

A Ghost from the Past: The South African Developmental State of the 1940s

**Bill Freund, University of KwaZulu-Natal, Economic History and Development
Studies Programme (professor emeritus)**

The Developmental State

In recent years, with eyes alerted to the so-called Asian industrialisation model, there has emerged an important literature on the *developmental state* with Johnson, Amsden and Chang amongst the most frequently cited studies (Johnson, 1982; Amsden, 1989; Chang, 1994). Meredith Woo-Cumings provides a collection which stretches the subject to consider, for instance, *dirigiste* France and which also gives convenient definitional strength to the concept. (Woo-Cumings, 1999) 'The common thread linking these arguments is that a developmental state is not an imperious element lording it over society but a partner with the business sector in an historical compact of industrial transformation'. (Ibid.:4) A key defining element in the developmental state seems to be agency: the existence of a state formation that transcends or overrules the usual bureaucratic processes. Such agencies are capable of directing capital and defying the logic of market forces which may constrain structural transformations. While the state may tolerate large-scale corruption, favourites are channelled in such a way as to ensure economic results, not simply indulge in private rent-seeking activities. Capitalists and top government officials, perhaps in the military, come together to form an elite, probably moulded through social associations, common educational background and personal ties. With reference to Brazil, Peter Evans proposes that members of such an elite 'are embedded in a concrete set of social ties that binds the state to society and provides institutionalised channels for the continued negotiation and renegotiations of goals and policies.' (Evans, 1995:12) They thus fulfil the requirement suggested by Coase's much discussed theory: costs are reduced to a minimum where economic interactions are embedded in social forms. (Coase, 1937)

Indeed such formations are difficult to achieve in a democratic dispensation which is surely a major reason why developmental states have been authoritarian (South Korea) or at least had an authoritarian element (Japan); in general, they have been strongly motivated by an intense nationalist ideology called into being by real or imagined threats. Adrian Leftwich explores this side but also makes the important qualification that successful developmental states are nonetheless able to achieve broad general, if passive, support from their populations which he calls legitimacy, precisely because they can deliver the material goods, raise living standards and live up to the often intense nationalist fervour which powers them. (Leftwich, 2000) Contemporary China in this sense perhaps fits his point well. It is worth flagging the point here too that the neo-liberal view of East Asian success stories was always dominated by the importance of export and successful, competitive participation in the international economy. While far from being the whole story, it is true that industrial export success has

been of great importance even in China today and barriers intended to block this success for Japan in the 1930s led to developmentalism sliding into militarism and fascism.

The developmental state formulation has been increasingly attractive to many modern regimes that consider themselves developmental and which look for a road where other models seem to have led to blockage. Indeed the developmental state idea really found its feet in the teeth of the political triumph of neo-liberalism with its reification of market forces and its hostility to the state as a director of economic initiatives. South Africa after 1994 embraced neo-liberalism controversially but the limited success of the neo-liberal agenda led President Thabo Mbeki to embrace what he called the 'democratic developmental state'. I have criticised this view as unsatisfactory elsewhere. (Freund, 2007)

However, the successor Zuma government has opened the door to activists interested in making this concept work in the South African political economy. But in so doing they have so far virtually ignored older historic models.¹ I am posing as a hypothesis that South Africa under white rule was a very good example itself of a developmental state, by no means unsuccessful by the standard of the times. The racial definition of the citizenry and the emergence of the Bantustan system were a part of the conception of this state although certainly they created contradictions at various stages. Far from never having known the structures typical of what developmental state theorists have considered characteristic, key elements of the developmental state structure are still in existence although they have lost their coherence and require substantial reorientation.

Elsewhere in Africa, colonial policies had strong developmental elements and sometimes instituted grand infrastructural projects. Already before the end of World War I, the British created a colonial department of scientific and industrial research and Britain remained a model for institutional innovation in South Africa. However, this and equivalent projects elsewhere focussed on ideas of tropical agriculture and disease causing decay and decline to rural communities. After 1945, elements of welfare and economic diversification were far more prominent in British and other colonial thinking but imperial planning did not envision large-scale industrialisation or partnership with a local bourgeoisie, certainly in the absence of a significant settler population. (Hodge, 2007; Lonsdale, 1986) 'Alongside other British African territories, in 1945 the Northern Rhodesian administration was ordered to create a comprehensive ten-year economic development plan.' (Bowman 2011: 135)²

Early Industrialisation

In order to make sense of the evolution of South Africa as a developmental state, it is useful to establish a basic periodization. The first stage can be associated with the defeat and conquest of the Boer republics in war. It can be argued that the ZAR of Paul Kruger was taking the first steps in the transformation of the gold-rich republic's development with some key appointments and government decisions but this thrust was overridden under British occupation and the period known as Reconstruction, which led to the establishment of the Union of South Africa in 1910. Reconstruction was a very fertile period for the

¹ The view taken by Ashman et al, 2011, 12, is that it was only well into the apartheid period that a potential developmental state could be said to have taken shape, admittedly on earlier institutional foundations.

² But this plan and Bowman's analysis also essentially focus on modernising agricultural production.

institutional and infrastructural work which could be deemed essential for industrial development. Of course, this work was carried through under imperial auspices with Alfred, Lord Milner the archetypal proconsul. (Marks & Trapido 1979; Dubow, 1997; Kaplan, 1976: 79) British financial and commercial interests were dominant and the growing massive financial concentration built around the great gold mining houses favoured a system which marginalised other economic activities and turned them into service sectors for mining. Immigration from Britain was strongly encouraged in the hopes of creating an electoral majority of British origins and trade and investment operated within an imperial penumbra for the most part. The economic policy thrust of this period was also accompanied by powerful social and political currents. The mining interests were critical in promoting a vision of a bifurcated South Africa which would contain zones deliberately excluded from development: 'native reserves' or 'locations' to be administered by a paternalistic system of white officials and from where unskilled migrants could come to the gold mines to work for fixed time periods without moving into a phase of skill acquisition and urbanisation that might lead to claims on citizenship. (Legassick, 1995) Citizenship was increasingly intended to be strictly racialised and bounded to those recognised as of European origin, i.e. white. This conflicted both with the more liberal constitutional structures of the coastal provinces, especially the Cape Colony, which lacked gold mines and with the politics of the rural interior which wanted severely to limit, or to abolish, the locations entirely.

After the establishment of Union, struggle over those contradictions which loomed largest in interpreting these issues, were critical to political developments and the furtherance of state initiatives. In his excellent recent study, Saul Dubow, focussing on the history of science in South Africa, looks at further institutional developments, noting the founding of the South African Association of Science in 1903, the Office of Census and Statistics in 1917, the Board of Trade and Industries in 1922, the development of higher education and the creation of a Public Service Commission. (Dubow, 2006) These initiatives were accompanied by struggles involving various interest groups over the division of land between capitalist and communal agriculture, the future of the cities and the nature of the national electorate, all cast in racial terms. These struggles led finally to the passage of the Native Bills in the 1930s under the Fusion government which united most of the white electorate for a while, and the growing racial exclusivity of the electorate, developments which have long evoked the interests of critical historians, and which will be not directly be considered here.

This can be said also for the intensifying struggle, especially taken forward by Afrikaner nationalists, to cast South Africa on a more independent path marginalising British influence and regulation. Again this struggle will not be considered much in this paper. However, once again following Dubow, it proposes that what was considered the political centre, associated strongly with Jan Christiaan Smuts, who as a young man had come to the Transvaal as a key figure in the efforts to modernise Kruger's republic and then served as a general in the Anglo-Boer War on the losing side, also had a national vision. Certainly Smuts believed in aligning itself with the West of Britain and the USA and to working co-operatively with the British Empire. But Dubow considers that Smuts' *South Africanism* had a grandiose and intimidating view of Africa as a continent where South Africa would largely replace Britain as hegemon.³ At the end of his life Smuts expressed dismay and disgust that Britain was not

³ For South Africanism, see also Bozzoli, 1981.

prepared to devolve power in central and eastern Africa to white settlers which would have made the realisation of this picture far more likely. (Hancock, 1968)

It is often assumed that Smuts was first and foremost the mines' man, especially because of the history of government intervention on behalf of the mines in the course of a series of bitter confrontations with white and black workers when he was in power and perhaps the Rand Revolt of 1922 in particular (Krikler, 2005, 45-46). One can also point out his close relation with the Government Mining Engineer Robert Kotze, a strong champion of mining interests (as well as a 'vicious racist' in the view of David Duncan). (Duncan 1995) Certainly Smuts recognised the irreplaceable impetus that the discovery of gold had made possible in South Africa as well as the need to accept private control over the mines and to accommodate many of their needs. He was equivocal about the introduction of a strong tariff regime which the mines bitterly opposed. In addition, he was no friend of organised labour. However, this is not to say that he did not want to see South Africa evolve as an industrial economy. Already in the early Union government period where he was prime minister between 1919 and 1924, presiding over a mixture of free trade, mining dominated interests and others interested in a more nationalist outlook, he took a great interest in the latter grouping while remaining cautious and somewhat equivocal. (Bozzoli, 1981; Kaplan, 1976)

As early as the Cullinan Report of 1914, the government had begun the practice of protecting early secondary industry which then began to flourish under the circumstances of isolation due to World War I. (Feinstein, 2005). Early industrialists demanded tariff protection and found their most important and articulate spokesman in a British immigrant named W.J. Laite who started to discover the virtues of protectionism when a small Cape Town business of his failed. He made the journal *Industry and Trade* his mouthpiece. (Laite, 1943) Laite was never able, despite two substantial attempts, to get himself elected to Parliament. However he had a considerable wide vision and supported, for instance, the emergence of the parastatals while trying to promote industrial exports. 'South Africa must manufacture goods for itself, or be doomed to perpetual underdevelopment, or rather lopsided development until the mines give out...' (Ibid.: 36 and Bozzoli, 1981)

This conflict for the interwar Union period has been dominated by studies of the tariff regime. With the ousting of Smuts, the National Party, who created the Pact government with the minority Labour Party, did introduce tariffs on imports against heavy opposition, tariffs that are today evaluated as quite moderate and at the time largely were aimed at employing so-called poor whites through protecting local industry against foreign competition. (Customs Tariff Act of 1925, see Kaplan 1976) However, an important distinction can be deduced from an undeservedly obscure rejoinder to an article written by sociologist Bill Martin in an American journal by Renfrew Christie. (Christie, 1991 and Martin, 1990) Martin considered the relationship of the state and industrialisation largely from the tariff question perspective and the role played by the Pact government as nationalists. It is difficult however to really envision the Pact government of General Hertzog as an energetic promoter of developmentalism. It is true that the vital state Iron and Steel Corporation (ISCOR) was created by the Pact although only brought into fruition by the Fusion government subsequently. However, the Pact politicians were narrow-minded and dominated by special interests, notably of agriculture and they really held little promise for an industrialised society. For them, the most important aspect of industry was the

provision of jobs for whites who were being forced off farms, the so-called poor whites. The private sector in fact was very reluctant to reserve jobs for poor whites who had few relevant skills and demanded more pay than other workers, hence the interest in regulation and control.

Christie, however, basing himself on his study of South African electrification and its relationship to the mining industry, from which it acquired growing autonomy while the connection remained so central, took a different tack. (see also Freund, 1989) He stressed the existence of a quite distinct second industrialising trajectory that came to depend on state support, critically through the creation of the giant parastatals, ESCOM, ISCOR, and later others such as SASOL. Structurally South Africa has been uneven, and perhaps in some areas even backward, in the production of industrial consumer goods. The relatively minor importance of the clothing industry, in most cases the pioneer secondary industrial sector, is very striking in any comparative industrial history. Yet South Africa leaped into the construction of heavy industry from the late 1930s onward largely under state guidance.

Christie argues that it is here and not in the skirmishes over tariffs that the battle for state industrial policy was really fought. From the perspective of industrial history, the Christie line leads up towards the establishment of characteristics which are the focus of Ben Fine and Zavareh Rustomjee's influential study of what they consider to be a minerals-energy complex that continues to dominate the South African economy. (Fine & Rustomjee, 1996) Christie tells the story of how ESCOM, formed in 1922, eventually won control of the electricity sector from the Victoria Falls & Transvaal Power Company, formed by British capital albeit with German technical knowhow, and made cheap electricity an inherent feature until very recently of further big industrial growth. 'Electrical mechanisation was a crucial factor in increasing productivity.' (Christie, 1984: 20) The struggle against mining interests in order to pass the Electricity Act of 1922, which required important concessions to the Chamber of Mines that for instance made the parastatal officially non-profit, was difficult. (Christie, 1984: 83-84)

Nancy Clark's thoughtful monograph demonstrates how this kind of initiative gradually became acceptable to the private sector as its promoters intended, and the mining magnates themselves came to live with what to them had been extremely questionable new structures. (Clark, 1994) It is also telling to flag the point made by David Kaplan (in 1976 and also Jon Lewis, 1994) that ISCOR, very early in its history, dropped the poor white engagement with which it had been established as unprofitable and yet was allowed to develop unhindered in the twilight days of the ministry and then under Smuts' political aegis after 1939.

There was a parallel in agriculture. The National Party had good political reasons to try to bring investment and prosperity to agriculture which was in mostly very poor shape in the 1920s. Under the Fusion ministry in the 1930s, the support for co-operatives and the passing of the Marketing Act provide very significant, hated as it was by the laissez faire economists. (Feinstein, 2005:142) However, after 1939 Smuts tried to shift the emphasis towards modernisation and productivity gains rather than keeping white farmers, especially marginal ones, on the land. . Agriculture had started to receive significant aid and protection in the 1930s and could rely on the Land Bank for capital but there was a sense that some of this was purely political in character and state support had to be channelled to raising 'scientific'

production standards rather than just subsidising farmers or assisting self-sufficiency at the expense of the industrial economy.

This form of development suited Smuts very well. His thinking about industrialisation was already in formation during his first term of office. For instance, it is revealing that he wrote as early as 1920 to Laite that ‘I need your services in connection with the large policy of industrial development which both you and I have been advocating.’ (Laite, 1943: 57) It was Smuts, coming out of discussions on the electrification of the railway system, who presided over the creation of a national electricity parastatal, ESCOM, in 1923 in which Kotze played a significant part (Christie, 1984:51; Clark, 1994) ⁴ Smuts was an admirer of John Maynard Keynes, who shared with him a very critical view of the treaty of Versailles and the post-World War I arrangements which would collapse into disaster a decade later. On the technical side, he was one of the few figures in international politics in his own or any other period who had a good understanding and passionate interest in science. He was ambitious to turn at least a white-run swathe in the southern half of the continent into an African America.⁵

Before turning to the question of South Africa in the 1940s and the onset of a developmental state, it should be said as well that this movement was far from uncontroversial. This was not merely an incidental consequence of the circumstances and intellectual climate of the 1940s much as that was a time for a discourse of planning and centralisation⁶. The mining interests worried about secondary industry as an albatross around their necks for which they would have to pay. A divided economic profession certainly did not abandon its cherished disciplinary principles in order to support wartime developmentalism under Smuts. (Nattrass, 2005) Economists S.H. Frankel and C.S. Richards at the University of the Witwatersrand were articulate and voluble enemies of state intervention in the economy. (SAJE 2002) The 1942 Social and Economic Planning Council, for instance, notoriously contained no economists. It was described contemptuously by Richards as ‘the Blue-Print of the New Order in South Africa’ formulated by ‘enthusiastic but untrained amateurs’. (Richards, 1942: 48)⁷ Frankel, often considered the best pre-war economist in South Africa, was excluded from any post of importance after the war and left South Africa in pique for a rather undistinguished career in Oxford in 1945. Here he found it hard to fit into the growing pressure on the British Establishment for decolonisation. However, it could also be said that Frankel, and even more so Richards, actually were supporters of liberalisation in South Africa from the point of view of dismantling racial segregation. Another emigré and liberal in racial questions, C.W. de Kiewiet, in his influential social and economic historical writing, reflected these laissez-faire views concerning the artificiality and questionability of such interventions in the economy (de Kiewiet, 1942).⁸

⁴ However Smuts in opposition, perhaps recognising the power of mining house arguments did oppose the creation of ISCOR, against the sponsorship of Frederick Creswell, a strong supporter of the economic dominance of white labour.

⁵ This is well addressed by Hancock, 1968.

⁶ For this see Chibber, 2003 and Hurtado, 2010 respectively on India and Argentina.

⁷ For more, see Richards, 1940. This book on the iron and steel industry, hostile to the parastatal, was sponsored by the mining industry.

⁸ This kind of laissez faire economics remained a strong tradition in the South African academic world with such luminaries as W H Hutt and Ralph Horwitz. They were typically anti-apartheid such as Francis Wilson who wrote an important study of mining labour, or the fledgling economic historian turned politician Helen

The Making of the South African Developmental State

By the 1940s it is possible to apply the developmental state concept to state and economy in the Union of South Africa. Until 1939 the Fusion government under General Hertzog contained developmental initiatives but within an atmosphere of caution and fiscal conservatism. This was true despite the fact that Hertzog was eager for South Africa to assert national sovereignty within the Commonwealth and was aligned with those Commonwealth members, such as the Irish Free State, that held comparable perspectives.⁹ However, this impulse, which brought Smuts to power as premier again, actually initiated a remarkable period of planning much of which can be labelled as developmental. Some of this, of course, fitted the need for wartime government co-ordination and planning at a time when planning was considered of the utmost importance amongst all belligerents. However in South Africa, it involved as well thinking about the post-war future. Key elements here were the initiation of a series of commissions intended to consider all aspects of government policy, social and economic, the establishment of new institutions which could regulate and take forward overarching policies outside the normal work of ministries and the furtherance of the existing parastatals, ESCOM and ISCOR, together with plans to create new ones.

The first aspect recalled earlier attempts, notably during and after World War I, along these lines. An Industries Advisory Board, intended to have some research capacity, was created already in 1916 but was fairly ineffectual. (Dubow, 2005: 228) It morphed into the Board of Trade and Industries in 1923, which excluded industrialists. (Kooy and Robertson, 1966; Martin, 1990) According to Martin, the Board was a centre of thinking about industrialisation and how government subsidisation could support it under the leadership of American-trained A.J. Bruwer. (Martin, 1990: 71, Kooy and Robertson, 1966) Its relationship with the mines was strained, Martin, 1990: 74-75) Less successful yet was the National Business Corporation, founded in 1919 and liquidated in 1926. (Cartwright, 1971)

The Industrial and Agricultural Requirements of 1940, still largely motivated by war demands was an early example of the new generation of thinking. Ringing words boldly called for a society where every individual would have a right to develop himself to the best of his ability and to a decent living standard and, where necessary, the state should intervene to support this right. (UG 40/1941) The state would inevitably be the 'largest investor' and stabiliser through such investment in the economy with Sweden held out as a model. (UG 40/1941:26, 67) This remarkable commission report was really the charter of an industrialisation plan. The van Eck Commission in 1941 called for rationalisation and a more productive secondary industry that did not require protection. (Feinstein, 2005:131) It affirmed the centrality for industrial development, focussed on the Rand, of 'a cheap supply of electrical energy generated from coal' (UG 40/1941:8) Investment in mechanisation would help remedy the lack of skills and the poor quality of welfare in South Africa. Interestingly there was scepticism about the efficacy of aid to agriculture. (UG 40/1941:31ff)

Suzman. It could be said in fact that there was a dearth of substantial intellectual support for the developmental project in this critical period. For a liberal view hostile to state intervention but sympathetic to black advancement and elimination of the colour bar see Frankel, 1947.

⁹For interwar shifts towards a more nationally directed economy, see Gelb, 1989 and Ally, 1994. Unlike Ireland and against the will of Herzog, the Union parliament voted to enter World War II in 1939 alongside Britain.

However other documents also deserve mention. Industrial decentralisation plans, which would mount in importance after the war, received attention in the Rural Industries Commission. (Clark, 145-46; see also Mager, 1999:ch. 2) The Factory Act of 1941 (preceded by the Shops and Offices Act of 1939) was aimed at enforcing acceptable work conditions in secondary industry (Duncan, 1995:57) after the war. The 1942 Social and Economic Planning Commission series, which differed in quality and importance, were of great significance as well.

Institutional formation followed debate. The Board of Trade and Industries, critical from the point of view of tariff determinations, became far more active in the new era. (Kooy and Robertson, 1966) The 1939 Research Commission can be seen as the start of an attempt to co-ordinate and further scientific research to the benefit of industry following the creation of the National Research Council Board. (Dubow, 2205:237; Cartwright, 271) The Industrial Development Corporation was created in 1940 in order to assist new business activities as well as promote the expansion, better organisation and modernisation of existing firms. (Cartwright, 1971: 5; Nattrass in Dubow and Jeeves, 32) Various other agencies such as the Fuel Research Institute and the Forest Products Research Institute and various bodies linked to agricultural development, were amalgamated under the overall care of the Council for Scientific and Industrial Research, an extremely important and large formative body for developmental concerns. In addition to the CSIR once the war ended, the National Council for Social Research was formed; it later became the Human Sciences Research Council. (Dubow, 2005: 243)

In the case of ESCOM and electrification, the struggle was to wrest the electrical grid from British interests, nationalise the VFPTC and tie it into a national power system, in other words to transform it from a largely regulatory body to a major stimulus for heavy industry. It was right at the end of the Smuts period in office in 1948, that the largely British owned VFPTC, unwillingly but profitably, was finally bought out, a great victory for Smuts' top industrial advisor, HJ van der Bijl, who had focussed on the construction of great coal-based power stations. (Christie, 1984:145ff, Clark, 1993) The VFPTC had been especially lucrative as a business concern during the war but the goal of the people behind Smuts, especially van der Bijl, was industrialisation based on cheap electricity. (Dubow, 2005; Clark, 1994; Fine & Rustomjee, 1996) This in turn would depend on the exploitation of coal mines at very economical rates but lead to the emergence of industry requiring electric power as well as the electrification of increasing amounts of agricultural production. (Christie, 1984) With regard to ISCOR, Charles Feinstein provides some idea of the growing capacity and efficiency of the steel industry and its ability to provide a basis for heavy industrial expansion. (Feinstein, 2005) According to Clark, 'van der Bijl's plans to expand ISCOR's market control were largely successful, turning the state corporation into the country's major supplier of steel.' (Clark, 1993:150) ESCOM too had found an irreplaceable niche alongside the growing coal industry and the mining giants, notably Ernest and then Harry Oppenheimer's Anglo-American. And the end of the war was accompanied by plans for new parastatals although the next major one, SASOL, the coal-into-oil corporation, only started operations after the fall of Smuts and the onset of the National Party regime.

The Planning Elite

The czar of the economy during the war years was HJ van der Bijl, Director General of War Supplies. Van der Bijl was a remarkable man whose career has struck a number of academic

observers although it can be argued that his importance in shaping modern South Africa has been neglected.¹⁰ (Christie, 1991, Dubow, 2005, Clark 1993) A family friend of not only Smuts but his predecessor as premier General Louis Botha and his rival J.B.M. Hertzog and also of Sammy Marks, the Jewish immigrant who established the first modern industry in the old South African Republic, his father had taken a special interest along South African economic nationalist lines even when he was a boy before the Anglo-Boer War. Van der Bijl was a brilliant university student in imperial Germany, where he was the rare example of a foreigner being rewarded with an academic appointment. Thereafter he went on to New York and Bell Laboratories with his American wife where he authored an important early textbook on electronics (“thermionic vacuum tubes”) and was one of the pioneer developers of long-distance telephony. After the war, it was Smuts who persuaded him to come back to South Africa (Clark, 1993: 49), initially to rather frustrating beginnings at the time of the pre-1924 government and thereafter, where he became the key champion of state intervention on behalf of industrialisation. Van der Bijl headed ESCOM from the start (when he was a mere 32 years old) and later ISCOR and was a decisive figure in the wartime commission structures. After the war, he (and here with his great influence on Smuts) he looked forward to South African exploration of nuclear energy based on its uranium deposits and its capacity to build a commercial national shipping fleet before his early death in 1949. It is not surprising that Nazi Germany tried to secure his services in the 1930s and Labour Party Britain brought him over to negotiate between state and business in the negotiations leading ultimately to the nationalisation of steel. (Jacobs, 1948)

Van der Bijl anticipated the debate on the developmental state and democracy with considerable acumen:

‘The best thing that can be said of dictatorship is that it has in some cases resulted in more expeditious material development but the same can undoubtedly be achieved by democracy more suitably constituted. I do not see why it should not be possible to form a democratic constitution that will enable a country to be run more like a business concern’. (Jacobs, 1948: 224)

On democracy and the developmental state in South Africa, more certainly needs to be said. Clark, for instances, thinks that van der Bijl had little interest in black labour beyond the cost advantage it gave South African industry. He certainly accepted the logic of racial segregation in an industrialised setting. Thus his dream city, Vanderbijlpark, was intended to allow black workers direct access to work and the centre without encountering white neighbourhoods or residential populations whatsoever (Jacobs, 1948), a vision which proved very popular in the post-war generation with urban planners in South Africa more generally. (Kuper, Watts & Davies, 1958; Western, 1981; Parnell, 1989, Robinson, 1996)

However, before this, it is important to stress that the core activists around van der Bijl who had Smuts’ ear, represented just the sort of small, personally close kind of elite circle that developmental state theory stresses as critical. Frederik Meyer, German-trained like van der Bijl and with a faith in the power of steel, and HJ van Eck, perhaps van der Bijl’s chief advisor, were key lieutenants who remained significant figures in the National Party era. (Cartwright, 1971: 7) Schonland, a geophysicist who helped in the applied development of

¹⁰ There exists a short biography: Jacobs, 1948.

radar, was a wartime scientific adviser of importance. He succeeded in bringing a range of autonomous state-initiated research organisations into the more centralised CSIR penumbra. He left the CSIR in 1950 and emigrated to Britain in 1954. (Dubow: 2005, 242) By contrast, van der Bijl, van Eck and Meyer were all Afrikaners. So was E.G. Malherbe, the educationist closely associated with the Smuts era. Malherbe's interventions in the sphere of education, guided by his belief in the determining vision of science, were not always very successful but perhaps his finest hour, according to Dubow, were his adult education efforts aimed at the military during the war (Dubow, 2001). Van der Bijl and van Eck were key speakers and Malherbe's opinion polls of soldiers (an area where he was for South Africa a pioneer) indicated a very wide acceptance of the role of the state in promoting economic development. (Malherbe, 1980)

What was perhaps missing was the role of the private sector where the weight of the mining industry hung heavy. The private sector came to appreciate increasingly important state economic initiatives in South Africa. Nancy Clark correctly stresses the extent to which van der Bijl and van Eck especially always intended to create structures that would benefit and work with private firms, especially South African ones. However, it is probably only after the successes of the business leaders and the formation of powerful corporations in the third quarter of the twentieth century that partnership came into the picture more substantially. In most respects though, the evidence of state orientation, of the coming together of a dedicated elite and the creation of bodies aimed at furthering industrialisation along certain lines suggest that South Africa was fitting very well into the development state model.

Social Policy as Part of the Industrialisation Plan

To return to the question of democracy is to bring up a subject on which considerable recent research has focussed. This section aims to bring to bear on this the linkage to overall developmental ideas of the national elite at this time. Planning for deeper and more thorough industrialisation of the economy went together with a great deal of establishment thinking about social policy and about issues that touched on the question of race such as urbanisation.¹¹ The 1944 van Eck Commission on social and economic planning put it succinctly: the coupling of social welfare and economic development was essential in creating 'an internally logical system where social welfare is coupled with economic investment and growth.' (p. 39) Van Eck and van der Bijl both passed over at times into social planning. However, as against this, three years earlier the Reitz Commission into Native Affairs had still emphasized the need to reconcile industrialisation with segregation and trusteeship, to focus on the development of the Reserves and to avoid social integration when possible (UG 42/1941) As Seekings and Nattrass note, social welfare was meant in particular to aim at the needs of a bounded, urbanised population with little interest in the rural residue. (Seekings & Nattrass, 2005) The developmental vision of Smuts was in no sense free of the racist assumptions of his upbringing and political milieu. Smuts grasped very well that the Native Bills did not adequately deal with some of the consequences of industrialisation. He understood that, whatever the successes of programmes encouraging white migration to South Africa (quite considerable between 1945-48), there inevitably would have to be an acceptance of substantial black urbanisation as part of the broader industrial project.

¹¹ This is captured by Posel, 2005, Seekings 2005 and by Seekings & Nattrass, 2005:84ff.

The Reitz Commission considered that the main offering of health care to the latter should focus on ‘communicable diseases.’ (UG 42/1941:10) However it equally stated that ‘it is a commonplace that a healthy Native population is necessary to the well-being of Europeans.’ (UG 42/1941:55) An early and relatively obscure Smuts era commission, it nonetheless stated postulates that were never really abandoned. During the war, the government called into being under the aegis of Dr. Henry Gluckman a National Health Commission to formulate a national health policy which contained more than one complimentary remark about the USSR.¹² A physician who sat in Parliament for the ruling party, Gluckman’s interests focussed very strongly on health issues but his interest in the institution of the Industrial Development Corporation, for instance, shows his sense of linkage between health issues and the state’s industrial thrust. (Gluckman Papers, University of the Witwatersrand Archives) The release of this commission report in 1944 was followed by the appointment of Gluckman as first minister of health and housing in South Africa. With its call for a national health system embracing the entire population and sustained by a dedicated tax, for hundreds of centres aimed at promoting health education, research and preventative medicine and for medical jurisdiction to come under democratic control from below, this has been taken as a kind of remarkable anticipation of progressive post-1994 legislation that was shut down by the reactionary racists who came to power in 1948. (Jeeves, 2005)

Indeed Smuts had already rejected some of the proposals of the commission as extravagantly utopian. (Duncan 1995; Wylie 2001) While the health centres and some support for community health proceeded, Smuts refused to allow for a national health system funded by higher taxes or to take medical power away from the rather anarchic and hospital-centred control of the provinces. It remains true that really what was wanted by the regime was ‘a cheap formula for African health needs in the context of segregation’. (Marks and Anderson, 1992, 150) While Gluckman was a visionary in certain respects (his championship of the experimental health centre in rural Natal at Pholela led by Sidney and Emily Kark and his strikingly democratic proposals for administrative management), a more reasonable assessment would have to stress that the Commission was not intended to defy, but rather to fit in with, the overall vision of the Smuts government. Despite Gluckman’s admiration for the Pholela model, the Commission advocated a basic division in the administration of health between a more significant urban and a residual rural section of the population. It did not really escape from the existing reality whereby hospitals were overwhelmingly situated in the cities.

Gluckman’s idea of national coverage made, first of all, a key distinction between *urban and rural*. Urban health care was to be more heavily capitalised and more intense. Allied to this were the recommendations of the parallel Social and Economic Planning Council (UG 14/1944) which envisioned an A and a B social system. The B system envisioned for rural blacks by the van Eck 1944 commission was intended to be administered by the Native Administration department. Nor was it necessarily to be desegregated by race. Gluckman actually pointed to Vanderbijlpark, the brainchild of van der Bijl, as a model of urban planning to fit the new ideas about health. (UG 30/1944:32)

¹² Although Marks and Andersson, 1992, suggest the real impetus for reform came from the medical profession and from the Chamber of Mines rather than the government

It was also part of Gluckman's vision to improve nutrition, seen as a national problem and he chaired a National Nutrition Commission. The 'desirability of subsidised food' as an answer, given that wage hikes were not going to win government approbation very substantially, was also a policy ball in the air frequently wafted round in the health discourse. (UG 9/1943). However, a withering contemporary view suggests the limits of the nutrition initiatives all too sharply: 'What then is the significance of the National Nutrition Council? The council's brief career includes the inclusive impulse of wartime idealism. Its minutes also reveal what the time to come would reveal as the flaws in its collective thinking: it linked African health with farming; it treated black and white health separately; it had no power like that of white farmers. It could only tinker with the details of inequality'. (Wylie, 1999:215)

There was no equivalent bold planning in education despite the call in the Social and Economic Planning Council Report of 1943 for universal primary education 'irrespective of race' to age 14. Ironically, the spread of mass primary education would await the National Party government's institution of Bantu education in the 1960s. The other area that called for reform and commitment was urban housing. This would mean housing provision that went together with the destruction of what were considered to be slums (and notably if they were in any way thought of as interracial), suitable education for a semi-skilled workforce and appropriate social legislation. Deborah Posel has called this a 'racialised welfare state...white supremacy albeit one with a much more human face'. (Posel, 2005: 66) Such thinking assumes substantial central state intervention and control as opposed to the semi-charitable and piecemeal thinking of the past. Even before the Fusion ministry gave way to the wartime government, a Department of Social Welfare had been created. (Posel, 2005: 78)

For all its limitations, it is worth highlighting notable reforms that were enacted in this period: the transfer of 'white' funds to black education on a small scale in the 1944 budget (promoted by Jan Hofmeyr, another key Afrikaner but former VC of the University of the Witwatersrand based in Johannesburg and with far more of a link to Anglophone liberals), the provision of school meals to black children from 1943 (later withdrawn after 1948), the creation of a medical school for Africans and other 'non-whites', the transfer of Baragwanath Hospital in the environs of the new townships that would become Soweto, for African use as a major urban medical centre and the beginnings of the extension of pensions to urban Africans in 1944.¹³ (Sagner, 2000) Unemployment insurance was introduced in 1946 against the opposition of both mining interests and the Nationalist opposition but it hardly was applied in so far as black workers were concerned after 1948 (Seekings and Nattrass, 2005). These provisions, often whittled down from more idealistic beginnings, fit very well the developmental perspective of the state in trying to cope with South Africa race ideology at the same time.

This was equally true of legislation concerning labour. During the war years, the pass laws were largely in abeyance (and were actually clearly opposed by van der Bijl in his term as Minister of Native Affairs as well as by his predecessor, Denys Reitz) and the government, which used the wage council system to improve black wages, dithered over granting full recognition to black or even perhaps integrated trade unions. (Lewis, 1984) Harry Lawrence,

¹³ Yet Sagner writes that 'Without adopting a narrowly instrumental view, it can be argued that the broadening of the national pension scheme in 1944 was indirectly related to the needs of the economic structure.'

wartime Minister of Labour, favoured negotiations aimed at regularising and improving workplace conditions and wages, notably via the intervention of Lynn Saffery, an employee of the independent Institute of Race Relations, a stalwart formation of Johannesburg liberals, to this end. (Hirson, 1989; Duncan, 1995) Politically, this could be accompanied by local equivalents to the strictly advisory Native Representative Council, a cornerstone of the Native Bills of the 1930s and an inherent element in the withdrawal of any participation in the core political system by Africans. It is perhaps difficult to imagine that, in the shining light of Allied wartime propaganda, this could even in South Africa be accepted as 'democracy' but it is unlikely that van der Bijl meant anything more. Smuts and those around him hadn't the slightest intention of either destroying the structures created apparently definitively in the 1930s or of meddling too much in the harsh labour regimes propounded by the gold mines or the substantial white owned farming enterprises. This was not exactly because no possible critique existed. A small fringe of white thinking was increasingly aware of the contradictory nature of the position of the state. Nattrass highlights, for example, the radical perspective of economist Ellison Kahn who denounces the 'Reserves' and their maintenance as a 'kind of workhouse' strategy that got to the heart of the dual economy. (Kahn, 1943; Nattrass, 2005: 37) And this is even truer when one considers the general non-consultation with people of colour who could in any sense be described as militant.

This perspective can even be confirmed by a contemporary look at the most famous all the wartime and post-war reports, the Native Laws Commission report chaired by Judge Henry Fagan (UG 28/1948). It is true that the commission unequivocally calls for the recognition of black urbanisation but most of its recommendations follow from that (more effective and inexpensive transport, African-built public housing under white supervision, modification and eventual phasing out of pass laws, institution of labour bureaux and other measures aimed above all at 'stabilising' labour). But if the Fagan Commission wished to end the anarchic and unpredictable regulatory regime, it affirmed that the 'South African combination of races differ...so radically from each other that there can be no question of assimilation' (UG 28/1948:50).

Smuts' lieutenant Hofmeyr, whose death followed the defeat of the United Party in 1948 and preceded shortly that of Smuts himself, was certainly a more liberal figure who was considerably more open to what we could call a critique of this guiding perspective. He was in a position to understand the contradictions at play although only in the liberal fantasy world is it possible to imagine him as succeeding Smuts and leading the UP towards a rejection of segregation and into a genuinely more democratic dispensation. However, it is a point worth making that those who at least wanted to push the envelope with regard to these contradictions, did have his ear. Men like van der Bijl, Reitz and Malherbe were really what were then called *Sappe*, Afrikaners who supported Smuts and South Africanism and as such the hated rivals of the Purified National Party which came to power in 1948. Their approach and understanding of the country has consequently been marginalised and largely forgotten as they were pushed out of positions of power although plenty of individuals in their ranks did adjust to the winds of Afrikaner change and move towards the conventional white perspective.

However, there were also consequential men, particularly in the civil service, who were genuinely more liberal and who wanted to see at least a partial breakdown in segregation. These high civil servants, often in close touch with British liberalism and with the most

perceptive academics, were largely Anglophone. One significant area of research, for instance, was on personnel. The psychologist Simon Biesheuvel did what was considered important research in the National Institute of Personnel Research established as a branch of the CSIR that strongly criticised early efforts at racial measures of IQs typical of the 1930s and considered that black workers showed far more potential for skills development that had been admissible earlier albeit within limits with which South African developmentalism could live. Indeed these views especially spoke to management who resented the expensive and exclusive claims of most of white labour. (Biesheuvel, 1943; Lewis, 1984)

Other key liberals directly in the government included the energetic promoter of the Karks, Dr. George Gale, really the father of the University of Natal Medical School to train 'non-white' doctors, Eustace Cluver, secretary for health together with his deputy and successor, H.S. Gear, a man with extensive Asian experience, E. W. Lowe, director of Native Labour who believed in trade union recognition for black workers, Herbert Cooke, Chief Native Commissioner of the Witwatersrand, who called for pensions for Africans as early as 1931 and advocated health and safety legislation even on farms, J. E. Holloway, secretary for finance who chaired the prescient Native Economic Commission of 1930-32 and who believed in black rights to urban settlement and Ivan Walker, secretary of labour. It is remarkable to find in the memoirs of Communist labour leader Ray Alexander accounts of practical and fairly congenial meetings on points of contention with representatives of the Harry Lawrence and Walter Madeley and civil servants connected to Wage Board determinations such as Walker. (Alexander, 2004; see also Duncan, 1995) Highlighting this second, somewhat different group, albeit mainly very much Smuts loyalists, provides a shading to the view of the developmental state vision as one-dimensional or all-pervasive. They were probably most important in the social rather than the economic impulse of the time.

The Nationalist Party opposition famously did not share this last view at all. Especially on the hustings, they promoted racial segregation, defended 'traditional' forms of white control and promised when in opposition to shore up racial defences that were being weakened by the social processes that accompanied intensified industrialisation. The Fagan Report was turned into a red flag for the white South African *bulle* although its National counter, the Sauer report too recognised the need for black incorporating into a growing industrial economy. We have already seen the gradual attenuation or disappearance of black school meals which at peak fed more than 500,000 children and unemployment insurance and the reduction of pensions. However, it cannot be said that the main thrust of the SAP vision of industrialisation was rejected with hostility. Nancy Clark sees post-1948 as one of maturation in existing industrial developments rather than a drastic new turn. Even in an area such as health, Dr. Karl Bremer and Minister A.J. Stals, actually supported reform along the lines proposed by the Gluckman Commission in some respects. (Marks and Andersson, 1992) Sagner notes that albeit grudgingly, the Nats kept the 1944 pension legislation while gradually lowering black entitlements. (Sagner, 2000) And eventually it would be the Nats who drastically extended education systems at all levels for blacks, especially dramatic compared to the tiny levels typical of the 1940s. 'Arguably', as Deborah Posel has written, '...the old form of the state was no longer viable, and whichever party had won the 1948 election would probably have made moves to refashion the state along more centrally and powerfully interventionist lines.' (Posel, 2005: 81)

The Developmental State after 1948

This brings us to a final consideration, the fate of the developmental state project, so substantially advanced under Smuts although perhaps less so in the last peacetime years when the government felt weaker.¹⁴ The first point to make is the extent of continuities. Certainly the Nationalists in power purged the higher civil service of 'rooineks' and 'liberalists'; the most significant critical voices on race and social policy disappeared. So did men such as Schonland and Gale. Yet key structures remained and were built on. Van der Bijl and Smuts promoted the development of a massive coal into oil parastatal based on wartime German technology that only saw the light of day under Malan's administration. (Christie, 1984) The apparently apartheid linked nuclear research development was significantly earmarked by the Atomic Energy Act of 1948 which fathered the Atomic Energy Commission created a decade later. (Christie, 1984:187) Smuts created a Uranium Research Committee directly under his own guidance and independent of the CSIR. (Fig, 1998). The continuities in atomic enthusiasm between Smuts and Malan are noted in Edwards and Hecht, 2006) The CSIR was warmly supported by A.J. Stals, first National Party minister of health. (Kingwill, 1990,10) Meiring Naude, a student of Schonland, succeeded him in office. Van Eck remained prominent until his death in 1969 and where he encouraged the intensification of industry aimed at consumer markets, an economic area of growing importance and Biesheuvel only left for the private sector in 1962. The IDC, as has already been noted, was arguably a less successful agency but certainly also has played an important economic role. The Malan and successor governments continued to create new parastatals, notably SASOL founded in 1955, SAFMARINE (very much a dream of van der Bijl's last years) IN 1954, FOSKOR in 1954 and ARMSCOR (1968) and SENTRACHEM in 1967. The CSIR and/or IDC was closely linked to the emergence of all of these as well as the timber giant SAPPI, SAICCOR as the pioneer in chemicals.

The study of South African capital and the state in the apartheid era has been dominated by political considerations and the concerns of the anti-apartheid movement (Innes, 1984; O'Meara, 1996) which has perhaps obscured some important considerations. It is possible, however, to posit two major developments which emerge from a limited engagement with the period. Firstly, South African capitalism engendered the emergence of very large successful companies. In some of these, the complicity of the state at point of origin might be examined more closely. One thinks here of the Afrikaner magnates--Rupert in tobacco, Wessels in automobiles through the link with Toyota and Venter in information technology initially based on links to Taiwanese companies. (For an insightful look at industry in the apartheid era, see Kaplan, 1986 and 1990) The rise of the textile giant Frame was closely tied to the state's tariff regime. In other cases, such as Premier Milling, Donny Gordon in insurance, Sol Kerzner's Southern Sun and South African Brewing or Raymond Ackerman's Pick 'n Pay, the growing scale and scope of the consumer economy and possibly with state protectionism did the trick. This meant however that state-business relations became more complicated. Rupert and Wessels, for instance, certainly became more and more critical of National Party leadership with time. This was a sharp contrast to an earlier period where really only the mining industry, powerful as it was, could contest much with the state.

¹⁴ In Duncan's view, 'the Smuts regime in its last years was not a reforming government set on implementing a new deal for all its citizens. Rather it was a hard-pressed coalition [with the leftward turning and declining Labour Party], torn by pressures arising from the Opposition's growing popularity among Afrikaners,' 83.

And yet in some respects, one can perhaps justify Martin Legassick's view there was a growing accommodation and alliance between capital and the state, a position which needs to be researched further. (Legassick, 1974 and see also O'Meara, 1996) For secondly, state efforts become linked to a growing extent with a defense mentality and with defense-related economic activity as the regime began to feel threatened. (Henk, 2006; Batchelor, 1998; Seegers, 1996, McWilliams, 1989) By the end of the 1980s perhaps 3000 firms had significant involvement in arms procurement. (Henk, 2006:13) Henk estimates that 9% of manufacturing labour was effectively involved in defense. (Henk, 2006:17) Here the Legassick linkage was probably very significant although it is true also that this kind of commitment that may have kept even very large companies relatively limited in their overseas linkages at a time when these linkages began to seem more and more important. (Henk, 2006; Kaplan, 1990) ¹⁵ The dominant political figure of late apartheid was P.W. Botha, prime minister and finally state president, who rose to power on the strength of his very effective reign as Minister of Defence (Polakow-Suransky, 2010). Appraisals of his role contain many of the features of developmental state policy, that is to say, dependence on a small, intelligent, efficient group of closely aligned and like-minded men trained together (notably, for instance Piet Marais, the head of ARMSCOR) , prominence of the State Security Council and a shared, essentially nationalist vision that drew in a large percentage of the appropriate available highly skilled labour force and offered partnership and considerable rewards to the private sector. (Henk, 2006; McWilliams, 1989) The CSIR created a National Institute for Defence Research as early as 1954 and further on, acquired more and more capacity for research aimed at military purposes before the foundation of ARMSCOR in 1968). It might also be possible to compare reform apartheid (for instance, the massive expansion in black secondary education, industrial decentralisation and the attempt to build up effective administrations in the Bantustans) as social policy that would fit what Botha was trying to achieve and with even more contradictory results to that of the Smuts regime thirty to forty years earlier.

There was also a weakness that was clearly etched from the 1940s which only recurred. While South Africa has been able to rely on a panoply of rich natural resources to engage in international trade, to some extent profitably benefited, industrialisation, while a spectacular success in creating jobs taking workers beyond farms and mines, failed then and indeed has largely continued to fail, to produce competitive industrial products based on know-how and skills.¹⁶ Economic growth continued to depend in apartheid times on gold sales supplemented by other minerals, forest and sea products and a strongly subsidised and capitalised agriculture. This would lead to endemic balance of payments problems. Clark points to the hope on the part of van der Bijl and others for certain new developments: cheap textiles manufactured in poor rural areas based exclusively on black labour and the planting of timber plantations in suitable areas. (Clark, 1994) This was already strongly flagged by the van Eck Commission of 1941 and the last of the Social and Economic Planning Commission reports in 1948. (UG 53/1948)

The answer of Smuts' people (and even before of WJ Laite) lay in the economic development of colonial Africa, especially the southern half of the continent. (UG 40/1941)

¹⁵ McWilliams views a 'military-industrial complex' whose interests really bestrode the entire economy.

¹⁶(This insight is strongly put forward by Richards, SAJE, 1949 and permeates Oppenheimer, 1950).

African territories seemed to be the only obvious potential recipients of South African industrial exports. This was one reason why Smuts was so unhappy at the threatening if distant cloud of decolonisation. One could finally add that the outward policy of B J Vorster and, to a lesser extent, Botha, included a certain later renewal of this dream. However, without the realisation of significant exports based on added value, the South African model came to look more and more like another form that has been critiqued elsewhere, the import substitution industrialisation model (ISI) which emphasized the movement and export of heavy materials, massive unskilled labour application and semi-military forms of labour control. ISI calls to mind the limits which Latin American economies were reaching simultaneously. (Duncan, 1992; Gelb, 1991) Apart from the exchange constraints, this led in time to declining productivity and stagnant investment which became tickets to political instability as labour requirements started to fall from the 1970s onwards. (Seekings & Nattrass, 2005; Gelb, 1991)

This key limitation, in contrast to the dramatic export successes of the East Asian developmental states, might underscore the point that the developmental state cannot only, if at all, be seen as a panacea for the problems of South Africa. This paper has tried to pursue the developmental state model consistently. In key respects, the formation of a suitable body of institutions in large part through the deliberations of select commissions, the existence of a small, committed elite with limited involvement from the public set the stage for the application of the model in key respects. In terms of its own economic goals, it achieved much but the national political vision, which seems almost inevitably to be linked to this kind of policy making, while perhaps also almost inevitably welfareist, was not going to promote political democracy or inequality with only minimum beneficial social results. Historically it was tied to a racist paternalism of the sort we can associate with Smuts and thereafter even to a rejection of, even a confrontation with, the Third World as in the apartheid era. The model chosen in South Africa, as Charles Feinstein has powerfully argued, was pregnant with contradictions that later were to have very problematic outcomes.

A developmental state can even arguably approach a Fascist model although it is unlikely to have the Fascist draw on the masses. However, the response to this may be, rather than a liberal abandonment of developmentalism, a struggle to pursue developmentalism in a way that will promote more desirable and sustainable social outcomes. However, the form it takes will be constructed according to the social forces already in play and in command of real effective administrative power.

References

Government Documents

- UG 40/1941. Industrial and Agricultural Requirements Commission (van Eck), 3rd interim report.
- UG 42/1941. Native Affairs Commission. (Reitz)
- UG 9/1943. Social and Economic Planning Council Report 1. Re-employment, Reconstruction and the Council's Status.
- UG 14/1944. Social and Economic Planning Council Report 2. (van Eck) Social Security, Social Services and the National Income.

UG 30/1944. National Health Services Commission. Report on the Provision of an Organized National Health Service for all Secors of the People of the Union of South Africa 1942-44 (Gluckman).

UG 10/1945 Social and Economic Planning Council Report 4. (van Eck) The Future of Farming in South Africa.

UG 28/1948 Native Laws Commission (Fagan).

UG 53/1948. Social and Economic Planning Commission. Economic and Social Conditions of the Racial Groups in South Africa (van Eck), Report 13.

Gluckman Papers, University of the Witwatersrand

Printed Sources

Ally, Russell, *Gold and Empire; The Bank of England and South Africa's Gold Producers 1886-1926*, Johannesburg: Witwatersrand University Press, 1994.

Amsden, Alice, *Asia's Next Giant; South Korea and Late Industrialisation*, New York: Oxford University Press, 1989.

Ashman, Sam, Ben Fine & Susan Newman, 'Amnesty International? The Nature, Scale and Impact of Capital Flight from South Africa', *Journal of Southern African Studies*, XXXVII, 1, 2011, 7-26.

Batchelor, Peter, 'South Africa's Arms Industry: Prospects for Conversion' in Jacklyn Cock & Penny McKenzie. eds., *From Defence to Development; Redirecting Military Resources in South Africa*, Cape Town & Ottawa: David Philip & DRC, 1998, 97-122.

Biesheuvel, Simon, *African Intelligence*, Johannesburg: South African Institute of Race Relations, 1943.

Bowman, Andrew, 'Ecology to Technocracy: Scientists, Surveys and Power in the Agricultural Development of Late-Colonial Zambia', *Journal of Southern African Studies*, XXXVII, 1, 2011, 135-53.

Bozzoli, Belinda, *The Political Nature of a Ruling Class; Capital and Ideology in South Africa 1890-1933*, London, Boston & Henley, Routledge Kegan Paul, 1981.

Cartwright, A.P. *Die Nywerheids-Ontwikkelings Korporasie van Suid Afrika Beperk*, translated into Afrikaans, Johannesburg: IDC, 1971.

Chang, Ha-Joon, *The Political Economy of Industrial Policy*, London: Macmillan, 1994.

Chibber, Vivek, *Locked in Place; State-Building and Late Industrialization in India*, Princeton: Princeton University Press, 2003.

Christie, Renfrew, 'Anticipated Industrialisation: A Comment on William Martin's "The Making of an Industrial South Africa"', *International Journal of African Historical Studies*, XXIV(3), 1991, 589-608.

Christie, Renfrew, *Electricity, Industry and Class in South Africa*, Macmillan, 1984.

Clark, Nancy, 'The Limits of Industrialisation under Apartheid' in Philip Bonner, Peter Delius and Deborah Posel, eds., *Apartheid's Genesis 1936-62*, Johannesburg: Ravan Press and Witwatersrand University Press, 1993.

Clark, Nancy, *Manufacturing Apartheid; State Corporations in South Africa*, New Haven: Yale University Press, 1994.

Coase, R. H., 'The Nature of the Firm', *Economica*, IV, 10, 1937, 386-405.

de Kiewiet, C. W., *A History of South Africa, Social and Economic*, Oxford: Clarendon Press, 1942.

Dubow, Saul, 'Colonial Nationalism, the Milner Kindergarten and the Rise of South Africanism 1902-10', *History Workshop Journal*, 43, 1997, 57-85.

- Dubow, Saul, *A Commonwealth of Knowledge; Science, Sensibility and White South Africa 1820-1900*, London; Oxford University Press and Cape Town: Double Storey Press, 2006.
- Dubow, Saul, 'Scientism, Social Research and the Limits of "South Africanism"; The Case of Ernst Gideon Malherbe', *South African Historical Journal*, 44, 2001, 99-142.
- Duncan, David, *The Mills of God; The State and African Labour 1918-48*, Johannesburg: Witwatersrand University Press, 1995.
- Duncan, David, "'We are Motor Men'; Management Culture and Consciousness in the South African Motor Industry', unpublished ms. c.1992.
- Edwards, Paul & Gabrielle Hecht, 'Technopolitics in the Construction and Destruction of Apartheid South Africa', unpublished paper, Itala Park workshop, c. 2006.
- Evans, Peter, *Embedded Autonomy; States and Industrial Transformation*, Princeton: Princeton University Press, 1995.
- Feinstein, Charles, *An Economic History of South Africa; Conquest, Discrimination and Development*, Cambridge: Cambridge University Press, 2005.
- Fig, David, 'Apartheid's Nuclear Arsenal: Deviation from Development' in Jacklyn Cock & Penny McKenzie, eds., *From Defence to Development; Redirecting Military Resources in South Africa*, Cape Town & Ottawa: David Philip and DRC, 1998, 163-80.
- Fine, Ben & Zavareh Rustumjee, *The Political Economy of South Africa: From Mineral-Energies Complex to Industrialisation*, Boulder: Westview, 1996.
- Frankel, S. H., *An Economist's Testimony*, Oxford: Oxford Centre for Postgraduate Hebrew Studies, 1992.
- Frankel, S. H. , 'Whither South Africa? An Economic Approach', *South African Journal of Economics*, XV, 1947, 27-39.
- Freund, Bill 'The Social Character of Secondary Industry in South Africa with Special Reference to the Witwatersrand 1915-45' in Alan Mabin (ed.), *Organisation and Economic Change*, Johannesburg: Ravan, 1989, 78-119.
- Freund, Bill , "South Africa As A Developmental State?; Changes In The Social Structure Since The End Of Apartheid And The Emergence Of The BEE Elite", *Review of African Political Economy*, 114, 2007, 661-78.
- Gelb, Stephen, 'South Africa's Economic Crisis: An Overview' in S. Gelb, ed., *South Africa's Economic Crisis: An Overview*, Cape Town & New Jersey: David Phillip & Zed Books, 1991, 1-32.
- Gelb, Stephen, 'The Origins of the South African Reserve Bank 'in Alan Mabin, ed., *Organisation and Economic Change*, Johannesburg: Ravan, 1989.
- Hancock, W.K., *Smuts; The Fields of Force 1919-50*, Cambridge: Cambridge University Press, 1968.
- Henk, Dan, *South Africa's Armaments Industry: Continuity and Change after a Decade of Majority Rule*, Lanham MD: University Press of America, 2006.
- Hirson, Baruch, *Yours for the Union; Class and Community Struggles in South Africa*, Johannesburg and London: Witwatersrand University Press and Zed Press, 1989.
- Hodge, Joseph, *Triumph of the Expert; Agrarian Doctrines of Development and the Legacies of British Colonialism*, Athens O: Ohio University Press, 2007.
- Hurtado, Diego, *La ciencia argentina; un proyecto inconcluso, 1930-2000*, Buenos Aires: Edhasa, 2010.
- Innes, Duncan, *Anglo; Anglo American and the Rise of Modern South Africa*, Johannesburg: Ravan, 1984.
- Jacobs, Alice, *South African Heritage: A Biography of H.J. van der Bijl*, Pietermaritzburg: Shuter and Shooter, 1948.

- Jeeves, Alan, 'Delivering Primary Health Care in Impoverished Urban and Rural Communities; The Institute of Family and Community Health' in Saul Dubow & Alan Jeeves, eds., *South Africa's 1940s; Worlds of Possibilities*, Cape Town: Double Storey, 2005, 87-107.
- Jeeves, Alan, 'Health, Surveillance and Community: South Africa's Experiment with Medical Reform in the 1940s and 1950s, *South African Historical Journal*, 43, 2000, 244-66.
- Johnson, Chalmers, *MITI and the Japanese Miracle; The Growth of Industrial Policy 1925-75*, Stanford: Stanford University Press, 1982.
- Kahn, Ellison, 'Whither Our Native Policy?', *South African Journal of Economics*, XI, 1943.
- Kaplan, David, *The Crossed Line; The South African Telecommunications Industry in Transition*, Johannesburg: Witwatersrand University Press, 1990.
- Kaplan, David, 'The Politics of Industrial Protection in South Africa 1910-39', *Journal of Southern African Studies*, III(1), 1976, 70-91.
- Kaplan, David, 'Towards an Analysis of the South African Capital Goods Industry: Some Evidence from a Study of the South African Machine Tool Industry in Comparative Perspective', unpublished ms., University of Edinburgh Centre of Technology and Social Change, 1986.
- Kingwill, D.G., *The CSIR: The First Forty Years*, Pretoria: CSIR, 1990.
- Kooy, Marcelle and Hector Robertson, 'The South African Board of Trades and Industries', *South African Journal of Economics*, XXXIV, 1966, 205-24.
- Krikler, Jeremy, *The Rand Revolt; The 1922 Insurrection and Racial Killing in South Africa*, Johannesburg & Cape Town: Jonathan Ball, 2005.
- Kuper, Leo, Hilstan Watts & Ronald Davies, *Durban; A Study in Racial Ecology*, London: James Gray, 1958.
- Laite, Harold J., *Portrait of a Pioneer: The Life and Works of William James Laite 1863-1942*, Cape Town, Johannesburg & London: South African Publishers, 1943.
- Legassick, Martin, 'British Hegemony and the Origins of Segregation in South Africa 1901-14', in William Beinart & Saul Dubow, eds., *Segregation and Apartheid in Twentieth Century South Africa*, London & New York: Routledge, 1995, 43-59.
- Legassick, Martin, 'Legislation, Ideology and Economy in post-1948 South Africa', *Journal of Southern African Studies*, I, 1, 1974, 5-35.
- Leftwich, Adrian, *States of Development; On the Primacy of Politics in Development*, Cambridge & Malden MA: 2000.
- Lewis, Jon, *Industrialisation and Trade Union Organisation in South Africa 1924-55: The Rise and Fall of the South African Trades and Labour Council*, Cambridge: Cambridge University Press, 1984.
- Lonsdale, John, 'The Depression and the Second World War in the Transformation of Kenya' in David Killingray & Richard Rathbone, eds., *Africa in the Second World War*, New York: St. Martin's Press, 1986, 97-142.
- Mager, Anne Kelk, *Gender and the Making of a South African Bantustan; A Social History of the Ciskei, 1945-59*, Cape Town, Oxford & Portsmouth NH: David Philip, James Currey & Heinemann, 1999.
- Malherbe, E. G., *Never a Dull Moment*, Cape Town: Howard Timmins, 1980.
- Marks, Shula & Neil Andersson, 'Industrialisation, Rural Health and the 1944 National Health Services Commission in South Africa' in Steven Feierman & John Janzen, eds., *The Social Basis of Health and Healing in Africa*, Berkeley: University of California Press, 1992, 131-61.

- Marks, Shula & Stanley Trapido, 'Lord Milner and the South African State', *History Workshop Journal* 8, 1979, 50-80.
- Martin, William, 'The Making of an Industrial South Africa; Trade and Tariffs in the Interwar Period,' *International Journal of African Historical Studies*, XXIII, 1990, 59-86.
- McWilliams, James, *Armascor; South Africa's Arms Merchants*, London: Brasseys, 1989.
- Nattrass, Nicoli, 'Economic Transformation and Growth in the 1940s' in Saul Dubow & Alan Jeeves, ed., *South Africa's 1940s; Worlds of Possibilities*, Cape Town: Double Storey, 2005.
- O'Meara, Dan, *Forty Lost Years; The Apartheid State and the Politics of the National Party, 1948-94*, Athens, O and Johannesburg: Ohio University Press and Ravan, 1996.
- Oppenheimer, Harry, *The Future of Industry in South Africa*, Johannesburg; Institute of Race Relations, 1950.
- Parnell, Susan, 'Racial Segregation in Johannesburg: The Slums Act 1934-39', *South African Geographical Journal*, 1938.
- Polakow-Suransky, Sasha, *The Unspoken Alliance; Israel's Secret Relationship with Apartheid South Africa*, Johannesburg: Jacana, 2010.
- Posel, Deborah, 'The Case for a Welfare State: Poverty and the Politics of an Urban African Family in the 1930s and 1940s' in Saul Dubow & Alan Jeeves, ed., *South Africa's 1940s; Worlds of Possibilities*. Cape Town: Double Storey, 2005, 64-86.
- Richards, C.S. 'Fundamentals of Economic Policy in the Union', *South African Journal of Economics* X, 1942, 47-72.
- Richards, C.S., *The Iron and Steel Industry in South Africa*, Johannesburg; Witwatersrand University Press, 1940.
- Richards, C.S., 'Some Thoughts on the Union's Economic Outlook' *South African Journal of Economics*, XVII, 1949, 142-54.
- Robinson, Jennifer, *The Power of Apartheid; State, Power and Space in South African Cities*, Oxford: Butterworth-Heinemann, 1996.
- Sagner, Andreas, 'Ageing and Social Policy in South Africa: Historical Perspectives with Particular References to the Eastern Cape', *Journal of Southern African Studies*, XXVI,3, 2000, 523-54.
- Seegers, Annette, *The Military in the Making of Modern South Africa*, London & New York, I B Tauris, 1996.
- Simons, Ray Alexander, *All My Life and All My Strength*, Johannesburg: STE, 2004.
- Seekings, Jeremy, 'Visions, Hopes and Views about the Future; The Radical Moment of South African Welfare Reform', in Saul Dubow & Alan Jeeves, ed., *South Africa's 1940s; Worlds of Possibilities*. Cape Town: Double Storey, 2005, 44-63.
- Seekings, Jeremy & Nicoli Nattrass, *Class, Race and Inequality in South Africa*, New Haven: Yale University Press, 2005.
- South African Journal of Economics*. Special Issue in Honour of Presidents of the South African Economics Society, LXX, 3, 2002.
- Western, John, *Outcast Cape Town*, London: Allen & Unwin, 1981.
- Woo-Cumings, Meredith, ed., *The Developmental State*, Ithaca & London: Cornell University Press, 1999.
- Wylie, Diana, *Starving on a Full Stomach: Hunger and the Triumph of Cultural Racism*, Charlottesville & London: University of Virginia Press, 2001.