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BY: ALLY, R.

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South Africa's Path to Industrialisation, c1850-1925.

by

Russell Ally

African Studies Institute
University of Witwatersrand
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I

It is generally acknowledged that while there are some common features underlying the process of industrialisation, each industrial revolution has its own peculiar features. Moreover, that the path followed by each country is determined to a very large extent by its past.

But at the same time that industrialisation is a uniquely national event, it is also a profoundly international phenomenon. While shaped by specific historical and national conditions, industrialism - since spreading from its original home in the United Kingdom - has always taken place in an international context. Anticipating this development given the international character of the capitalist system of production - of which industrialisation was an offspring - Marx more than a century ago observed,

The country that is more developed industrially only shows, to the less developed, the image of its own future.¹

Explicitly, but more often implicitly, studies of South Africa's industrialisation have therefore invariably tended to be comparative. Liberals and revisionists alike have attempted to categorise and understand South Africa's process of industrialisation in terms of the nature of its relationship to the world growth of industrialism. More generally, the attempt has been to situate South Africa's industrialism in the broader framework of the growth of capitalism and the international division of labour.

Where the earlier liberal scholarship, however, was more inclined to see South Africa's economic development in terms of a stages of development paradigm - most commonly Rostow's five stages of economic growth² - revisionists, on the other hand, have been more concerned to discover what was distinctive about South Africa's industrial revolution. Put differently, while liberals have generally located South Africa's industrial development in a kind of historical model which enabled present events to be interpreted as a logical outcome of events of the past, revisionists have largely been preoccupied with isolating South Africa's particular pattern of industrialisation.

The concerns of this paper are largely the concerns which

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have engaged the revisionist scholarship. The paper attempts thus to explore whether South Africa did follow a particular path to industrialisation.

II

The revisionist historiography of the process of industrialisation in South Africa has gone through a number of stages. In the early scholarship, the country's industrialisation was linked to the 'mining revolution' of the 1860s and 1880s. Prior to the mineral discoveries, the country is regarded as having been predominantly rural and agrarian. It was the discovery of diamonds at Kimberley in 1868, and more particularly, gold on the Witwatersrand in 1886, which is said to have brought about South Africa's transition to an industrially advanced and economically diversified society.

Indeed, in much of this early literature South Africa's industrial revolution is synonymous with the mining capitalist revolution. In a seminal article written more than two decades ago, Stanley Trapido, drawing on Barrington Moore's work on industrialisation in labour repressive economic systems, suggested that Germany's industrialisation through the 'marriage of iron and rye' had its counterpart in South Africa in an alliance between 'gold and maize'. Trapido at the same time, however, was quite clear as to who was the dominant partner in this uneasy union:

... from 1890 to 1930, gold mining determined the rate of growth of the South African economy and was the major stimulant of manufacturing industries ...  

For Trapido, it was the way in which the gold mining industry developed which imparted to South Africa's industrialisation its distinctive character. Most unique was the labour coercion techniques employed - migrant labour and the compound system - which led both to the perpetuation of social dislocation among the African working population and the failure of the country to incorporate the major part of its working class into its social and political institutions.

This dual theme of extra-economic coercion and ultra-

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1 Some of this revisionist work is cited below.


5 ibid., p. 311.

exploitability of the black working class - which was regarded as having its origins in the peculiar features of the mining industry - was subsequently to feature prominently in much of the early radical studies of South Africa's economic development. In the work of Harold Wolpe, for example, South Africa's rapid industrial growth was seen as the outcome of extreme coercion and the homelands system, which made it possible for the employers to pay wages below the cost of human reproduction. Capital accumulation, for Wolpe, was linked directly to cheap black labour.

Martin Legassick similarly identified the measures elaborated to control and cheapen black labour as the unique features of South Africa's industrial revolution:

Along with other mechanisms of labour coercion, segregation created and perpetuated the system of migrant labour which has characterised South Africa's road to industrialisation.

Later revisionist scholarship did not abandon these themes of labour coercion and cheap labour power. The emphasis, however, was turned away from the working class to an examination of the economic policies of the state. In the process, South Africa's industrial revolution became less identified with the mining capitalist revolution of the late nineteenth century and more with the political and economic developments of the interwar years. The reasons for this change in focus were twofold. On the one hand, the interwar years were increasingly recognised as the period when an industrial policy was first elaborated and implemented. On the other hand, and more fundamental, where the earlier scholarship saw an almost natural evolutionary path from mining to manufacturing, the new scholarship explicitly tied the process of industrialisation in South Africa to the emergence and growth of a national bourgeoisie.

Most influential in this regard was the work of Rob Davies, Mike Morris, David Kaplan and Dan O'Meara. Adopting the approach of Poulantzas, they argued that essential to understanding South Africa's economic development was distinguishing among the various fractions of capital represented in the state and identifying which fraction or fractions were hegemonic in which period. In terms of their analysis, mining - which represented imperial or monopoly capital - dominated the power bloc in the first decade after the formation of Union in 1910, and it was only after 1924, with the formation of the National-Labour Pact government, that manufacturing - which represented national

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capital - was able to gain control of the state. Mining had consistently opposed industrialisation - insisting that this would raise the cost-structure of the industry - consequently, it was only with the change in hegemony that a policy aimed at the development of a viable secondary sector could be implemented. The other strong theme in their work was the association of secondary industrial growth with the civilised labour policy of the Nationalist-Labour Pact government. Manufacturing interests were provided protection from foreign competition in exchange for providing employment for white workers with the state itself consciously employing 'poor whites' in the state industrial sector.\textsuperscript{9}

The revisionist scholarship on South Africa's industrial development has moved on since the appearance of their work, with much of their theoretical framework been jettisoned.\textsuperscript{10} But many of the assumptions of Davies, et al have survived, albeit in a different form.

Thus, in the recent work of William Martin, for example, he too insists that there was no 'direct road' from mining to manufacturing, and that a distinctive shift in state economic policy was required before industrialisation could get underway. Central to Martin's argument are the debates over trade and tariff policies among South Africa's economic and political leadership during the interwar years.

'Examining the debates of the day on their own terms', he writes, '... reveals an extensive debate over the proper path of economic growth: whether to continue down the road of prosperous primary production or to pursue an unchartered path towards advanced industrial production by limiting free trade across the borders of the Union'.\textsuperscript{11}

By the mid-1920s, according to Martin, the free trade policies which had characterised the economic policy of Smuts's administration were decisively shattered by the Hertzog-led Pact government 'making it possible to alter the country's position in the international division of labour through expanded industrial production'.\textsuperscript{12}

More recently, the debate has shifted to a consideration of the effectiveness of industrial policy during the interwar years.


\textsuperscript{12} ibid., p.60.
and whether there was indeed a strategy to diversify out of the extractive base provided by mining. For Ben Fine and Zavareh Rustomjee, while there might have been the political will on the part of Hertzog's government to promote industrial diversification, the economic strength of the mining industry militated against such a process occurring and set limits on the kind of industrialisation which could and did take place. In their view,

the interwar development of South African capital is best seen as one in which the strength of mining capital dictated the boundaries within which national capital could be economically, and hence politically, supported. There were then limits on the economic policies of the state, whatever its derived political objectives, because of its economic dependence on mining capital. ¹³

Consequently, what characterised South Africa's industrialisation was not a coherent and comprehensive policy, but rather ad hocism and compromise. They do not deny that there were attempts to promote industrialisation through tariffs, protection and the establishment of state industries, but what stands out for them is not these policies, 'as much as the failure to adopt an additional range of industrial policies, promoting manufacture through provision of skills technology, finance, intersectoral linkages and marketing'. ¹⁴

What then are the dominant themes which emerge from the revisionist literature of South Africa's path to industrialisation? On the one side, there are those scholars who see South Africa's industrialisation as having sprung from the mining capitalist revolution of the late nineteenth century, which gave to the process its distinctive and peculiar features. On the other side, there are those who argue that the South African experience was one of state-led industrialisation, accompanied by protective tariffs, import-substitution, and the creation of state corporations.

Certainly, the impact of the mining industry on South Africa's economic transformation was profound. Mining stimulated economic development in the form of investment, urbanisation, infrastructure and skill development. More directly, the industry was responsible for the growth of both the engineering and chemical industries on the Rand. Also, it is possible to identify a clearer commitment on the part of the South African government to the country's industrial development during the interwar period. But while both these approaches help us to understand aspects of South Africa's industrialisation, each is too narrow in focus to claim a particular pattern to South Africa's process


¹⁴ ibid., p. 38.
of industrialisation.

A somewhat different approach is adopted by Belinda Bozzoli. The origins, development and growth of secondary industry are traced by her to a group of ideologists - connected to manufacturing - who consciously fought for the interests of this sector from the late nineteenth century. Beginning in the Cape, this movement spread throughout the country, culminating in 1917 in the formation of the South African Federated Chamber of Industries. The development proceeded through two stages. At first, manufactures fought for protection against foreign manufacturers. Once this had been accomplished, their emphasis turned to the pivotal role of manufacturing in the creation of a national economy. As Bozzoli explains the process,

on the one hand, there is the rise and eventual victory of protectionism; and, on the other, there is the transformation of South Africa from imperially-dominated to locally-oriented capitalism.\textsuperscript{15}

By focusing on the role of ideology in the legitimation of national capitalism, Bozzoli certainly shows the vision that manufacturers had both of their own role in the economy and of their relationship to other sectors of the economy, particularly imperial capital. But again the analysis too readily ascribes a distinctive character to South Africa's industrial revolution.

III

Until the mining capitalist revolution of the late nineteenth century, the path of South Africa's economic development appeared to be from agriculture to manufacturing. In this regard, South Africa would have been no different from Europe, where capital accumulated from agriculture contributed to industrial development, or America, where industrialisation in the early stages was largely a rural phenomenon.

Much of this early industrialisation was centred in the Cape and was based essentially on the processing of indigenous raw materials. There was the odd cart and wagon making, boat building and furniture making, but the major industrial activities were wine and brandy distillation, food-processing, brewing, butter and cheese making.

But if the appearance of the country's economic development was from agriculture to manufacturing, the reality was something different. Cape Town had grown up as a site of trade, commerce and government. Moreover, the existence of a port meant that the Cape could easily be penetrated by cheap manufactured imports. From the outset then, limits were set not only on the growth of industry, but also on the kinds of industries which could develop.

Given this situation, it is not surprising that one of the first issues taken up by the early Cape manufactures was the protection of their industries. During the depression in the first half of the 1880s, they succeeded in getting the Cape government to appoint a Select Committee to look into the question of protection for colonial agriculture and industries. Several witnesses to this 1883 Select Committee called for various forms of government assistance to promote industrial development. For example, a senior railway official recommended the establishment of a scrap iron mill at the coal fields in the Albert district, through which the Border railway passed.

In the end, the Select Committee did recommend tariff reform, together with a system of bonuses, to encourage the establishment of manufacturing in the colony. But very little came of this. The main reason for the recommendations of the Select Committee not being taken up was the opposition which came from the merchants. Searle, president of the Cape Chamber of Commerce, was opposed to protection generally, while Twentyman, a Cape Town merchant, held that,

If commodities can be imported cheaper than they can be made here, I should say that they should be imported.\footnote{17}

This successful blocking of industrial protection by the merchants not only revealed the extent to which commercial capital dominated manufacturing capital, but - more importantly - was also a reflection of the nature of the economy in the Cape at the time. The Cape developed in the context of British industrial and commercial supremacy. The result was its integration into British-controlled markets and its subordination to, and dependence on, British capital investment. This not only secured the dominance of merchant capital, but also placed severe constraints on industrial expansion.

Not satisfied with their ability to sell imported goods more cheaply than locally produced goods, the merchants also acted in other ways to hinder local manufacturing. The small trading stores in the interior were effectively bonded to the big merchant houses, on which they relied for credit and supplies. As soon as there was any threat of these stores buying locally produced goods instead of imports, the wholesaling houses retaliated by cutting credit and supplies. As credit was hard to come by and local industry only able to supply a limited amount of goods, not many trading stores were willing to risk alienating the wholesaling houses.

If in the Cape the government was unsympathetic to promoting


local industrialisation, the same was not true of the Transvaal. Kruger's government, both in response to the demands of the farmers for a market for their surplus produce and in a bid to achieve economic self-sufficiency, encouraged the establishment of new industries through a concessions policy. In terms of this policy, businessmen were given the sole right to operate a particular industry for a specified time, usually thirty years. In 1881, the 'concession king', Hugo Nellmapius, undertook to organise 'factories and furnaces for smelting and manufacturing and treating all kinds of iron including cast iron, hammered iron, iron for drawing wire, pig iron, wrought iron, sheet iron, steel and iron wares'. But where the Cape manufacturers lacked political support, the Transvaal - an agricultural backwater - was unable to attract the capital required for such an ambitious industrial programme. Before the emergence of the gold mining industry, the only factories to develop extending beyond mere handicrafts were built by Isaac Lewis and Samuel Marks for brandy and whisky distillation and for the manufacture of glass, barrels and jam.

In Natal, the development of manufacturing industry other than sugar was less marked than in the Cape or the Transvaal. Natal consistently followed a policy of levying lower duties on imported goods than the Cape, which was aimed at promoting inland trade with the two Republics and African territories. An increase in the volume of trade meant more revenue from customs duties and more employment in transport by rail and wagon. Trade and transport were therefore regarded as more important than the manufacturing industry, which consisted mainly of sugar refineries, flour mills, bakeries, saw mills, wagon-making works and tanneries.

The Orange Free State was of even less significance as an industrial economy, where mainly handicrafts developed.

Even before the mining revolution, therefore, the prospects of developing a manufacturing industry in South Africa did not seem very promising. In the Cape commerce ruled, in the Transvaal access to capital was restricted, in Natal trading was regarded as a more secure source of revenue and the Orange Free State had developed little beyond self-sufficient farming.

It was into this world that the large-scale primary industry of the Witwatersrand intruded. Much more powerful, organised and centralised than merchant capital, mining capital deepened and

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18 Charles van Onselen points out that it was the capital accumulated through liquor distillation which provided the basis for the emergence of a rural bourgeoisie in the Transvaal. 'Indeed, had this configuration of factors remained constant, the Transvaal Republic might have experienced a more gradual 'decline of feudalism and rise of towns', like that of Europe, in which capital accumulated from distillation contributed to the subsequent development of industrial capitalism'. The dramatic emergence of large-scale mining on the Rand, however, changed the pattern of development. C. van Onselen, Studies in the Social and Economic History of the Witwatersrand 1886-1914, Vol. 1, (New York, 1982), p. 47.
extended the process of South Africa's subordination to institutions funded largely by foreign capital. Where manufacturing previously had mainly to contend with the hostility of the big importers, the 'merchant princes' of the south, they now also faced opposition from mining and finance capital in the north. Worse still, many of the merchant houses, hit by the depression in the Cape and seeing great opportunities for profit making in gold mining, invested large amounts of capital in the Transvaal. 'In the longer term', says Mabin, 'these forces of geographical expansion involved the Cape inextricably in the new industries of the South African Republic'. Not only did local industrialisation therefore fail to develop, but where there were opportunities for capital investment these went directly into mining. The appearance of the mining industry on the economic scene thus not only fundamentally altered South Africa's pattern of economic development, but also the configuration of forces ranged against manufacturing.

IV

The formation of the Union of South Africa in 1910 seemed to bring new opportunities for manufacturing. Political union brought into being a common market and internal free trade, bringing to a close the customs and railway rivalry which had characterised the preceding period. The manufacturers themselves were also better organised. In 1904, a small group of Cape Town factory owners came together to form the South African Manufacturers' Association to 'guard the Colonial Manufactures' interests.' The activities of the Association centred on agitation for protective tariffs, the promotion of 'colonial industries' and the local organisation of manufacturers.

SAMA had 50 members at its first general meeting in 1904; 70 in 1907 and in 1909 claimed a membership between 300 and 400. In 1907 the profile of the Association was significantly enhanced by the recruitment of W.J. Laite, who became its full time organiser and most effective propagandist. Only a year after joining the organisation, Laite set off on a tour of the country's industrial centres 'preaching the gospel of organisation and development'. Manufacturers' associations were established in the Transvaal and Natal and in the Eastern Cape. Regional rivalry held back amalgamation until 1917, but national co-ordination of demands for protection was partly achieved by the South African National Union, a pressure group formed in 1907 by wealthy farmers who believed that there were benefits for themselves in the protection of industry.

For SAMA, the establishment of union presented the country

19 Mabin, 'Waiting for Something to Turn Up', p. 40.
20 Archive of the Cape Chamber of Industries, University of Cape Town.
21 Nicol, 'Garment and Tailoring Workers', p. 83.
with two choices: either it could continue in the old way where national prosperity was wrongly believed to lay in agriculture and mining or it could embark on a programme of industrialisation and take its rightful in the world's economy as a sovereign nation. The choices distilled into either continuing with the policies of free trade or introducing protectionism. As Chas H. Lepper, a fanatical protectionist dramatically put it,

As in the affairs of men, so in those of nations, a moment pregnant with potentiality arrives, which, seized or missed by the nation's leaders, makes or mars their country's destiny. Such a moment has arrived now for South Africa. She is at the parting of the ways. Her future is at stake, and rests upon the decisions she will shortly have to make, when the new Customs Tariff comes up for consideration of the Parliament.

Manufacturers must have felt that the cause was vindicated when in response to their demands, the new Union government agreed to appoint a commission 'to inquire into the conditions of trade and industries and other matters appertaining thereto'. Even more encouraging was that the terms of reference also included 'steps which should be taken to encourage (1) the trade and present industries of the country; and (2) the establishment of new industries'.

Chaired by Sir Thomas Cullinan, the first President of the Transvaal Manufactures' Association, the Commission sketched a picture of South Africa's industrialisation which was firmly rooted in the development and advancement of agriculture. In the Commission's own words,

South Africa must begin at the beginning, and that is develop her agricultural resources. It is often said in regard to agricultural and manufacturing interests that the one is the complement of the other, which is true; but it is equally true that until the first named is well established, the second cannot be successfully undertaken, for industry has its beginning in agriculture, and it must ever be so. It can be traced through the industrial history of the world; first agriculture, and then manufactures rising from the cottage to the village industry and so on, through successive stages to the modern factory system.

22 Chas H. Lepper, National Prosperity: How to Obtain It, The Union's Opportunity, (Pietermaritzburg, 1911), Preface.

23 U.G. 10-'12, Report of the Commission Appointed to Inquire into the Conditions of Trade and Industries And Other Matters Appertaining Thereto.

And in another part of the report,

The success of a country depends primarily on its agricultural development; and until this is brought about, industrial expansion will be retarded.\(^25\)

Ironically, a commission of enquiry ostensibly aimed at the promotion of manufacturing, had more positive recommendations to make with regard to agriculture than with regard to the development of secondary industry. If the manufacturers, however, had made a more sober and objective assessment of the political dispensation after Union they would not have found this outcome all that surprising. The dominant economic interest represented in the national convention was farming. According to Thompson, no less than 20 delegates were in one way or another linked to farming. And if mining, banking and commerce were less well represented, manufacturing did not even have one representative.\(^26\) The slogans of the time were 'back to the land' and 'Die Boer is die ruggraat van die land'. Botha himself, the first Prime Minister of the Union, was a great advocate of land settlement and agricultural rehabilitation.

In terms of the condition of agriculture in the country, the emphasis of the Cullinan Commission was also not entirely unexpected. In 1910 South Africa was still importing the bulk of its agricultural products: corn and grain, flour and meal, fruit, sugar, milk, meat and poultry. For the commissioners, only when the bulk of these products were produced in the country 'can we be said to be progressing'. Consequently, the Commission called for the establishment of experimental farms, scientific methods of farming and training and cattle breeding.

For ardent supporters of industrialisation through a policy of protection, the recommendations of the Cullinan Commission were a great disappointment. Rudely jolted out of its false sense of achievement, the South African Manufactures' Association decided to compile its own report on the needs of manufacturing. Laite was commissioned to undertake this work, which involved visits to Canada, the United States and Australia, both to learn from the experience of these countries and to gain a comparative perspective.

The major lesson which Laite claimed these countries taught South Africa was that prosperity was intimately bound up with a protective policy. 'IIn each', he averred, 'the working classes are far better off than in so-called Free Trade England'.\(^27\)

\(^{25}\) ibid., p.95.


\(^{27}\) U.G.10-'12, p. 27.

Laite took the hostility of mining and commerce to manufacturing for granted.

'The crux of all opposition to the fostering and encouragement of manufacturing interests...', he asserted, 'centres in Johannesburg. The Chamber of Mines has stated its case most explicitly, and it is evident that the opinion holds that every interest in the country must be sacrificed to the stated needs of the mining community'.

More worrying to him was the position that the Cullinan Commission appeared to be adopting, which counter-posed the interests of manufacturing and agriculture. Drawing on the example of the United States, Laite pointed out that America at one time had also believed that its future lay in agriculture. That the country should develop its farming activities, sell its produce to the manufacturing countries and take in exchange the manufactured products of these countries. Fortunately, however, protection was adopted in the form of the McKinley Tariff of 1890, leading to the United States becoming one of the most powerful manufacturing countries of the world. The experience of the United States thus proved that

[the interest of the farmer and the manufacturer are identical, and the farmer who relies upon the practical patriotism of the community to support him in his claim for Protective duties, must be ready to give as well as take.]

In a fundamental sense, the battle for a policy favouring manufacturing in the immediate years after Union was a battle for the soul of agriculture. The mining magnates and the merchants most commonly presented their case against protection not in their own interests, but by claiming that such a policy would be deleterious to the farmer. If protective barriers were erected around South Africa, the country's trading partners would reciprocate, closing off important markets for agricultural exports. Over and above this, agricultural machinery produced by local manufacturing would be more expensive than foreign imports, which would result not only in an increase in costs of inputs, but also make South Africa's agricultural produce uncompetitive on the international markets.

The Union's first custom's tariff legislation - the Custom's Tariff Act No. 26 of 1914 - thus reflected both the dominance of mining and commerce and the ambiguous position of the new government towards secondary industrialisation. Protection was not wholly endorsed, neither was it rejected out of hand. Existing industries considered beneficial to the economy - leather goods, building materials, timber, tobacco and confectionary - were to be granted protection, while a more

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29 ibid., p. 50.
30 ibid., p. 29.
cautious approach was adopted towards new industries which still had to prove their viability. Laite no doubt exaggerated for polemical effect when he described the tariff legislation as 'a display of ineptitude and callous indifference to the needs of manufactures'. But the Custom's Tariff Act did favour free trade more than it did protection, and its bias was more directed at raising revenue than stimulating industrial development.

The outbreak of the First World War in 1914 did for manufacturing what both the manufacturers' associations and tariff reform had failed to do. Where the manufacturers' associations had relied on ideology to convince detractors of the importance of the manufacturing sector to the national economy, the need to replace imports halted by the war was sufficient to win over most cynics. And where tariff barriers were seen as artificial impediments to free trade, the war's disruption of normal shipping patterns brought a natural form of protection.

The main beneficiaries of South Africa's being cut off from foreign suppliers were the garment industry on the Witwatersrand and the boot and shoe industries in the Eastern Cape. Other industries which also benefitted were leather goods, furniture and dairy products. The growth of the manufacturing sector during the war years was indeed impressive: from 1915/6 to 1917/8, 1700 new factories were opened, an increase of 45 percent, and the contribution of the manufacturing sector to the national income rose from 6.7 percent in 1912 to 9.8 percent in 1918.

These developments had a huge impact on both government and manufacturers. In October 1916, the government appointed an Industries Advisory Board, made up mostly of businessmen, to advise it with regard to the industrial development of the Union. As a result of a report of the Advisory Board in December 1916, in which an auxiliary body for the solving of scientific and technical industrial problems was recommended, a Scientific and Technical Committee was also appointed. In October 1918 the decision was taken to amalgamate these two organisations into the Advisory Board of Industry and Science.11

Finally able to overcome their regional differences, the different manufacturers' organisations in the four provinces also came together in 1917 to form the Federated Chamber of Industries, 'the body', Bozzoli writes, 'whose future role as the vehicle for the expression of industrial interests was to be vital'.12 W.J. Laite was elected as the first secretary of the new organisation.

The impact of the war on manufacturing, however, went beyond questions of organisation. The involvement of manufacturing in

the war effort inevitably led to a closer relationship developing between industry and government, resulting in significant changes taking place in thinking on industrial matters. Reflecting the new direction in thought, B. Price, Chairman of the Scientific and Technical Committee, in a memorandum on the future of industrial development in South Africa drawn up as the war was ending, ruminated:

Anyone who has followed even superficially the recent trend of thought in Britain and the various Dominions must have been greatly impressed by the unanimity of opinion in favour of combination, co-operation and organisation in almost every branch of industrial and commercial activity. It is now realised that the successful competition of our enemies in industry and commerce has not been due to any individual superiority but to a more systematic and complete national organisation.

It was not that the issues of tariff reform and protection now became less important to manufacturing, but rather that attention was increasingly given to matters of planning and organisation. One of the first tasks suggested for the new Advisory Board of Industry and Science, for example, was to 'survey the whole position [with regard to industry] with a view to recommending the nature and scope of national organisation for production and trade best suited to South African conditions and formulating a comprehensive programme for dealing with the various aspects of the problem which call for attention'. Practically this involved, inter alia, an extensive collection of statistics of existing industries in the country and a detailed inventory of the country's natural resources.

A further indication of the change in the direction of thinking was the appointment by Smuts's government of H.J. van der Bijl to the office of Scientific and Technical Adviser. Indeed, the government had brought van der Bijl back to South Africa from the United States specifically to take charge of the Industries Division of the Department of Mines and Industries. A scientist by training, it was van der Bijl who came up with the plan for the establishment of the Electricity Supply Commission in 1922. A few years later the decision was also taken to establish an iron and steel industry in South Africa, which van der Bijl believed was the 'foundation' of all other industries.

In his first report to F.S. Malan, Minister of the Department of Mines and Industries, van der Bijl already gave a clear indication of what he saw as the country's priorities:

If we aspire to anything approaching economic independence, we cannot rely entirely on our agricultural industries, but must pave the way for the

\[33\] CAD, BIS/B38, B. Price, Memorandum on the National Organisation of Production and Trade, 3 August 1918.

\[34\] ibid.

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development of manufacturing industries...
Most of the Union’s manufacturing industries are small — many of them are very small — and still in a stage where they need careful nursing to enable them to survive the struggle that will result from the fact that Europe is beginning to recover from the effects of the war, and the conditions that enabled these small industries to gain a temporary foothold, are changing. 15

Van der Bijl placed great emphasis on organised scientific research, establishing a Scholarship Loan Scheme in 1922, mainly to send promising candidates abroad to study the latest developments in science and technology. 16

One of biggest problems which manufacturing had always faced was securing access to capital. It was easy to approve of the establishment of industries in principle, but not many were prepared to put up the money required. It was against this background that the turn to the commercial banks took place. In 1919, the National Industrial Corporation of South Africa was founded, in which the National Bank took the lead. The paid up capital was UK500,000, of which UK400,000 came from the National Bank. According to the general manager of the bank, the company was 'formed by us and some of our financial friends with a view to establishing industrial enterprises.'

Unfortunately, the establishment of the National Industrial Corporation coincided with the onset of a serious recession in world trade. To make matters worse, its promoter and main backer, the National Bank, itself underwent a serious crisis, eventually floundering. Seven years after it was founded the National Industrial Corporation was liquidated, having lost some UK496,000.

Notwithstanding such setbacks, by the mid-1920s the profile of manufacturing in South Africa had undergone a profound transformation. Industries were increasingly becoming electrically driven; experiments in the development of oil products were proceeding apace; there had been advances in radio communication, air-crafts, telecommunications and medical science.

The role of the state had also changed. Whereas before it had mostly left manufacturing to its own devices, it now co-ordinated activities to accomplish certain set objectives. Old views and attitudes of laissez faire based on individual self-achievement gave way to views of social responsibility and social advancement, albeit that it was white social responsibility and white social advancement that was emphasised.

The example of Germany featured prominently in the change

15 CAD, PM 46/6, CT 228/21, Report of the Scientific and Technical Adviser on the Functions and Organisation of the Industries Division of the Department of Mines and Industries, March 1921.

of attitude. The widespread belief was that the German state had guided the development of Germany's industries in a conscious and deliberate way. Government involvement in industry was therefore not only considered to be justified, but regarded as a national necessity. H. Warrington Smythe, Secretary for Mines and Industries, defended this new position in a lecture to the Department of Commerce of the University of Cape Town, we went into the war in relation to our industrial position like into a tunnel of darkness, into which we went bound in the restraining bonds of orthodox theories of government, of trade methods, and of scientific development. We came out of it, into a new world in which Governments had exercised unheard of activities, commerce had entered a new era of conflict, finance had gone mad in half the world, and the scientific advance had been so immense in certain directions that four years produced a revolution of half a century.\(^{37}\)

VI

The coming to power of the Hertzog-led Pact government in 1924 is generally seen as representing a turning point in South Africa's industrial policy. Taking the rhetoric of the Pact government at face value easily gives this impression as well. Soon after being appointed as the new Minister of Mines and Industries, F.W. Beyers told the South African Federated Chamber of Industries that it could expect a new and different industrial policy from his government. The government would reconstitute the Board of Trade and Industries as a permanent body with enhanced powers. In addition, it would revise the existing tariff which was 'unscientific and not based on rational principles, and especially with a view to industrial development'.\(^{38}\)

The Pact government certainly delivered on most of its promises, introducing the Tariff Reform Act of 1925 which provided for a broad-based policy of tariff protection. Consequently, Hertzog's government is often credited with commencing South Africa's planned industrialisation through a deliberate policy of protection. As Dan O'Meara has put it, the Pact government pursued a bold and vigorous programme of industrial and infrastructural

\(^{37}\) H. Warrington Smythe, The Work of Government Departments in Relation to South African Commerce and Industry, Lecture to the Cape Town University, April 1924.

\(^{38}\) The Star, 17 July 1924.
The Pact government's commitment to the development of secondary industry in South Africa is not in dispute. In many ways it also followed a bolder and more thought out policy than its predecessor. The clothing industry, for one, was one of the first successful areas of import substitution. After struggling for twenty years against strong foreign competition, it was the protective tariffs introduced by Hertzog's government which made it possible for the local manufacturing of clothing to be profitable.

Hertzog's government also used state industry, or state capital as a catalyst of private industry, which became an important lever in South Africa's industrial growth. The most notable case was the creation of the country's first heavy industry, the Iron and Steel Corporation of South Africa.

But in a more fundamental sense, the Pact government was simply continuing the trends already evident during the last years of Smuts's administration. Besides, both the international and national environments were far more suitable for secondary industrialisation. Britain emerged from the war with its position as the world's leading industrial nation irrevocably shattered. This opened up the space for local industry to develop in South Africa. Also, many British manufacturing firms, fearing that they would lose their market in South Africa, established subsidiary companies in the country. Locally, mining and commerce - which traditionally had been averse to secondary industrialisation - began increasingly to diversify into manufacturing.

What conclusions then can be drawn from this overview of South Africa's path to industrialisation during the period 1850-1925? Clearly, to try and establish a set pattern of industrialisation is a hopeless task. The process by which South Africa was transformed from a predominantly rural and agrarian community into an industrially advanced and economically diversified society was sometimes planned, often reactive, and contained many paradoxes. At the same time that industrialisation represented a break with older forms of social, political and economic organisation, it also grew out of these earlier forms and represented an extension of what was present for many years. While the process was intensely forward-looking, the path followed was profoundly influenced by the country's past. At the same time also that new classes and new social forces were created, old classes and social forces either adapted to the new conditions or were absorbed into the new society. Perhaps it is apt to end with Paul Mantoux's observation, which can be interpreted as either a cop out or sensitivity to the complexity of the process.

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Economic movements are ... confused. Their progress is like the slow growth of seeds scattered over a vast area. Endless obscure facts, in themselves almost insignificant, form great confused wholes and mutually modify one another indefinitely. No one can hope to grasp them all, and when we pick out a few for description it is obvious that we must give up, together with some of the truth, the rather vain ambition of arriving at rigorous definitions and final explanations.\[41\]