver and for long-term and short-term interest rates.[42]

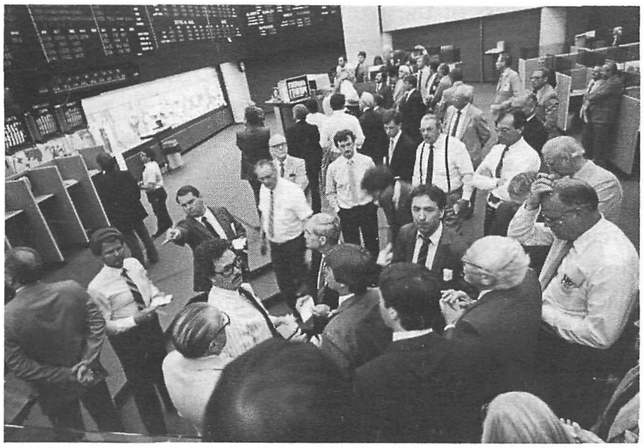

FIGURE 2. "The Pit," Trading Floor, Winnipeg Commodity Exchange. Photographer Peter Tittenberger.

To date these efforts to diversify have not proven terribly successful. The markets for gold and other financial futures have been dominated by other major exchanges in North America and Europe. Despite the change of name to the Winnipeg Commodity Exchange, the grain business now accounts for approximately 99% of the Exchange's trading volume.[43]

The close ties which still prevail between the Exchange and the grain industry can be illustrated by the current listing of the Exchange's Board of Governors.[44] Out of 20 governors, 13 represent the grain industry, 2 represent financial interests, another 2 represent the Exchange, and the final 3 are non-member governors representing the public interest. Thus far, the Commodity Exchange has failed to serve as a catalyst enabling Winnipeg's financial sector to move significantly beyond its grain base.

The limits on the expansion of the mercantile segment of Winnipeg's grain industry, and the loss of substantial market share to producer cooperatives and government marketing boards, are primarily rooted in social and political events. From the very beginnings of prairie agriculture the major grain companies, along with the banks and the railways, found themselves in conflict with the producers whose commodities were being marketed. The outcome of this conflict has tended to be increased political regulation of the industry, a strengthened producer cooperative movement, and frequently both at the same time.

The earliest disputes involved such issues as grading and weighing grain, competition at local elevator delivery points and the right to load railcars and ship grain. The Canadian government passed the Manitoba Grain Act (1900) and the Canada Grain Act (1912), establishing stringent conditions under which grain could be graded and shipped.[45] More decisive intervention came during World War I. In order to meet heavy import demand from Great Britain, the wheat futures market was closed and the Board of Grain Supervisors was authorized to sell the 1917 and 1918 crops. The next year a Canadian Wheat Board was appointed temporarily to sell the 1919 crop. It established the principles, in use today, of pooling sales and giving producers an initial payment plus final payment based on net returns.[46]

Despite considerable support for a Wheat Board among farmers, grain trade interests persuaded the federal government not to re-establish it for the following year and in 1920 trading in wheat futures resumed. However, the subsequent collapse of grain prices was blamed by producers on the private trade and the opposition to the open marketing of grain intensified. Failing to get government marketing, producers attempted to form cooperatives to sell grain directly to overseas customers, circumventing both the private merchants and the Grain Exchange. These efforts met with tremendous initial success. By 1930 the Manitoba, Saskatchewan and Alberta Pools controlled about 50% of both producer's marketings and country elevator capacity.[47]

The subsequent collapse of the Central Selling Agency, the Pools' main marketing arm, did not rebound to the advantage of the private trade. In 1935 the federal government intervened once again and re-established the Canadian Wheat Board on a voluntary basis. It was made compulsory in 1943.[48] The efforts of the mercantile segment of Winnipeg's grain industry to control Canada's grain trade had failed.

The reasons for this failure are well known and need only be briefly summarized. The deep conflicts between producers and grain merchants remained unresolved and the industry was unable to convince farmers that it was acting in their best interests. Grain farmers showed a remarkable ability to organize either cooperatively or politically when their interests were at stake. Finally, the private trade lost influence with the federal government which became convinced that the national interest of a strong wheat economy could best be served by government rather than private marketing of grain.[49]

The decline of the mercantile segment of Winnipeg's grain industry did not lead to its demise. Indeed, the private trade probably reached its nadir in 1972 with the sale of Federal Grain to the pools. Since then, prospects for the private trade have brightened somewhat. Changes in federal policy have been an important factor. Under the Trudeau government and, especially, with the ascendancy of Otto Lang as minister responsible for the Wheat Board during the 1970s, federal policy was more supportive of open marketing in grain than it had been in years. Two new policy advisory bodies were established — the Canada Grains Council and the Grains Group — and two commissions of inquiry — Hall and Gilson — were authorized. The direction was generally favourable to a greater degree of open marketing.

FIGURE 3. Traders on the phone, Winnipeg Commodity Exchange. Photographer Peter Tittenberger.

In 1974 the Wheat Board's monopoly of domestic feed grains was ended. This policy was reinforced in 1980 with the creation of the Grain Transportation Authority, a new federal agency which took over some of the Wheat Board's authority for allocating railcars for grain shipments and was designed to ensure fair allocations for both Board and non-Board grains.[50] Finally, in 1983 the Western Grain Transportation Act abolished the statutory Crows Nest Pass freight rates and held out the possibility — though so far not the reality — of a much more competitive and market driven system for shipping grain.

These changes, combined with growing demand for oilseeds and non-regulated special crops (corn production on the prairies increased from 5 to 317 million tonnes between 1974-84[51]) gave the private trade an opening. One consequence was the entry of Cargill into the Canadian grain handling business through the purchase of National Grain in 1974. This move which, according to one observer "really shook up the industry,"[52] brought in a formidable competitor for both the pools and the existing private companies. Cargill's entry focused attention on controversial trends in the industry — towards large high throughput grain elevators and tradeable non-Board grains — illustrated by Cargill's construction of two large inland terminals at Elm Creek, Manitoba and Rosetown, Saskatchewan. Cargill's entry could also be seen as an expression of confidence in the money making possibilities of the private trade in Canada. As well, since it is the largest family-owned grain trading firm in the world, its presence also represented a legitimation of that traditional form of family ownership so characteristic of Winnipeg's private firms.

Finally, the ideological climate of the 1970s and early 1980s also proved favourable to the mercantile segment. Public antagonism to the "merchants of grain" was tempered by a growing disenchantment with government regulation of industry in general and a desire to give the market a freer hand. The greater public acceptance of private enterprise was reinforced in the grain industry by changes in the social and demographic basis of prairie agriculture which were eroding the old antagonism between farmers and grain merchants. Prairie farms are getting fewer and larger. Between 1961-81, the number of prairie farmers decreased from 223,674 to 146,016 while average farm size increased from 570 to 775 acres.[53] These trends toward concentration are expected to continue and in fact are an underestimate for they take no account of the polarization among prairie farmers with about one third of them coming to own most of the land and produce and most of the grain.[54]

Today's large and successful farm operator is a businessman, knowledgeable about land, machinery and chemicals as well as crops and livestock. Meanwhile the political battles of the interwar years have receded into the distant past as a new generation of farmers with a business-minded outlook takes charge. In this changed situation the private trade is no longer the enemy but a potential business partner which, just like the farmer, talks the language of profit and loss. Future competition between private and cooperative grain companies, and between open and orderly marketing of grain, will be decided less by the automatic loyalties of the past and more by farmers' perceptions of where their best interests lie. Yet it is ironic that the private grain companies which in their heydey dominated the prairie wheat economy from their Winnipeg head offices now must find a niche as an alternative to the larger and more powerful cooperatives.

The Cooperative Segment

If we could imagine an industry where, in defiance of trends found almost everywhere else, small producers successfully banded together to control the marketing of their product and prevent their industry from being dominated by outside mercantile interests, we would have, not a fairy tale, but the history of prairie grain cooperatives. Reality is, however, not that simple and, as in the case of the private trade, ironies abound. The evolution of prairie grain cooperatives certainly supports Susan Berger's contention that industrial segments may long outgrow their original purposes.

Wheat pooling on the prairies originated as an alternative to the private line elevator companies and the open market system; yet today the cooperatives are by far the largest line elevator companies and are important participants in futures markets. Cooperation was an egalitarian movement designed to ensure solidarity among producers; yet while cooperatives have prospered as businesses, the number of producers has dwindled and prairie agriculture is increasingly the preserve of big farmers. Cooperatives now compete with private companies for the patronage of the same large scale producers. Finally, cooperation was originally a rural-based movement which successfully challenged the power of the Winnipeg grain trade; yet two of the largest Winnipeg-based grain companies are cooperatives. Technological changes are furthering the centralization of the cooperatives as well as the private grain companies, reducing the influence of rural members.

Despite these transformations, the cooperative segment is the one segment of the grain industry least tied to Winnipeg. While the private trade and the political institutions associated with grain remain firmly anchored to Winnipeg, the development of the cooperatives has to a great extent been at the expense of Winnipeg as a western financial centre.[55] The two largest grain companies, the Saskatchewan Wheat Pool with a capacity to handle 2.2 million tonnes of grain and the Alberta Wheat Pool with a capacity of 1.6 million tonnes, have their head offices in Regina and Calgary respectively. This means that Winnipeg loses the head office jobs associated with the two giant grain firms as well as the spinoff work in such advanced services as research, law, accounting and data processing. The sale of Federal Grain to the pools in 1972 which boosted the cooperative's share of grain elevators from 58% to 79% may have marked a low point for Winnipeg as a grain centre, as well as for the private trade.

This outcome was not evident at the inception of the cooperative movement. The first major cooperative, the Grain Growers Grain Company — later the United Grain Growers (U.G.G.) — was founded in 1906 to participate in rather than to circumvent the open market system. It would be a farmer-owned company which would buy grain and trade on the exchange, much like a private line elevator company.[56] This gave United Grain Growers an orientation unique in the industry, an orientation it has retained to the present.[57] For instance, it has generally been more supportive of open marketing and of the de-regulation of prairie grain transportation than the pools. At the same time, as a farmer-owned company, U.G.G. remains distinct from the private trade which, in the early days, tried to bar it from obtaining a seat on the Grain Exchange.

Today, U.G.G. is the fourth largest Manitoba-based firm in terms of revenues and has 1,859 employees, over 700 of them in Manitoba.[58] Similar to the large private grain companies like Cargill and Pioneer, it is organized prairie-wide. Its 339 elevator operating units are located in all three prairie provinces and handle about 17% of the grain crop, making it Canada's third largest grain company.[59] As well, U.G.G. exemplifies trends toward consolidation, centralization and vertical integration so characteristic of the industry. Its 339 elevator operating units are down from 500 in 1974. About 100 of its existing elevators are low volume units, vulnerable to further rationalization.[60]

Consolidation coupled with extensive computerization is promoting the centralization of company operations, augmenting the significance of the head office at the expense of regional management.[61] Over 200 of the company's elevator units representing 70% of grain volume are equipped with minicomputers linked by telephone to the mainframe at the Winnipeg head office. Managers at head office can now obtain information on grain shipments or farm supply sales in the country almost instantly, reducing the need for regional supervision. Area managers in Regina, Saskatoon, Calgary and Edmonton can also obtain information on operations in their jurisdiction but only from the head office mainframe and usually after it has been reviewed by top management. As a result, some area management functions may in future be consolidated in Winnipeg.

U.G.G. has also become more vertically integrated, branching out into more areas of agribusiness. It is the largest manufacturer and marketer of feed on the prairies.[62] It maintains a huge farm supply business, extensive terminal elevator operations in Thunder Bay and the west coast, and is an important oilseed crusher. It is also a publisher of note. Through its Public Press subsidiary U.G.G. puts out *Country Guide*, Canada's largest circulating farm magazine with almost a quarter of a million subscribers, plus other farm-related publications.[63] Thus a farm cooperative is a major supporter of Winnipeg's flagging printing and publishing industry.

In short, U.G.G. in many ways is approaching the model of a modern multidivisional and multilocational company. Although it claims ownership by 80,000 prairie farmers it is prepared to recognize that some are more equal than others. This is made explicit in the 1983 Annual Report which comments favourably on the economic position of the 30% of prairie growers who produce more than 80% of total production.

> The statistics tell you there are about 150,000 grain growers in the prairies. But of that group, only 30% gross more than $50,000 per year. These farm managers are the heart of Canada's grains and oilseeds industry.[64]

Whatever the moral implications, inequality on the farm is now a business reality, even for cooperatives.

Similar trends are underway at Manitoba Pool Elevators, Manitoba's tenth largest company in terms of revenues and the fifth largest grain handler on the prairies. Manitoba Pool, along with similar pools in Saskatchewan and Alberta, was founded in 1926, a high point of prairie radicalism, as an alternative marketing mechanism to the private trade. The collapse of the pools' Central Selling Agency and subsequent establishment of a Wheat Board obviated the marketing function but left Manitoba Pool intact as a handler and storer of Manitoba grain. In this latter role it has grown and prospered but remains the smallest of the three prairie pools and, in the information processing field at least, the least advanced.

Centralization and consolidation have affected the pools as well as the private elevator companies. They have been transformed by internal structural alignments and external acquisitions. In Manitoba Pool, power has shifted from the rural membership — the 18,000 owner-members in the country — to the Board of Directors and the Winnipeg head office. These shifts were evident in a 1969 reorganization in which 211 semi-autonomous cooperative elevator associations were amalgamated into 180 pool locals and 38 cooperative associations.[65] Rural depopulation and elevator closures have reduced the current numbers to 147 active locals and only 9 cooperative associations. At the same time, elevator consolidation has been significant. Between 1974-84 the number of elevator units was almost cut in half from 312 to 160 units.[66]

Elevator closings frequently brought the Winnipeg head office into conflict with affected rural members. This conflict was evident in the Brandon area where many members objected to the projected closing of smaller elevators to make way for a modern high throughput facility. The head office, however, which employs about 250 out of 780 Manitoba employees was strengthened during this period under the authority of a general manager and secretary responsible to the board of directors.[67] There was a new emphasis on professional management as more university graduates with degrees in accounting, data processing or management, but without much background in agriculture, were hired.

Although Manitoba Pool was a comparative latecomer in grain industry computerization, it is rapidly catching up. About 80 of its 160 elevators representing more than half its grain volume are now on line to the head office. This number is projected to rise rapidly. Computerization promotes centralization by viewing the company as a multilocational entity in which grain and farm supply inventory can be instantly tracked at a multitude of storage facilities. It also promotes professionalization at head office. While clerical staff has been cut back due to office automation, data processing staff has continued to increase and now numbers more than 30.[68]

These changes are related to increasing vertical integration. Similar to other grain companies, Manitoba Pool is being transformed from primarily a grain handler, who buys from the farmer, into a diversified agribusiness concern, who sells the farmer large quantities of chemicals and fertilizer. There is now a synergy between farm supply sales and grain purchases which no grain company can ignore.

As fertilizer and pesticide use has taken off on the prairies, expenditures on these two products have risen dramatically. In 1961 expenditures on fertilizer and pesticides in the prairie provinces were a relatively insignificant $27.7 million, about 4% of total crop expenses. In 1981 they had ratcheted up to $954.4 million, almost 20% of total crop expenses, and exceeded only by interest payments on debt and expenditures on machinery and fuel.[69] Grain companies, whose revenues were previously limited to storage and handling charges — a market worth only about $270.7 million in 1981[70] — have moved aggressively into the fast growing field of farm supplies.

Manitoba Pool is no exception. In 1971 farm supply sales were $2.6 million.[71] By 1981 they had jumped to $47.3 million, an eighteen fold increase, making fertilizer and pesticide sales the fastest growing segment of the company's business. In 1984 they were $61.2 million, representing about 10% of total annual sales. In addition, because farm supplies are usually sold on credit, grain companies are becoming creditors as well as vendors to the farm community.[72] Manitoba Pool had accounts receivable for farm supplies of $1.4 million in 1971, rising to $16.5 million in 1981 and $23.1 million in 1984, now amounting to more than half of all current accounts receivable.

The growing involvement of grain companies in selling farm supplies and issuing credit, coupled with the trend toward centralized administration, has, to an extent, strengthened Winnipeg's position as a wholesaler and supplier of financial service to the farm sector. The centrally run pools have become direct competitors of smaller locally run farm supply cooperatives, taking advantage of economies of scale and their dual role as both buyer and seller to the farmer. Their dominant position in the country — as suppliers of farm inputs as well as purchasers of outputs — has emphasized the contradiction between the economic success of farmer-owned grain companies and their traditional social role as spokesman for the rural community. As a high official of the Canadian Wheat Board who is generally sympathetic to the cooperatives has remarked, "The pools wear two hats, one economic, the other social."[73]

This contradiction is highlighted by the pools heavy involvement in open market trading through their jointly owned Winnipeg-based trading subsidiary, Xcan Grains. Although ideologically opposed to open marketing and the Winnipeg Commodity Exchange, the pools, through Xcan, are now major players in both. In 1984 Xcan Grains sold 2 million tonnes of non-Board grains and oilseeds world wide with special emphasis on the Japense oilseed market.[74] Vertical integration for the pools has meant forward linkages into international grain marketing as well as backward linkages into farm supplies.

The farmer-owned cooperatives, once radical rural organizations, have come increasingly to model themselves after more conventional multidivisional and multilocational organizations. They remain ideologically distinct from the private trade and controlled by farmers, but the farmer-owner, who counts, is more likely to be a large and business-minded producer. As a former assistant general manager of Manitoba Pool has stated: "We are an entrepreneurial organization; the farmer is an entrepreneur."[75] Furthermore, effective control is increasingly exercised through the urban head office. This is reinforced by the fact that the cooperatives, like the private elevator companies, are enmeshed in a tight network of Winnipeg-based trading and government regulatory institutions. These latter will now be examined.

The Political Segment

In addition to family-owned elevator companies and farmer-owned cooperatives, a distinguishing feature of Winnipeg's grain industry is the striking presence of political institutions and government regulation, a presence that may be unmatched outside the communist world. Government involvement developed from the early significance of grain for Canada's National Policy as an export earner and focus for national development. This established the federal government as the institution with dominant responsibility for regulating the handling and marketing of Canadian grain, a responsibility it has retained to the present. The contrast with western resources developed later in this century where provincial involvement has been paramount, especially in the energy sector, is extremely significant.

Federal involvement has also come about as a response to persistent conflicts between producers and merchants and later between cooperatives and private elevator companies. Hostility between the groups and the inability of either side to market Canadian grain in an effective and orderly fashion resulted in the creation of political institutions — notably the Canadian Wheat Board — to do precisely that. However, the presence of federal agencies has complicated longstanding conflicts in the industry and has led in recent years to the creation of additional federal agencies to counterbalance the impact of existing federal agencies or policies. Thus the political segment runs counter to the consolidation trend so evident in the mercantile and cooperative segments: it is the only segment of the grain industry to have undergone proliferation of agencies and functions over the last two decades.

Whatever the original reasons for government involvement in the grain industry, the government agencies have evolved over time to perform the major head office functions for the entire Canadian grain industry. The government agencies have become specialized in supplying such higher level services as marketing, accounting, research and information processing for an industry which, until recently, was relatively slow in adopting a number of important modern managerial practises. Despite the assertion by such astute observers as Alfred Chandler[76] and Dan Morgan[77] that grain firms have been among the first businesses to take advantage of state of the art information systems, it was the government grain agencies rather than the companies which have been the leaders in establishing standardized and computerized information flows for the industry in Canada.[78]

The push for standardization is evident in the oldest of the federal grain agencies, the Canadian Grain Commission, which has evolved into the quality control and research arm of the industry. Originally the Board of Grain Commissioners, the agency was established by the Canada Grain Act of 1912 to meet the complaints of producers about elevator company abuses and to set some uniform grading and weighing standards for Canadian grain. In 1952, the agency moved its head office from Thunder Bay to Winnipeg, closer to the producing region and to grain company head offices. The 1971 Canada Grain Act gave the agency its current name.[79]

The agency has grown into a large organization with more than 900 employees, almost 300 more than the Canadian Wheat Board, and an annual budget of close to $40 million.[80] Approximately 250 of these employees are based in Winnipeg. The vast majority of its total employees — about 700 — are involved in inspecting, grading and weighing grain. The major function of the agency is thus to centralize quality control activities which otherwise would be scattered among the various companies handling and marketing Canadian grain. Another activity is research. The 100 employees of the Winnipeg-based research laboratory are conspicuous in an industry notorious for its relatively weak commitment to research and development.[81]

The leading government agency, of course, is the Canadian Wheat Board which has consolidated its authority as the marketing, administrative and information processing centre of the grain industry. Founded in 1935, the Wheat Board was strengthened in 1943 when it was given a monopoly of wheat sales, and again in 1966 when its status was reaffirmed as a permanent body. The Wheat Board has effectively supplanted the Commodity Exchange as the key agency responsible for marketing the Canadian grain crop. Its over 800 employees based at its Winnipeg head office are responsible for selling more than $5 billion worth of Canadian wheat, oats and barley every year.[82]

Much of the reason for the dominant position of the Canadian Wheat Board is political. The history of conflict between producers and grain companies and demands by producers for a government agency to market their crop have enhanced the Wheat Board's position in the agricultural community. This thread of political support has continued. Indeed, the Minister responsible for the Wheat Board remains a politician with clout in Western Canada.

Other reasons are economic and relate to changes in the international grain trade which have tended to favour marketing agencies at the expense of traditional commodity exchanges. Much of the trade today is either on a government to government basis or is dominated by large international trading corporations. This trend is evident even in the United States where grain exports have come under the control of huge vertically-integrated corporations, often bypassing the Chicago Board of Trade. As the Deputy Commissioner of the Canadian Wheat Board has noted, referring to the five largest international grain companies: "The United States has five Wheat Boards; we have one."[83]

Finally, the Wheat Board has consolidated its position administratively, becoming the information-processing centre of the industry. It has long been the leader in pushing an often reluctant industry into further computerization. Information-processing is at the core of its operations. Over 100 of its 600 employees are involved in data-processing, a very high ratio for any organization.[84] Since the agency owns no facilities, other than its head office, computers are its major capital outlay. They keep track of the accounts of the 150,000 prairie permit holders, of quota deliveries to primary elevators, of rail shipments into export position and of stock in terminal elevators.

The Wheat Board is able to process all this information because its computers are directly linked to the mainframes of the major grain companies, the two national railways and the other grain agencies such as the Canadian Grain Commission and the Grain Transportation Authority. In the future, on-farm computers may give the Wheat Board direct access to farmers' inventories of grain. No other organization in the grain industry has access to such a wide variety of computerized information flows. The central position of the Wheat Board's computers in the grain industry both reflect and reinforce the authority of its political mandate.

The proliferation of new grain-related government agencies over the past fifteen years illustrates both increased specialization in supplying advanced services and the changed political dynamics affecting the industry during the 1970s. The Canadian International Grains Institute was founded in 1972 as a specialized public relations and educational agency to assist in the marketing of Canadian grain.[85] The Canada Grains Council, on the other hand, was created in 1969 as a research and lobbying organization by a Liberal government anxious to represent the views of the private grain trade. As the council has endorsed views favourable to an open marketing dissenting organization, the three provincial pools have withdrawn their membership. What is interesting is that a federally subsidized organization is promoting views which may be antithetical to those of the Canadian Wheat Board.

This potential conflict between government grain agencies is even more evident in the case of the newest agency, the Grain Transportation Authority (G.T.A.). Established in 1980 to supervise rail car allocations and control the movement of grain from country points to terminal positions, the agency maintains a staff of 25 from its headquarters near the old Winnipeg Grain Exchange.[86] In part the agency is a functional spinoff from the Wheat Board, designed to take over some of the specialized administrative tasks involved in controlling grain shipments. However, like so much else in the grain industry, its existence is also political.

The very establishment of such an agency implied criticism of the Wheat Board's handling of grain shipments. The private trade had complained that the Wheat Board was biased in allocating rail cars between board and non-board grains. The G.T.A. was supposed to be a neutral body, able to make allocations on an objective basis. The future of the G.T.A. and the extent of its overlap and conflict with the Wheat Board remain unresolved. The grain industry has now joined the broadcasting and airline industries in emulating a unique Canadian pattern whereby conflicts between pre-existing government agencies and private interests lead to the creation of a new level of regulatory bureaucracy designed to mediate between the two.

Implications for Winnipeg

The growing authority which federal grain agencies exercised over the Canadian grain industry institutionalized Winnipeg as the grain industry capital. It reversed the trend toward decentralization and rural decision-making exemplified by the cooperatives, especially the three provincial pools. Winnipeg is now unquestionably the information and managerial centre of the grain industry, the place where the most significant activities associated with accounting, research, marketing and decision-making unfold. Where once Winnipeg owed its dominance over the grain industry to its locational advantages as the prairie rail centre linking country points to world markets, today it is situated at the nexus of a growing computer-communications network covering production, delivery and marketing of grain. This latter development, however, is as much a consequence as a cause of its administrative predominance.

The increasing government control of the grain industry is no unmixed blessing for Winnipeg's development. Policies are made with federal rather than local or provincial priorities uppermost. Provincial and civic leaders do not have the same influence over the major grain bureaucracies that they would if they were provincially controlled. Similar to the railways, the grain industry exerts great power over Western Canada yet is responsible to a federal government in which western and especially Manitoba interests are usually at a disadvantage. This contrasts sharply with the energy industry, developed at a later date, and jealously guarded as a provincial prerogative.

Federal control of grain marketing has meant that of necessity many sophisticated activities performed in Winnipeg are internalized, restricted to an agency's internal use, rather than sold as a tradeable service on an open market. This has hindered Winnipeg's diversification from its grain trading base. We can see this process at work if we look at activities associated with marketing and data processing. When grain is marketed by exchange traders rather than bureaucrats there are more opportunities for diversification. As grain trading organizations build up expertise, clientele and financial acumen, they are in a better position to diversify out of grain and into other tradeable commodities and financial services — stocks and bonds, precious metals and various financial instruments. In this way the Chicago Board of Trade has evolved into a major financial centre. On the other hand, Canadian Wheat Board employees can only market grain; indeed only those cereals designated by legislation. Trading and financial expertise developed in Winnipeg is thus restricted in its application.

A similar situation prevails in information services. The grain industry is an enormous producer and consumer of information. Indeed, since the 1950s, the Wheat Board has been a pioneer in data processing applications in Winnipeg and, along with the provincial government, Air Canada and the insurance industry, a mainstay of the city's computer services establishment. Yet the market for these information services is largely internalized, dominated by a small number of government agencies and big vertically-integrated grain companies which tend to promote computer applications for their own consumption. In addition, government control of commodity sales limits the demand for market information on the part of producers. As a result, despite the efforts of such local firms as Homestead Computer Services, C.P.A. Data Systems, Farm Market Network and the innovative Grassroots system, Winnipeg has not developed as a supplier of advanced information services to the agricultural community as much as might be expected if there were an open and broadly based market for such services.[87]

The slow growth of the grain industry relative to other industries in Western Canada has also vitiated its role as an engine of economic development. This is evident in the relationship between the grain trade and banking. Winnipeg has long been an important regional banking centre and has played a leading role in financing international grain sales. This role continues. Acting as financier for the Wheat Board is good business for the Winnipeg branches of the major Canadian banks since all loans are backed by the federal Minister of Finance. If anything, the regionalization of the chartered banks has been enhanced in recent years by the development of international trading offices in Winnipeg as well as other Western Canadian cities. These offices which handle foreign currency trading formerly centralized through banking head offices in Toronto or Montreal have come online over the past ten years to offer a variety of computerized services. Although precise figures were not obtainable, the scale of the international grain trade ensures a considerably higher demand for foreign currency trading in Winnipeg than would otherwise be the case.

Winnipeg's regional bank branches also support the more mundane aspects of the grain trade by financing country purchases of grain and clearing cash tickets issued to farmers. These functions are shared with branches based in Regina and Calgary which extend credit on behalf of the Saskatchewan and Alberta Wheat Pools, respectively. In all, the scale of the grain trade, the heavy reliance on credit and the inability of grain companies to supply their financial needs internally ensure a continuing demand for banking services in Winnipeg. But it is a demand which can only grow slowly owing to maturation and heavy competition in international grain markets. This relatively stable though unspectacular situation, however, may be preferable to the roller coaster ride which banking, fed by the oil and real estate markets, has recently undergone in Alberta and British Columbia. The situation in banking may, in fact, be representative of the grain industry's overall impact on Winnipeg's economy.

The transformation of Winnipeg's grain industry is as significant for its social as for its economic implications. The industry owes its present structure to the history of conflict between producers and mercantile interests, as well as to federal intervention to mediate that conflict and to market the grain crop as a national resource. The industry has also been affected by long term trends toward vertical integration, consolidation into fewer and larger units, and increased reliance on computer-communications technologies to knit far-flung operations into centralized systems. These trends have affected mercantile companies and producer cooperatives alike. Government agencies, on the other hand, have become specialized suppliers of advanced services, supplanting independent merchants, brokers, shipping agents and consultants in the process.

These developments may tell us something about the changing role of cities in the production process. Winnipeg's function in the grain industry is to finance, coordinate and market the production of 146,000 dispersed prairie farmers. This pattern, common in agriculture, of a dominant city supplying services to a production hinterland, is becoming increasingly the norm in other industries as cities shift their economic base from goods to services. Detroit, for instance, is less and less a location where automobiles are actually built and more and more a centre for planning, design and marketing for an increasingly internationalized and dispersed auto industry. Similarly, Houston is more important as a centre of expertise for the international petroleum industry than as a geographical centre of actual production. Even Silicon Valley's role in electronics is shifting towards research and design as production work is transferred to low wage nations.

Future segmentation in the grain industry may reflect these changes. Already some of the distinctions among private companies, producer cooperatives and government agencies are blurring as they adopt similar management methods and tie into the same computer networks. The traditional antagonism between farmers and private grain companies is fading. In the future, segmentation is likely to run between the large urban-based distribution and marketing organizations which dominate the grain trade — whether private, government or cooperatively owned — and the thousands of farmers who remain in a situation of economic dependence and vulnerability to risk. This situation may be reproduced in other industries where widespread subcontracting replaces direct production by the dominant corporations.

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NOTES

1. In 1979 Manitoba controlled 10.5% of Canada's total wholesale trade but 61.2% of wholesale trade in farm products, mainly grain related. See *Statistics Canada*, 63-601, 1979, 20.
2. Derek Hum and Paul Phillips, "Growth, Trade and Urban Development of Staple Regions," *Urban History Review* X (October 1981): 13-24.
3. See the critique of staple theory by James Sacoumen, "Regional Uneven Development, Regionalism and Struggle," in *Sociology, An Alternative Approach*, ed. J. Paul Grayson (Toronto: Gage, 1973), 160.
4. *Economic Council of Canada* (Ottawa, 1984), 35-36.
5. The pros and cons of the *Western Tradition Report* are discussed in the special issue of *Canadian Public Policy* X (July 1985).
6. This is a continuous theme running throughout much of the literature on the Canadian grain trade. Vernon Fowke's classic, *The National Policy and the Wheat Economy* (Toronto: University of Toronto Press, 1957) makes this point best.
7. Suzanne Berger and Michael Piore, *Dualism and Discontinuity in Industrial Societies* (Cambridge: Cambridge University Press, 1980), 144.
8. In Western Canada the output of 150,000 prairie farmers is distributed by a small number of trading organizations. The top four organizations distribute 83% of the output, the top eight 97%. The degree of concentration is equivalent to or greater than that prevailing in petroleum, paper products and cosmetics. See *Statistics Canada*, 63-539, 1979, 40.
9. A good discussion of concentration and vertical integration among food companies can be found in Susan George, *Feeding the Few: Corporate Control of Food, 1981* (Washington: Institute for Policy Studies, 1981), 23-32.
10. James McCrorie, "Change and Paradox in Agrarian Social Movements," in *Canadian Society: Pluralism, Change and Conflict*, ed. Richard Ossenberg (Toronto: Prentice Hall, 1971). Charles Sabel has noted that industries may either be dominated by a small number of large producers or a large number of small, independent producers; in the latter case producers' cooperatives are often a significant force. Charles Sable, *Work and Politics* (Cambridge: Cambridge University Press, 1982), 43.
11. Berger and Piore, *Dualism and Discontinuity*, 144.
12. Fowke, *The National Policy.*
13. Out of the top 30 companies listed as having their head office in Winnipeg in 1984, only one — 29th on the list — was primarily a manufacturer, *Manitoba Business* (August 1984): 6-9.
14. Jean Gottman, *The Coming of the Transactional City* (Maryland: Institute of Urban Studies, University of Maryland, 1983), 12. The service sector accounted for 68% of the Manitoba labour force in 1981, up from 60% in 1971, *Statistics Canada*, 1981 Census, 92-923.
15. Sabel, *Work and Politics*, 34.
16. Jane Jacobs, *The Economy of Cities* (New York: Vintage Books, 1970), 245.
17. One study found that the typical Japanese car manufacturer supports 36,000 subcontractors, of which all but one thousand are small firms. Quoted in Charles Handy, *The Future of Work* (Oxford: Basil Blackwell, 1984), 90.
18. The dualism between centralized urban functions and dispersed prairie producers is well pointed out by Paul Phillips, "The Prairie Urban System, 1911-1961," in *Town and City: Aspects of Western Canadian Urban Development*, ed. Alan F.J. Artibise (Regina: Canadians Plains Research Center, 1981), 28.
19. Reuban Bellan, *Winnipeg's First Century: An Economic History* (Winnipeg: Queenston House, 1978), 49-50.
20. C.F. Wilson, *A Century of Canadian Grain* (Saskatoon: Western Producers Prairie Books, 1978), 17.
21. *Ibid.*, 16.
22. *Grain Elevators in Canada: 1984-5* (Winnipeg: Canadian Grain Commission), Table 6; Barry Wilson, *Beyond the Harvest* (Saskatoon: Western Producer Prairie Books, 1981), 10-11.
23. *Ibid.*
24. Wilson, *A Century of Canadian Grain*, 16.
25. *Grain Elevators in Canada.*
26. The story of the sale of Federal Grain to the pools is told by Gary Fairbairn, *From Prairie Roots* (Saskatoon: Western Producer Prairie Books, 1984), 198-205.
27. Wilson, *A Century of Canadian Grain*, 18.
28. See G.F. Parsons, "Winnipeg as a Financial Centre," in *Winnipeg 1874-1974*, ed. Tony Kuz (Winnipeg: Manitoba Department of Industry and Commerce, 1974), 191-193; 199-204 for a discussion of the financial role of the Winnipeg Commodity Exchange. See also Robert E. Ankli, "The Decline of the Winnipeg Futures Market," *Agricultural History* 56 (January 1982): 272-286.
29. G.D. Weaver, M.J. Nilsson and R.E. Turney, *Prospects for the Prairie Grain Industry to 1990* (Winnipeg: Canada Grains Council, 1982), Figure 4.1.
30. *Ibid.*
31. Colin Carter, *The System of Marketing Grain in Canada*, Extension Bulletin No. 82-2 (Winnipeg: Faculty of Agriculture, University of Manitoba, 1982), 13.
32. Dan Morgan has noted that large multinational grain companies operate their own private internal "commodity exchanges," downgrading the public exchanges in the process. Dan Morgan, *Merchants of Grain* (New York: Viking Press, 1979), 208 and 220. In Canada the Wheat Board increasingly cultivates its overseas clientele directly, interview with Dennis Stevens, Director Canadian International Grains Institute, Winnipeg, August 1984.
33. *Handbook Winnipeg Commodity Exchange*. See also *Grains and Oilseeds*, 3rd ed. (Winnipeg: Canadian International Grains Institute, 1982) 385.
34. Carter, *The System of Marketing Grain*, 11, Table 2.
35. *Statistical Handbook 84* (Winnipeg: Canada Grains Council, 1984), 26, Table 8.
36. Fairbairn, *From Prairie Roots*, 215.
37. *Ibid.*
38. Interview with King Kearns, Director of Information, Winnipeg Commodity Exchange, June 1985.
39. Data supplied by King Kearns.
40. List of Members, Winnipeg Commodity Exchange, *Statistical Handbook 84*, and previous years.
41. Interview with Conrad McMillan, former Office Manager, Winnipeg Commodity Exchange, June 1984. For a more general discussion of liquidity problems in commodity exchanges see Allen Paul, "The Past and Future of Commodities Exchanges," *Agricultural History*, 56 (January 1982): 304.
42. *Statistical Handbook.*
43. Interviews with King Kearns, June 1985, and Conrad McMillan, June 1984. Expectations that the Winnipeg Commodity Exchange would diversity — Parsons, "Winnipeg as a Financial Centre," 200 — have, unfortunately, not been met.
44. *Statistical Handbook 84.*
45. *Grains and Oilseeds*, 74-75.
46. *Ibid.*, 91-2.

47. Carter, *The System of Marketing Grain*, 6.
48. *Ibid.*, 7.
49. Robert Ankli, "Decline of the Winnipeg Futures Market," 285-6, summarizes the reasons behind the decline of Canada's private trade. See also D.A. MacGibbon, *The Canadian Grain Trade, 1931-51* (Toronto: University of Toronto Press, 1952).
50. R.M.A. Lyons and Colin Carter, *Grains in Western Canadian Economic Development to 1990* (Ottawa: Economic Council of Canada, 1984), 89-90.
51. *Statistical Handbook 84*, 26.
52. Interview with anonymous official of rival grain company, June 1985.
53. Lyons and Carter, *Grains in Western Canadian Economic Development*, 50, Table 16.
54. K. Murray Knuttila and James McCrorie, "The National Policy and Prairie Agrarian Development: A Re-Assessment," *Canadian Review of Sociology and Anthropology*, 17, 3 (1980): 267.
55. Phillips, "The Prairie Urban System," 21.
56. R.D. Colquette, *The First Fifty Years* (Winnipeg: Public Press, 1957), Chapters 1-7.
57. Interview with John Clark, Information Officer, United Grain Growers, July 1984.
58. *Manitoba Business.*
59. Wilson, *A Century of Canadian Grain*, 10-11.
60. Interview with Gerry Moore, General Manager, United Grain Growers, July 1984.
61. *Ibid.*
62. United Grain Growers, *Annual Report*, 1984 and previous years.
63. *Ibid.*
64. *Ibid.*, 1983, 59.
65. Manitoba Pool Elevators, *Annual Report*, years 1970-84, inclusive.
66. *Grain Elevators in Canada.*
67. Interview with Ben Tuan, Manager, Management Information Services, Manitoba Pool Elevators, July 1985.
68. *Ibid.*
69. Weaver *et al., Prospects for the Prairie Grain Industry*, 198; Lyons and Carter, *Grains in Western Canadian Economic Development*, 53, Table 17.
70. Weaver *et al., Prospects for the Prairie Grain Industry*, 215.
71. All figures from Manitoba Pool Elevators, *Annual Reports.*
72. Increasing reluctance by chartered banks and credit unions to make risky loans to the farm sector has placed pressure on grain companies, especially cooperatives, to sell farm supplies on credit.
73. Interview with Ragnar Kristjansen, Deputy Commissioner, The Canadian Wheat Board, August 1985. See the discussion of this issue by Fairbairn, *From Prairie Roots*, 233-4.
74. Manitoba Pool Elevators, *Annual Reports.*
75. Interview with Jim Doull, former Assistant General Manager, Manitoba Pool Elevators, June 1985.
76. Alfred Chandler, *The Visible Hand* (Cambridge: The Belknap Press, 1977), 210.
77. Morgan, *Merchants of Grain*, 60.
78. For background on grain industry standardization see Earl Baxter, *Computers and Telecommunications within the Canadian Grain Industry* (Winnipeg: Agriculture Canada, 1983), 1-5.
79. *Grains and Oilseeds*, 76.
80. Canadian Grain Commission, *Annual Report*, 1984.
81. Terrence Veeman, *The Future of Grain* (Toronto: James Lorimer and Company, 1984), 106.
82. The Canadian Wheat Board, *Annual Report*, 1983-4.
83. Interview with Ragnar Kristjansen, August 1985.
84. Interview with Dick Jefferson, former Director, Management Information Systems, The Canadian Wheat Board, July 1984.
85. Interview with Dennis Stevens, August 1984.
86. Grain Transportation Authority, *Four Year Review, 1979-83.*
87. Interviews with executives of all three companies, 1984-5. Indeed the Winnipeg grain industry is a heavy user of imported information services, notably Reuters, Commodity News Service and Dow Jones.