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'Scientific Salvation' and Development: Britain, South Africa and the African Regional Scientific Conference, October 1949

Suryakanthie Chetty

University of Pretoria, Pretoria, South Africa

ABSTRACT

The African Regional Scientific Conference took place in Johannesburg, South Africa in October 1949. With delegates drawn from South Africa, Britain, France, Portugal and Belgium, the Conference was an attempt to chart a way forward for development in Africa. This article draws upon the voluminous correspondence and reports held at The National Archives Kew, supplemented with other primary and secondary material, to consider the workings of the Conference from its inception with its commitment to delineate a distinction between science and politics to its culmination and the subsequent formation of the Scientific Council for Africa South of the Sahara. The Conference was contextualised by development policies predicated upon colonial and South African expertise and leadership which created a sense of tension and contradiction related to the racial exclusions of the apartheid state, the attempt to maintain colonial hegemony through science and impending decolonisation. This paper therefore uses the Conference as a lens to explore the changing relationship between Britain and the apartheid state and nevertheless shows that, while Britain and South Africa held opposing views regarding African development, the shared assumptions of western 'civilisation' led to the maintenance of hierarchies of power and knowledge that excluded those at whom development was aimed – indigenous Africans.

KEYWORDS

Development; science; Africa; malnutrition; disease; erosion; Colonial Welfare and Development Act; labour; psychometric testing; Scientific Council for Africa South of the Sahara; Schonland; apartheid

In 1929, South African statesman Jan Smuts spoke of the dramatic 'revolutions' taking place in Africa since the late nineteenth century: the expanding railway network and the far-reaching changes wrought by mining. These revolutions had provided the impetus for increasing white settlement on the continent, and an influence that was necessary for 'African advancement'. For Smuts, without European presence, '… The African mass will not be moved, the

CONTACT Suryakanthie Chetty chetty.s@up.ac.za

sporadic attempts at civilisation will pass, Africa may relapse to her historic and prehistoric slumbers.'[1] Defending white settlement in Kenya, Smuts' words were also evidence of South African ambitions on the African continent. They reflected, too, one of two British perceptions of development in Africa. The first – as articulated by Smuts – was based on the view that white leadership was essential, coupled with African development 'along their own lines'. It would be evident in the segregation and later apartheid policies of white South Africa. The second emanating largely from West Africa, emphasised African-centred development under the benevolent paternalism of indirect rule. As John Cell shows, both views nevertheless shared mutual assumptions of African 'difference'.[2] And both were based on some form of European intervention to stimulate African development. However there were tensions between Britain and South Africa as evident in a conference on development held in the apartheid state.

This article therefore has two aims: the first is to consider the African Regional Scientific Conference held in Johannesburg in 1949. While mentioned in the existing literature on development and resulting in the formation of the Scientific Council for Africa South of the Sahara, there has been little focus on the content and context of the Conference itself. This paper also uses the Conference as a lens to explore the changing relationship between Britain and South Africa at a key moment. Contextualised by the decline of empire and the imperial ambitions of the apartheid state, development in Africa – as articulated at the Conference – exposed the contradictions of the last decades of colonial rule on the African continent, evident in the fraught relationship between Britain and the new apartheid state.

The first part of the article addresses the period immediately preceding the conference where suspicions regarding South African intentions in Africa were allayed by an emphasis on the scientific rather than political nature of the Conference – a distinction that would prove impossible to maintain. This is followed by a consideration of the Conference itself and the papers presented that reflected the key developmental concerns of the imperial powers. Integral to the developmental initiatives proposed was a vision of the African continent as a site of perpetual underdevelopment requiring scientific intervention and European expertise. The main outcome of the Conference was the proposal of a 'Scientific Committee' to co-ordinate scientific research across sub-Saharan Africa – a discussion of which forms the final part of the article.

There has been extensive literature on development in Africa. In *Triumph of the Expert*, Joseph Hodge traces the relationship between agriculture and development during the first half of the twentieth century, demonstrating the ways in which developmental interventions and policies were intertwined with real-world social, political and economic circumstances. Depression and war marked shifts in the ideology behind and implementation of development in the colonies. In the aftermath of the Second World War, development in

Africa acquired a new urgency as a result of the Cold War coupled with African nationalism and was marked by greater collaboration between the colonial powers.[3]

Sara Lorenzini positions development within an international milieu, beginning with the interwar period where, within the context of the mandate system (the brainchild of Jan Smuts) and trusteeship, the League of Nations associated development with colonial responsibility and morality. With the end of the Second World War amid the emergent tensions of what was to become the Cold War, Lorenzini considers the ways in which earlier attempts at co-ordinating development efforts from the local to the national to the regional became global. For Europe, this manifested in the form of the Marshall Plan, the attempt to assist European post-war recovery which would simultaneously stay the growth of Communism. By October 1949 – just as the African Regional Scientific Conference was taking place – American president, Harry Truman spoke of the adaptation of the Marshall Plan to promote development in the rest of the world.[4] With a more global bent, Corinna Unger addresses the post-war period and the new phase in colonial development. Key to this period was the role of the newly formed United Nations (UN) with organs such as the United Nations Educational, Scientific and Cultural Organisation (UNESCO) working with colonial powers in fostering development in Africa. In addition to UNESCO, other organs of the UN promoting development and providing relief included the Food and Agricultural Organisation (FAO) and the World Health Organisation (WHO)[5] – both of whom sent representatives to the Conference in Johannesburg.

Development during this period cannot be dissociated from science and Helen Tilley's *Africa as a Living Laboratory* begins with the 1929 visit to South Africa by the British Association for the Advancement of Science where politician, intellectual and president of the South African Association for the Advancement of Science, Jan Hofmeyr, considered the reciprocal relationship between science and the African continent: Africa was a potential 'laboratory' for the social, natural and medical sciences and the continent could simultaneously benefit from the development associated with science. Arising from this visit came the African Research Survey with its emphasis on both research and betterment. While addressing the various facets of intervention and development in Africa including the availability and potential exploitation of natural resources, the implementation of agricultural practice and the attempts to eradicate disease, at the heart of Tilley's analysis are the key features of the scientific method: theory and experimentation. The ways in which African was perceived and knowledge constructed about the continent shaped intervention or development. Like Hodge, Tilley also considers the intricate ways in which indigenous knowledge was both utilised and marginalised as well as the exclusion of indigenous Africans from the discourse of science and development.[6]

The notion of colony as laboratory is further addressed by Sabine Clarke with a focus on the Caribbean where she contrasts the more 'authoritarian' and hierarchical developmental approach adopted by the British in Africa with the more 'liberal' stance taken by the Colonial Official in the Caribbean. Key to developmental policy is the Colonial Welfare and Developmental Act of 1940 which asserted the importance of scientific intervention and the modernisation of the colonies, becoming the means by which Britain justified colonial dominance.[7]

These works are significant in addressing development on the continent and Britain's role in fostering development and contextualise the African Regional Scientific Conference. This article therefore contributes to the existing literature by considering in detail a conference which was ostensibly about African development. In this discussion, however, development itself is not the key consideration but forms the terrain on which Britain engaged with South Africa, revealing the strain evident in that relationship that played out over the notion of development on the African continent.

Contextualising the African Regional Scientific Conference

Writing of British policy towards Africa in 1958, E.R. Wicker criticised the mercantilist economic policies of early colonialism that exploited the natural resources of the colonies for the sole benefit of the metropole with little consideration given to development in the colonies. The *laissez faire* capitalism of the late nineteenth century also left colonial development to their respective governments. The trend however changed with an address by Joseph Chamberlain in 1895 that bemoaned the existing lack of development in British colonies, a legacy of an economic policy that should not 'apply to savage countries [as they applied to] civilised portions of the United Kingdom'. Chamberlain's articulation of the 'white man's burden' led to the availability of loans for colonial development in the early twentieth century. It was within this shifting context that the Colonial Development Act was passed in 1929. Funds were made available for 'works of development'.[8] According to Arthur Hilton Poynton, a Deputy Under-Secretary of State, the 1929 Act provided for development in the colonies so long as it stimulated economic growth in Britain. Thus, when colonial governments applied for funding, this was allocated based more on the worth that it held for British industry and trade than for actual development in the colonies.[9] While the implementation of the Act, as argued by Wicker, was therefore not revolutionary, it formed the basis of the Colonial Welfare and Development Act of 1940 which reflected in larger measure the preoccupation with social welfare and development from the 1930s. The Act also made provision to reduce the debt of the colonies and aid was provided in the form of grants rather than loans. Included in the ambit of the Act too was education – which had not been the case in 1929.[10]

And, according to Poynton, there was now an emphasis on 'making development an end in itself' rather than another means of catering to British economic self-interest.[11] A new measure was passed to extend the Act to 1956 and make available greater funding for the 'colonial territories to develop their own resources'. The plan envisioned greater consultation with the local populations and the descriptor 'trusteeship' gave way to 'partnership', a sign of the changing relationship between Britain and the colonies, indicating a certain abrogation of responsibility by the former and greater independence allocated to the latter.[12]

The relationship between Britain, the Dominions and the colonies was reflected in the changing nature of the production and acquisition of knowledge. As Roy Macleod argues, there were five phases in the relationship between science and the British empire, beginning with early imperialism and exploratory voyages around the world. The Briton engaged in collection, description and the ordering of the fauna, flora and the indigenous people. From identification came the exploitation of new resources and opportunities for new markets impelled by the Industrial Revolution. The third phase was marked by the incipient nationalism of settler colonies in the latter part of the nineteenth century and their own expertise in local and regional knowledge that was nevertheless subordinated to that of the metropole. In the twentieth century, however, the final two phases were marked by a greater sense of equality with paternal benevolence in the exercise of British power. Britain remained the hub, maintaining ties to the Dominions and colonies, with knowledge flowing both to and from the metropole. The Dominions were co-creators of scientific knowledge but had also unquestioningly imbibed the values and assumptions of development and progress.[13] The Dominions, too, could then insert themselves within this hierarchy of knowledge acquisition in terms of the relationship with the indigenous and the colonised.

The conference is the concrete demonstration of this hierarchy. As Bigg *et al* discuss, the growth of conferences was concomitant with the rise of imperialism – which was itself integral to the spread of global capitalism. Increasing conference attendance was also due to pragmatic factors such as new, efficient forms of transport and, while initially held in the capitals of Europe, by the twentieth century, it became possible to meet in parts of the world distant from the metropole. Yet the growing global nature of the conference occurred within a context of disputed borders, particularly evident in the last days of empire. This was manifest in the inclusions and exclusions, the voices heard and those marginalised and the convoluted relationship between empires, nations and colonies.[14]

S. Herbert Frankel wrote of the changing nature of colonial rule – and colonial obligations – in Africa. Frankel was a second-generation South African born in 1903 with a life that his obituary describes as being 'closely intertwined with the fate of the British Empire, with its triumphant expansion following the

First World War and its rapid contraction after the Second'. Serving as an economics professor at the University of the Witwatersrand and as advisor to Hofmeyr, Minister of Finance in Smuts's government during the Second World War, Frankel advocated a future for South Africa based on the 'foundation of a common civilisation'.[15] In his essay, 'Africa in the Re-making' published in 1932, he described the self-serving nature of colonialism in the nineteenth and early decades of the twentieth centuries: the plundering of resources by chartered companies, the brutal exploitation of Leopold's rule in the Congo and the prioritisation of German economic interests to the detriment of the indigenous people in their colonies. The French were singled out for a system of direct rule that actively impeded 'development' in their African colonies. The South African context presented even greater challenges than the colonial one, with the industrialisation arising out of the mineral discoveries occurring in a territory containing the 'primitive Native races' as well as a 'European society' that was up to three centuries behind. For South Africa to develop then, Frankel wrote of the exploitation of these two groups and the supplantation of their ways of life by the forces of modernisation. He condemned the ensuing labour policies that allocated indigenous Africans to reserves ill-equipped to support them, and that excluded them from development. South Africa presented the very archetype 'of a European policy towards the subject race being framed solely in what was regarded as the interest of the European population'. For Frankel, the abuse and inequality inherent in early colonialism and contemporary South African policies amounted to little more than 'economic enslavement', out of touch with 'modern' and 'scientific' thinking. But, if 'European civilisation' was the problem, it was also the solution and he believed it to be Africa's 'one great hope of progress' with 'Western science … alone capable of combatting the diseases by which the continent is ravaged.' The forces that had impelled ruthless exploitation could now be turned to benevolent development.[16]

At the end of the War then, at the Commonwealth Scientific Conference in 1946, B.F.J. Schonland, president of the South African Council for Scientific and Industrial Research (CSIR) proposed an 'African research committee' to co-ordinate scientific research focusing on the challenges facing sub-Saharan Africa. This would serve to further 'future development' in Africa: the wellbeing of both black and white and the proper utilisation and exploitation of natural resources related to agriculture and mining. He pointed out that the borders that divided African countries were an impediment to developing an understanding of – and response to – 'the continent's fundamental scientific problems', and greater regional co-operation was needed. The development of Africa was also not simply to be left to African territories but was also the responsibility of the Colonial Office. British scientists were not to be considered 'guests' but as 'partners', collaborating with their South African counterparts in the development of the continent.[17]

The working committee for the conference in 1946 acknowledged the disruption to research by the Second World War; the challenges with obtaining scientific experts and equipment when priority was given to the war effort. Simultaneously, the availability of funding meant that, with the conclusion of the War and the envisioning of a new world order, there could be an '[intensification]' of planning, research and development in the colonies. Key was a consideration of 'colonial interests' and the use of experts to resolve 'colonial problems'. Yet there was also a devolution of power. While funding was provided under the terms of the Colonial Welfare and Development Act of 1940 and its amendments, the '[supervisory]' role of the British was to be 'remote and general rather than close and detailed' and, once the expert had been installed and given their mandate, they were 'free to work out [their] own scientific salvation'.[18] As evident in Schonland's speech then, the Dominions and the colonies would use science and technology to map out their own destiny – which would, in turn, provide a vision for South African leadership in Africa. An outcome of this Commonwealth Scientific Conference then – and one initiated in part by Scholand – was the African Regional Scientific Conference held at the University of the Witwatersrand in Johannesburg three years later.

One of Jan Smuts's key scientific advisors, Schonland returned to South Africa after his war service to found and lead the CSIR. He had a keen interest in scientific and technological development and progress in South Africa – and in Africa. In 1948, he described the meteoric growth in the industrial and economic development of South Africa; its transition from an agricultural to an industrial-based economy initiated by the mineral discoveries of the nineteenth century and the subsequent development of secondary industry which, as a response to the demands of the Second World War, exceeded mining. Accompanying this expansion in development was a growth in the urban workforce of both black and white workers that, from the formation of the Union of South Africa to 1945, had increased 'eight-fold'. The preceding decades for Schonland had seen an 'industrial revolution' take place in the country and 'scientific research' was needed to meet the challenges presented by this revolution and this was to be fostered and co-ordinated by the CSIR, established in 1945. While drawing inspiration from similar organisations across the Commonwealth, its five areas of specialisation included physics, chemistry, telecommunications, 'building research' and 'personnel research', all geared towards what were perceived as unique South African challenges. Building research, for instance, was harnessed to the growing urbanisation of black workers whereas personnel research could be used to determine the 'aptitude' of these workers to meet the demands of industry.[19] At the time of the presentation of his paper in November 1948, South Africa had also witnessed another transition that would have far-reaching effects for policies affecting black labour, industrialisation and skilled work; and South Africa's position in relation to Africa (and, indeed, to the rest of the world): the advent of the apartheid

state in May 1948. Literally meaning 'separateness', apartheid racial doctrine was harnessed to a view of development that was both exclusionary and privileged South African scientific leadership on the continent. The African Regional Scientific Conference held in Johannesburg in 1949 would prove an amalgamation of nascent South African Afrikaner nationalism and the ferment of development initiatives in Africa.

'… wholly scientific:'[20] Preparing for a 'South African' Conference

In early January 1949, J.E. Keyston, research secretary for the Central African Council received a draft agenda for the African Regional Scientific Conference to be held in South Africa later that year. Keyston was based in Salisbury (present-day Harare in Zimbabwe) and had held the position of research secretary since November 1947. He was tasked with investigating the 'research facilities' available in Central, Eastern and Southern Africa and directing the future of scientific research in Central Africa.[21] Keyston was therefore the obvious choice to be sent a draft copy of the agenda drawn up by the Conference organiser P.J. du Toit for his 'information and criticism'.[22]

As proposed in the draft, the Conference was not to be considered a 'specialist' one but was to determine how best to allow for the movement of scientists across the region, the development of a common agenda and goals for scientific research, the availability and publication of research findings, the provision of more 'specialist' conferences and the creation of 'regional research institutes and bureau'. The proposed list of scientific topics that would be discussed was broad: agriculture, ecology, industrialisation, geology, metrology, medicine and also included the social sciences, 'sociological and anthropological research' that would focus on African 'intelligence and aptitude', 'beliefs and attitudes' and western 'acculturation'.[23] In short, the Conference would focus on the natural resources, their effective utilisation and the development of sub-Saharan Africa through science.

The prospect of holding the Conference in South Africa presented unique challenges. The conservative National Party government was perceived as being at odds with the development initiatives of the Commonwealth and the other colonial powers in relation to Africa and could potentially alienate the very Africans at whom development was aimed. In South Africa, the liberal press highlighted the distinctive nature of apartheid policy in relation to that evident in other African territories, a policy that maintained uncompromising segregation and difference applied not only to black South Africans but to Africans across the continent. South Africa's hardline stance thus meant that the country was 'out of step' with other states represented at the Conference, making it a challenge to arrive at common solutions to African problems.[24] It also meant that Africans could potentially be excluded from a conference related to African development.

It was however an early draft of the Conference programme sent to the FAO that raised a red flag for prospective Conference attendees. The missive was an invitation by the South African Department of External Affairs to the upcoming Conference, highlighting the importance of science in addressing the '[under-development]' in Africa, a product of disease and of 'ignorance'. The hope was that science would create the conditions for a 'much larger, healthier and more progressive population' that could sustain not just itself but provide for the rest of the world as well. Much of the letter dealt with the main aims of the Conference – the regional co-ordination of scientific research, the unique nature of the challenges besetting the African continent and the creation of an African research organisation. Point 10, however, addressed medical research specifically. Along with a consideration of the health of the inhabitants of the continent and the physical, psychological and intellectual attributes of indigenous populations was the following: 'what is happening and what will happen to European human stock in Africa?'[25] Describing himself as 'a little disturbed by the implications' of Point 10, the Acting Director-General of the FAO, Herbert Broadley, forwarded the letter to the Colonial Office with his view that it suggested that the South Africans perceived the Conference to be a 'means of maintaining white domination in Africa'. Should this be a key aim of the Conference then the FAO would be reluctant to attend, fearing a backlash from their constituent members.[26] In his response to Broadley, Gerard Clausen pointed out that in initial talks with the South Africans in London the previous year, the Colonial Office had made clear that they would 'strongly deprecate any subject having political implications' placed on the Conference agenda. The British too had taken issue with Point 10 and had written to Schonland suggesting that some of the points raised appeared 'too general for any fruitful discussion' and, moreover, were not 'wholly scientific'. The South African response then, was the more 'tentative draft agenda' that omitted any discussion of the future of 'Europeans' in Africa.[27] However the suspicion of South African motives was not confined to prospective Conference attendees.

The British press was ambivalent with an acknowledgement that attendance at the Conference would lend credibility to the apartheid state's racial policies and, while the University of the Witwatersrand (Wits) – where the Conference was to be held – was a cloistered space, any excursion to the city would expose delegates to the 'disconcerting' realities of segregation. However, as the *Manchester Guardian* suggested, if Malan could exercise restraint in his opening speech regarding white leadership in Africa and 'the excellence of the Apartheid pattern of race relations', the lack of political invective would put international delegates at ease, allowing them to focus on the matters at hand.[28] In contrast, an article appearing in *The Observer* portrayed the Conference as the apartheid state's 'first success' in taking charge of development on the African continent. Its scientific focus notwithstanding, the article argued that political issues were inevitable such as black migrant labour (integral to the South African economy)

as well as white settlement in Africa. The 'finer distinction' between politics and science would therefore be lost on African nationalists, who would view with hostility the British role in development in conjunction with a government committed to the maintenance of 'white supremacy'. The Conference also reflected clearly the racial exclusions of the apartheid state. In response to the criticism that those who would be most affected by the developmental policies under discussion would not be present at the Conference, the South African response was that the lack of black delegates was 'coincidence' – happenstance that the article referred to ironically as 'fortuitous'.[29]

The scathing article was countered by the South African High Commissioner to Britain, Leif Egeland, who – in a letter to the Editor of *The Observer* – reminded critics that the Conference origins lay in a proposal made at the Commonwealth Scientific Conference two years earlier.[30] Egeland highlighted the potential advantage of the Conference 'to black and white alike' in its aim of resolving African challenges common to the sub-Saharan region. With the Conference portrayed as 'a constructive and cooperative effort', he decried the criticism as 'political propaganda'.[31]

Indeed, as Dubow points out, during the very early years of the apartheid state, South Africa continued its participation in scientific conferences and organisations with these functioning as a form of diplomacy, a means for the state to maintain its ties to the international community.[32] Yet there remained skepticism about South African ambitions which would be evident amongst the foreign delegations. Further, as seen in the initial draft of the programme, the apartheid state was also testing the waters, treading a cautious line between their desire for leadership on the continent – a leadership predicated on racial dominance – and a developmental discourse within the context of impending independence. To allay the critics, a press conference was held a week before the Conference, under the eye of the State Information Officer, where Conference secretary-general D.B. Sole, gave assurances that 'questions of political policy' would not be addressed at the Conference and that the matters discussed would remain 'entirely non-controversial'.[33] Newly elected Prime Minister D.F. Malan, in his opening address would also reiterate the ideologically free nature of the Conference.[34]

Yet the Conference was by no means free of ideology, politics or the exercise of colonial and economic power. With the election victory of the National Party as tensions in Europe marked the start of the Cold War, Malan's government took an anti-Communist stance. As such, an early position adopted by Malan was the need for closer regional ties with the rest of Africa for the purposes of 'security'. With the initiation of the North Atlantic Treaty Organisation in April 1949 and its exclusion of Africa, Malan proposed instead an Africa Pact that would include South Africa, African colonies and the United States. Conflating nationalist movements for independence with Communism, the South African government believed that they held the responsibility for the

maintenance of 'Western European Christian civilisation' and, as Berridge points out, this Africa Pact opportunely allowed for 'the extension of South African influence over the whole of "Africa south of the Sahara"'. Britain, however, was opposed to the Africa Pact, which would likely alienate India, the Middle East and its colonies in West Africa. The Pact was moreover seen as a conduit for 'South African imperialism'.[35]

South Africa was also eager to strengthen its ties with sub-Saharan African territories. The country already exerted economic influence in Africa: investments in the Copperbelt, the vital trade going through the Mozambican port of Lourenco Marques and the services provided by trained South African specialists. Evident, too, was the country's military strength which had increased substantially during the Second World War.[36] Speaking in late August 1949 in Elizabethville in the Belgian Congo, Minister of Economic Affairs, Eric Louw discussed development and the need for regional co-operation to address disease and soil conservation. He also called for the strengthening of economic ties between African states, especially in the face of the threat presented by Communist doctrine that would have the alarming effect of inciting the 'indigenous inhabitants' and sowing racial discord. Links to territories such as the Congo then would be based on both its 'strategic position' in Central Africa but also on economic links where the Congo provided the raw materials for South African industry which, in turn, exported to the Congo, 'manufactured products, canned foodstuffs, fresh fruit and other goods'.[37] It was a replication of the economic and trading relationship that African territories had had with their colonial masters for decades.

And it was little different from the South African state's notion of development that had existed from the segregation era and acquired new momentum under the apartheid state. The 'Native Question' had been integral to South African politics and economics since the inception of the Union in 1910. In his discussion of the Native Economic Commission (NEC), Adam Ashforth considers the way in which the segregationist question attempted to resolve ('scientifically') the 'Native Question': the dilemma posed by a majority indigenous African population in a white minority settler state. Using the discourse of science as applied to economic principles, the NEC Report released in 1932 addressed the possible outcomes when a developed society was confronted with a 'primitive' one. The outcomes were the 'extermination or the absorption or the development of the backward race'. A black majority and a society committed to segregation omitted the first two, leaving 'development'. Further the NEC took little account of those indigenous Africans who were an educated, Christian middle-class elite; in terms of the proper implementation of 'scientific' principles, all 'Natives' had to be guided on the path to 'civilisation' as epitomised by white South Africa. As the proper place for the 'Natives' were the 'Reserves', land that had been set aside for them, this was to be the only site for their economic development. 'Civilisation' could eventually be acquired

through waged (and migrant) labour, and the ultimate lack of sustainability on these Reserves meant that development was nothing more than rendering the Reserves reservoirs of labour. The later refrain of the apartheid state was 'separate development' where culture/race was destiny and each culture would develop distinctly. While once again using the rhetoric of science, separate development precluded inclusion and would merely reinforce the economic dependence and underdevelopment of the Reserves – in their new incarnation as the Bantustans.[38] By 1950, Sir Evelyn Baring, the British High Commissioner would report that South African ambitions in Africa would be accompanied by a furthering of the apartheid government's aim of 'a common Native policy'.[39]

In addition to the racial ideology of development as adopted by the apartheid state, there existed too the vestiges of colonial rivalry at the Conference – a holdover from high imperialism. Writing to the Colonial Office, conference organiser Du Toit suggested that, in terms of logistics, the South Africans would be best able to manage if the number of foreign delegates did not exceed one hundred. He recommended a total of thirty-five delegates representing Britain and its ten African colonies with between ten and twenty representatives from each of the other colonial powers: Portugal, Belgium and France.[40] However, the British had to mollify the aggrieved French who reminded them of an agreement between the British, the Belgians and the French that 'the importance of the Conference should not be exagerated [*sic*]' due to its 'political implications' viz, the ways in which their participation in a South African conference held under the auspices of the apartheid state would reflect on them. In addition, budgetary constraints meant that the French had only planned to send a representative from Madagascar. Confronted however with the possibility of a sizeable British contingent, the French now considered sending ten representatives so as not to create the impression that 'their interests in Africa [were not] comparable to' that of the British.[41] The African Department of the British Foreign Office was rather dismissive of French insecurity with a sarcastic comment on 'the almost total lack of interest [that] they have hitherto displayed in the Conference'.[42] However, cognisant of French concerns, and with a tactful diplomacy, the Colonial Office notified Du Toit that the British delegation (consisting of representatives from Britain, East, West and Central Africa) would not likely exceed twenty-five.[43] Six decades earlier, the European powers had competed over the acquisition of colonial possessions; now a certain sense of rivalry was evident in their approach to development in Africa.

However, there was also a history of co-operation in terms of colonial development in Africa – which included South Africa. In the 1920s and 1930s a red locust plague had a lethal effect on crops in Central and Southern Africa, resulting in widespread hunger. From the outset this necessitated a regional response with South Africa providing almost one million pounds to combat the menace. The united response was solemnised just prior to the CSA Conference when representatives from South Africa as well as the British, Belgian and Portuguese

African colonies and territories formed the International Red Locust Control Service in London.[44] Between 1946 and 1949, numerous conferences took place in Africa to consider development in the British and French colonies. In Accra in May 1946, delegates representing the British, French, Portuguese and Belgian colonies considered the establishment of medical schools, the training of African medical professionals and the provision of vaccines. A conference in Dakar in May 1946 led to Anglo-French co-operation in addressing animal diseases while a rinderpest conference two years later focused on preventative measures and the prevention of the southward movement of infected cattle from Ethiopia and the Sudan. A conference on trypanosomiasis in Brazzaville in February 1948 discussed the range of the disease across the continent and sought to centralise and share knowledge of the disease. Conferences were also held in the European capitals: a conference on nutrition and 'the physical wellbeing of the African' in Paris in late 1947 and another in Brussels to focus on the quarantining of disease-carrying plants. Any vestiges of colonial rivalry notwithstanding, the aim of 'co-operation' between colonial powers – as evident in these gatherings – was advertised by the Colonial Office as 'the promotion of the interests of the colonial territories themselves and of their inhabitants'. The use of the colonies to further the economic and political ambitions of their colonial masters was proscribed in the post-War climate. Africans, themselves, were to be included in these discussions 'whenever possible'.[45]

Yet this was not always possible – especially in South Africa – and perhaps most compelling, were those who were excluded from the Conference. The South African government, for instance, was opposed to including Liberia – an independent African state – as the likely delegate 'would not be a European' leading to the possibility of 'an incident which would give offence'.[46] In *The Shock of the Old*, historian of science and technology David Edgerton makes the point that 'National and imperial boundaries were often radically less important than racial boundaries within nations and empires.'[47] And this would be reflected in the Conference where the very regionalisation of Africa created a racial dichotomy between the colonial powers allied with settler governments who were the purveyors of science and technology, the inventors, benefactors and the policy-makers; and indigenous Africans across the continent who were the recipients of the science, technology and modernisation associated with western 'civilisation'. For a time, Afrikaans-speaking white South Africans occupied a grey area in this dichotomy. Accounts by English-speakers in the mid-nineteenth century disparaged the Boers for their perceived failure to represent the values of white 'civilisation' and their inability to conform to the dictates of commerce and progress.[48] In a society so heavily characterised by and wedded to racial distinction, the rural Boers were the very antithesis of the urban, middle-class English-speaker, a symbol of 'degeneration'. However, as South Africa moved towards a union in the first decade of the twentieth century, the growing emphasis on white unity meant

the incorporation of the Boers or Afrikaans-speakers into the narrative of science, progress and development. There was, too, the establishment of specifically cultural organisations that would later include science and technology and took on an Afrikaner nationalist cast. Simultaneously, the segregated state that was being birthed meant that while the Boers could be included, black South Africans could not. According to Dubow, segregationist thinking buttressed by eugenics enforced the exclusion of black South Africans who were portrayed as representing 'pre-scientific and non-progressive ways of thinking'. They were considered irrational and 'superstitious', the 'subjects of scientific investigation' rather than the creators of knowledge. And exclusion from the narrative of science and progress was emblematic of their exclusion from the modern state that would come into being in 1910.[49] Over the course of the twentieth century then, these inclusions and exclusions based on the convergence of racial thinking and scientific/intellectual ability had been given new impetus by the apartheid state.

'a little hobby of the Colonial Office … ?'[50] The African Regional Scientific Conference, 17–28 October 1949

It was this new government that authorised the CSIR to prepare for the African Regional Scientific Conference. This was done under the leadership of zoologist and veterinary scientist Petrus Johann du Toit – who would later replace Schonland as head of the CSIR. In his capacity as director of Onderstepoort – the main institute for veterinary research in South Africa founded in 1908 – Du Toit had been heavily involved in research and other activities related to veterinary science on behalf of the Commonwealth. In 1927, he investigated the status of veterinary research in Nigeria at the behest of the Colonial Office. Two years later he chaired a Pan-African veterinary conference held in Pretoria and in 1946 he was one of the South African representatives at the Empire Scientific Conference. Just prior to the African Regional Conference, Du Toit was in the Congo attending a conference on addressing the threat posed by tsetse flies responsible for trypanosomiasis or 'sleeping sickness' affecting both people and livestock.[51] He now found himself with the daunting task of organising one of the largest conferences to be held in South Africa that would include seventy-five representatives from Europe, Britain and their African territories, thirty-six South African delegates and in excess of a hundred South African scientists.[52] In addition to the representatives from colonial territories, there were present delegates from WHO, UNESCO and the FAO.[53] The entire Conference would take place at Wits and the university timetable was altered with students having to forego the September break in order to complete lectures by the start of the Conference.[54] The *linguae francae* at the Conference were to be English and French with ten interpreters translating for the delegates. Proceedings were to be recorded by ten

stenographers.[55] The week before the start of the Conference saw 'intensive rehearsals' where interpreters, secretaries and stenographers were subject to 'mock discussions' and their interpreting and recording skills were then assessed to ensure there would be no flaws in their performance during the Conference.[56]

However, a confrontational note was struck by the South African Academy for Science and Arts which voiced its opposition to the exclusion of Afrikaans as an official language of the Conference, arguing that all Afrikaans-speaking scientists be given the opportunity to present in their mother tongue. In their complaint lurked the bitterness of historical Afrikaner exclusion from science with their vehement reaction to the perception that Afrikaans was neither 'sufficiently developed or mature' for discussions related to science and technology.[57] The Academy for Science and Arts (Akademie vir Wetenskap en Kuns) was established in 1909 to promote 'Dutch and Afrikaans culture'. By 1942, it had begun fostering Afrikaans-speaking scientists and incorporating the specialised language of science into Afrikaans. As Dubow shows, like 'culture', 'science' was now harnessed to Afrikaner nationalism.[58] The exclusion of the language from the Conference under an Afrikaner nationalist government must have been particularly galling but is also indicative of the tentative position of the South African state, a sense of caution and uncertainty that was mirrored by the international delegations.

The Conference itinerary was a full one with the first day focusing on the status of research in South Africa and South-West Africa, with reports by the representatives of other African territories the following day.[59] More than a hundred papers were expected to be delivered and delegates would also be taken on numerous field trips. Mid-way through the Conference there was to be a state banquet to be held on the 21st of October.[60] The Conference would culminate in the awarding of honorary doctorates by the University of the Witwatersrand to Du Toit, the heads of the British, French, Portuguese and Belgian delegations as well as Sir Edward Mellanby, a member of the British contingent.[61]

The Conference opened at the Wits Great Hall on 17 October 1949. Guest of honour, Malan was not in the best of health. Just over two months previously, he had been advised by his doctors to refrain from wearing 'stiff collars' which was believed to have left him 'indisposed' while delivering a speech.[62] Now, the 75-year-old made his way to the Great Hall leaning on Schonland's arm.[63] Standing before the gathering, Malan spoke of the 'unique' and 'urgent' difficulties facing the African continent that were more formidable than elsewhere in the world, requiring the 'co-operative effort of scientific research'. He considered the lack of 'resources in men and equipment' that bedevilled the continent, and which required collaboration to be effectively utilised. He then called for the establishment of an organisation that would serve as an 'advisory body on scientific research in Africa', with a focus on sub-Saharan Africa, being

careful to point out that this was a recommendation that had already been made at the British Commonwealth Conference three years earlier. Finally, he declared that, as scientists, delegates had a certain freedom of thought and expression apart from politics and it was this 'free discussion' that would lead to potential solutions to which his government would give due 'consideration'.[64]

Yet, in his address, Malan also referred to Africa as being 'the last remaining large space for which the world can look for food and raw materials', echoing his Minister of Economic Affairs, Eric Louw. This was seized upon by the British newspaper, the *Daily Telegraph* as being suggestive of Malan's own '[Pan-Africanist]' ambitions – the possibility of white domination in sub-Saharan Africa. It was a possibility that sat uneasily with the move towards independence, with the independent states of Abyssinia and Liberia, the French Colonies and, of course, West Africa 'whose people are already too politically conscious to fit into the pattern of Nationalist racial policy'.[65] Malan's 'Pan-Africanism' unsurprisingly stood in stark contrast to that held by 'politically conscious' West Africans. Writing in the mid-nineteenth century and countering the prevailing social anthropological views of intellectual ability being determined by race, Edward Blyden was a significant figure in African nationalism. He proposed instead perceived intellectual differences to be a product of circumstance which, in the case of Africans, was slavery. Blyden simultaneously argued for racial difference that nonetheless implied equality: Europeans were 'vigorous', 'violent' and 'scientific' while Africans were 'spontaneous' and exceeded their European counterparts in terms of 'spirituality'.[66] An early Pan-Africanist, Blyden's work inspired West African intellectuals with a vision of 'civilisation' that was uniquely African, based on the characteristics attributed by Blyden to Africans – even as it drew upon the west. From the early twentieth century, West Africans allied themselves with their West Indian counterparts in terms of Pan-Africanist thinking that, in the interwar period manifested as Negritude as evident in the French colonies: the perpetuation of a uniquely African 'civilisation' and 'culture' that was distinct from that of their colonial overlords. With the end of the Second World War, Pan-Africanism took on a specifically liberation cast advocating independence from colonial rule across the African continent.[67] No greater contrast could be imagined between the conservative policies of the apartheid state and the radical discourse emanating from West Africa. Yet, the reception of Malan's speech by delegates ostensibly concerned about South African ambitions on the continent, nevertheless validated the legacy of settler/imperial involvement in Africa.

In response to Malan's opening address, the leading representative of the French delegation, who also represented the Institute for Scientific Research in Madagascar, lauded the 'hardy pioneers' for creating a 'modern' South Africa where once there had been only '[desolation and wilderness]'. The

delegates in the Conference could do no less in solving African challenges; they were duty-bound to do so.[68] A day later – and after a cocktail party presided over by Schonland at Milner Park[69] – the leader of the British delegation and Schonland's equivalent at the United Kingdom Department of Scientific and Industrial Research, Sir Ben Lockspeiser, reflected on a humorous incident the night before when Conference members were beset by a 'swarm of bees' during the party. For Lockspeiser, the encounter symbolised 'untamed [nature]' in Africa and the adversarial relationship between science (as epitomised by the scientific men of the Conference) and hostile nature. The British delegate claimed that should science fail in its undertaking, it would spell the end of 'humanity' on the continent due to 'pestilence, or hunger'. Yet nature could ultimately be tamed, although the process would be slow and painstaking and, again, there was a sense of 'duty' associated with the role of scientists in saving humanity from rampant nature – that caused disease and famine – the very converse of the modern and of human development.[70] This was a common image in the rhetoric of development in Africa.

Drawing upon precolonial and colonial accounts of Africa – especially those by explorer and missionary, David Livingstone – Sjoerd Rijpma demonstrates the ubiquitous nature of portrayals of Africa as a continent of malnutrition and widespread disease. If, as he suggests, development is considered to be the ability of a society to ensure the physical wellbeing of its members, then Africa was considered by its colonisers to be in a permanent state of 'underdevelopment' and therefore subject to European intervention. This perception was as evident for the first half of the twentieth century, including the Conference in 1949, and would remain so even as African states gained independence. It was buttressed by a knowledge system that took for granted European prowess in agriculture and the steady provision of food as well as the authority of Western medical knowledge, thereby marginalising and silencing precolonial and local knowledge. In the 1930s, in her investigation of diet in West Africa, Cicely Williams – who would coin the term 'malnutrition' – realised the local term 'kwashiorkor' applied to what she identified as a new 'nutritional disease' affecting children. However, Rijpma contextualises kwashiorkor – caused by early weaning and inadequate food substitutes for young children – as being part of a system that prioritised cash cropping, leaving women in particular little time to tend more nutritious food crops. Alternative 'easy' food crops such as cassava contributed to an increase in the pregnancy rate thereby leading to early weaning for young children. It is also nutrition that is related to the ability to develop an effective 'resistance' to disease. In the absence of adequate nutrition then, disease is rampant. Including in his discussion settler expansion in South Africa, Rijpma suggests that precolonial African societies were adequately able to meet the nutritional and health needs of their populations; it was instead the social, economic and political disruption wrought by colonialism that created the conditions for malnutrition and disease that,

ironically, development initiatives now sought to redress.[71] Samüel Coghe, locates the debate on the origins of kwashiorkor within a scientific nutritional understanding that emphasised the importance of protein-heavy diets, with the malnutrition associated with kwashiorkor attributed to protein deficiency in largely agriculturally based societies. It would result in a developmental emphasis on animal husbandry. Coghe shows, too, that in the Belgian Congo, attempts to alleviate malnutrition did not take into account the detrimental effects of colonialism – which had been exacerbated by the demands made upon the colonies during the Second World War. Focusing instead on unsuitable crops, poor agricultural methods, a general lack of development and want of initiative, colonial authorities perceived kwashiorkor to be 'a paradigmatic disease of poverty'.[72] Coincidentally, an article appearing in the *Rand Daily Mail* during the Conference described the potential 'food crisis' arising from a drought in Central Africa, bringing with it a shortage of meat, milk, fruit and vegetables to the urban areas of Rhodesia. For the 'natives', there was a further shortage of the food staple, maize, as well as freshwater fish due to depleted water levels. The effects of the drought had been compounded by the population growth and the production of tobacco – approximately 37 million kilograms in 1949 alone – 'to the detriment of food production'.[73]

And nutrition was a significant part of the Conference agenda. Conference discussions were divided into six 'Sections': 'Physical environment' addressing climate, geology and water supply and chaired by South African geologist Sidney Haughton; 'Soils and Plants;' 'Zoology and Animal Industry;' 'Health and Medical Research' under British nutritionist Edward Mellanby; 'Social Research' and 'Technology'. The chairs of the various sections were drawn from South Africa, Britain, Belgium, Portugal, France and the East African delegation.[74]

The discussions held and papers presented in the various sections were not a matter of science for its own sake; underlying the resolutions adopted was the development of sub-Saharan Africa. In terms of the 'Physical Environment', geology was harnessed to identify 'mineral resources'. In addition, there was a recognition that geological strata did not follow political boundaries necessitating regional co-operation, and that research into palaeontology and 'fossiliferous deposits' needed to be 'chronological rather than territorial'.[75] The quest for mineral resources was elaborated on by the 'Technology' section which advocated 'field work' so as to identify mineral resources, especially coal, as well as those that could potentially be used as artificial fertilisers.[76] Also of interest to 'Physical Environment' was hydrology and the importance of obtaining a constant and steady water supply for both man and beast. All aspects of the physical environment were to be surveyed and mapped thereby creating 'a uniform Atlas of Africa'. These spatial representations were to contain information that, while not conventionally found on maps, was essential to further 'scientific research [and] economic development'. They thus had to contain

data related to the 'physical environment' such as geology and hydrology; the 'biological environment' addressing the location and movement of insects associated with disease; and 'human facts', a broad category including 'race', 'ethnic groups', 'pathology' and 'economic factors'.[77] The very depiction of the continent south of the Sahara, then, was in relation to its population, its resources and its development.

Related to water supply was erosion and soil conservation was a pressing concern for the development agenda. In November 1948 a conference on soil conservation in sub-Saharan Africa was held in the Belgian Congo. Even more ambitious than the African Regional Scientific Conference, more than 180 presentations were made with representatives from the colonial territories of France, Belgium, Portugal and Britain as well as the FAO. The Goma conference considered the resolution of 'soil degradation, utilisation and conservation … a matter of supreme urgency' and one that was 'the essential key to the full development of the African continent'. Moreover, both problem and solution were not confined by territorial boundaries, requiring extensive co-operation. The implementation of 'sound measures' of soil conservation and use were to be implemented on land occupied both by Africans and 'non-natives'. For the former, however, there was the aim of fostering African agriculture to render it more 'productive' and allow for 'its gradual integration into world economy'.[78] This was, nevertheless, a continuation of production for world markets that had been ongoing since the nineteenth century. The British description of agricultural research in their African colonies prior to the outbreak of the Second World War reflected the prioritisation of these global markets: cacao research on the Gold Coast, a focus on oil palm in Nigeria, coffee in Kenya, tung oil in Nyasaland (Malawi) and sisal in Tanganyika.[79]

The Goma conference also advocated further intervention in indigenous land use: preventing the overgrazing of cattle thereby alleviating soil erosion and inculcating into Africans the 'economic value' of stock. This was a capitalist-based economic value that was to supersede the view held by Africans who considered cattle 'a sign of wealth'. In addition to overgrazing, concerns were expressed about overpopulation of land thereby reducing its fertility. Considered too, was mechanisation to improve agricultural productivity. Conference attendees were also taken to see anti-erosion measures in the form of terraced hillsides put in place in Rwanda 'under the direction of the Belgian experts' in conjunction with local inhabitants.[80]

While considering local acquiescence, William Beinart discusses the 'crusading zeal' with which governments intervened in indigenous agriculture, often in the face of vehement opposition on the part of those most affected. Settler and colonial preoccupation with conservation was evident in Southern Africa since the nineteenth century, taking on a particular impetus in relation to soil conservation from the 1930s. Just two years before the Goma conference, the

Soil Conservation Act was passed in South Africa to give local officials greater authority to intervene in agricultural methods to prevent soil erosion. While settler farmers were as subject to intervention, focus in both South and Southern Africa was placed on African peasant farmers from the 1930s: overpopulation, the accumulation of cattle leading to overgrazing and the cultivation of a single crop that could potentially decrease soil fertility. The wide-ranging interventions envisaged from the culling of cattle to restructuring land use were linked to the hierarchy of power embodied in the 'colonial relationship' and, as such, provoked resistance and were ultimately unsuccessful.[81] Yet, as Hodge shows, in the 1920s and 1930s, colonial officials were willing to take cognisance of indigenous farming practices that demonstrated African familiarity with the land and how best to utilise it. H.L. Shantz with the United States Department of Agriculture recommended better understanding of indigenous land use and regional and environmental context rather than the simple imposition of 'scientific' methods of agriculture. Geoffrey Milne made a study of the soils of East Africa and, like Shantz, validated indigenous practice of burning to maintain soil fertility. The following decades, however, brought about a 'technological turn' yet, even then, scientific agriculture drew upon indigenous knowledge in the implementation of agricultural practice.[82]

This fine distinction, however, was not readily apparent in 1949 when the 'crusading zeal' appeared unabated, and the resolutions adopted at the African Regional Scientific Conference were to support the proposals made at the Goma conference the previous year. There was too a realisation that growing populations led to more areas coming under cultivation. With the inevitable cultivation of 'semi-arid regions', scientific expertise was essential to ensure that 'risks both to the land and to the human population' were minimised.[83]

Lack of indigenous knowledge and conservation were also themes in the report issued by the section addressing 'Zoology and Animal Industry'. In terms of the first, 'the traditional noneconomic husbandry' as carried out by Africans entailed poor nutrition for their livestock and the Conference proposed research conducted into the nutrition of domesticated animals in sub-Saharan Africa. For wild flora and fauna, biologists were accorded a role in addressing their conservation and animals and birds were to be 'tagged' to better understand their behavioural and migratory patterns. Of vital importance was the containment of disease, making it imperative to keep track of the movement of animals and plants to prevent the spread of disease from domesticated flora and fauna into wildlife sanctuaries. Insects such as ticks responsible for the transmission of disease needed to be better understood along with the development of the means to 'eradicate' them.[84] As evident after Lockspeiser's encounter with the bees during the Conference cocktail party, nature was to be understood in order to be controlled and both the domesticated and the wild were subject to the intervention of experts driven by conservation and development.

The continent's human inhabitants were also to be saved from the hostile environment. In addition to the perennial problem of malnutrition, the 'Health and Medical Research' section focused on the transmission of malaria, bilharzia, rickettsial and various viruses. Emphasis was placed on research and on scientific measures of prevention. In conjunction with the spread of disease was the focus on the environment with a recommendation put forth for a study on the effects of the 'African environment [on] human health' as well as the ways in which the 'different races' resident on the continent had '[adapted] and [acclimatised]'.[85] Researchers were drawing upon an older literature that posited the relationship between climate and 'civilisation'. In 1915, for instance, Ellsworth Huntington wrote of the 'stimulating qualities' of a climate that promoted a 'high' civilisation. The corollary was that a less suitable climate led to degeneration. Addressing specifically the South African context, Huntington considered the lack of vigour of 'poor whites' born in South African when compared to the 'push and energy' characteristic of the rest of white South Africa. This was deemed to be a result of the South African climate which did not reach the 'excellence' of that of Britain and Holland, the historical origins of the settler population. Indigenous people inhabiting the tropical regions such as Africa were deemed to be 'dull in thought and slow in action', a condition that would also infect European settlers, affecting adversely their innate 'sterner morality' and 'intense industry'.[86]

'Health and Medical Research' inevitably focused on the African body which was presented as a type to be understood biologically, socially and culturally to address 'his' response and, ultimately, suitability for development:

> … extensive long-term research should be undertaken in order to discover the potentialities of the African in general; his physical aptitudes and measurements; his physiological functions including nutrition; his psychological and social behaviour; his traditions and tendencies as he faces the modern world.[87]

The recommendations of the 'Social Research' section followed in the vein of 'Health and Medical Research' with its recommendation for research into African psychology and 'African ability' which could be determined partly through the application of psychometric and intelligence testing. The process would be refined through the consideration of ethnic groups, and ethnographers were tasked with the study of various populations to more effectively implement policies to foster 'education and progress' and make easier the transition to a 'modern social structure'.[88] Psychologist Simon Biesheuvel was the South African expert on intelligence testing. In his book, *African Intelligence*, written six years before the conference, Biesheuvel pointed out that a comparative study of African and European[89] intelligence would necessarily have to take environment into account. In a marked detraction from the notion of innate or biological difference, Biesheuvel also addressed environmental factors and presuppositions regarding intelligence. For instance, when considering migrant

labour, conventional wisdom suggested that those Africans who migrated to urban areas for work and were subsequently 'detribalised', were 'more intelligent, ambitious and energetic'. Biesheuvel, however, considered the compulsion behind migrant labour – the need to pay taxes, to purchase food and commodities, to obtain money to buy cattle for bridewealth. Migration could just as easily be driven then by economic and cultural factors rather than superior intelligence. The intelligence test itself was related to cultural bias – the familiarity of the testing situation to European children rather than African children who had not attended school; the anxiety created in an African child by having a European teacher conduct the test in a context of 'the dominance-submission relationship between the two races' and, on a very basic level, the differences in language. Drawing attention to malnutrition, Biesheuvel suggested that, while there was little correlation between malnutrition and intelligence, malnutrition – as was evident in the reserves with a diet dominated by maize – affected performance on tests. For Biesheuvel, the existing means to make a claim for racial difference in intelligence was limited; it was 'unscientific'.[90]

In his assessment of the Conference, C.G. Eastwood, Assistant Under-secretary of State at the Colonial Office pronounced the papers as being of 'very uneven value' with the great majority (as expected) presented by the South African contingent who tended to emphasis 'collaboration' across territorial and national borders. Schonland was described as having 'rather naively' confided in him that he had vetted the South African papers to ensure that they reflected this co-operative nature and the need for a regional organisation to co-ordinate research. Eastwood portrayed South African science as, for the most part, being free of 'politics', with its status as 'a far richer and more developed country' than any other territory in sub-Saharan Africa, along with its established tertiary institutions, making it integral to resolving African challenges. Schonland had also assured him that Prime Minister Malan had been unequivocally clear that the country's leading research organisation, the CSIR, would 'be a council of scientists and not of politicians'. Yet the exception was in the field of sociology where Eastwood saw the contamination of South African 'race relations', thereby '[discounting] a great deal of the sociological work'. An exception was the use of aptitude testing on black mineworkers at the National Institute for Personnel Research under Biesheuvel which he felt could be adapted to the rest of colonial Africa.[91] His avowal of aptitude testing for black labour was an indication of the way in which African resources could be best utilised for development.

Less circumspect was the report prepared by the West African delegation. There was a noting of the absence of a British West African representative on the panel for Social Research given 'the patronisingly fraternal tone of reference to the African' which characterised the discussions on sociology. This lack of representation was also evident in the papers. It had taken longer than

anticipated to decide on the members comprising the West African contingent, giving them little time to prepare presentations on the status of research in West Africa. In contrast to the attention given to South African research – as discussed by Eastwood – only two papers out of the almost 130 addressed conditions in West Africa. As a result, a special case was made for West African inclusion in the knowledge sharing that was envisioned to take place due to the 'low strength of scientific and technical establishments' in the region. Yet, there was also evident a condemnation of South African dominance. The report pointed out that the very distinction between the political and the scientific left the West African delegate '[fighting] with one hand tied behind his back' when confronting the possibility of South Africa becoming the 'main influence' on the continent – as the opposing arguments were necessarily political. The delegate was further hampered by the almost universal acceptance of South African superiority in science and development in sub-Saharan Africa with scientists of international stature such as Schonland and Du Toit which placed them in a position to guide West African development. There was however little acknowledgement of the majority of South African scientists at the Conference who appeared 'remarkably ill-informed on developments elsewhere in Africa'. In light of the proposed organisation arising from the Conference, the West African delegation therefore recommended strongly for representatives outside of Africa with the argument made that, should representatives from Africa be chosen from a purely 'scientific' point of view, this would inevitably lead to South African domination of the organisation, due to the lack of scientists elsewhere on the continent. West African indigenous representatives would then necessarily be excluded from a South African-controlled organisation. An appendix attached to the delegation's report also alluded to the 'political prejudice amongst the literate-classes in West Africa' that would likely reject any attempt at 'collaboration' in such a body. A possible solution presented by the West African delegation then was the greater representation of European scientists. The report thus drew attention to the contradictions in – and constructed nature of – the separation of science and 'politics'.[92]

While Eastwood's report was more moderate in its language, it displayed a similar skepticism of South African motives. On a practical level, he was effusive in his praise of the South Africans for a very well-organised conference: the housing of delegates at the 'two best hotels' in the city, the transport of delegates to the university via police escort, the extremely prompt circulation of papers and resolutions. Delegates were taken on visits to various research institutes. They were also given a demonstration of 'tribal dancing' at a mine compound and, when the Conference concluded, taken for a weekend to the Kruger National Park aboard a train provided especially for the occasion by South African Railways. Yet, in Eastwood's description, there is a distance and an awareness that this was an exercise in public relations with 'impressed'

delegates '[serving] the purpose of the South African Government'.[93] And this cynicism manifested itself when it came to the aim of the Conference.

'… they were building for the future':[94] Establishing a Scientific Committee

In his survey of the status of science in sub-Saharan Africa during the inter-war period, biologist E.B. Worthington wrote of the 'waste of research' on the part of scientists based in Africa where knowledge was not shared across territories and there was no common repository on which to draw, ' … each piece of work is done in ignorance of the other', making it difficult to place African challenges within an international and continental context. He suggested the formation of an organisation that would centralise and co-ordinate scientific research in Africa.[95] As Matasci discusses, Worthington became the scientific advisor in East Africa to rectify this 'chaotic situation' by serving as an intermediary between the Colonial Research Council and the East African colonies. It was this greater sense of co-ordination that led to the increasing number of conferences on development from the 1940s, and it was also Worthington who reinforced Schonland's proposal for cross-border co-operation in scientific matters – that would come to fruition with the African Regional Scientific Conference.[96]

Three days into the Conference in 1949 and a proposal was made for the creation of a scientific committee to co-ordinate research in Africa. According to the South African contingent, the envisaged body should be based on the African continent with a secretariat that rotated regions every three years. While not having direct 'control' over scientific policy the organisation should maintain 'an all pervading helpful influence over research on African problems'. The secretariat was to ensure that the council remained up to date on all scientific research and developments affecting the continent and to liaise with colonial and African governments as well as world bodies such as the UN. It was to meet biannually and forward its recommendations to all relevant bodies.[97]

While the UK High Commission assiduously reported on South African recommendations, a subsequent telegram revealed a more circumspect take on both the South African suggestion as well as the proposed role of the new organisation. There was an acknowledgment of regional co-operation and the concomitant sharing of scientific knowledge which was held by the colonial delegations, but the British advocated a 'modest and sound' approach that could also include the presence of distinguished European scientists at meetings. From these modest beginnings, there was the hope that 'expansion' could follow based on circumstance. For now, 'simplicity' was the byword as it made both 'scientific' as well as 'political' sense. The South African proposal was considered 'ambitious', its 'ideas [needing to be toned] down in various

other respects'. Yet the British delegation found itself having to walk a tactful path: moderating the South African proposal in lieu of rejecting it completely.[98] The 'political' implications of South African scientific ambitions in Africa remained a point of caution and suspicion for the British delegation.

Yet the proposed Council did not only bring to the fore concerns about future South African dominance on the continent. In his report to the British High Commissioner for Southern Africa, Evelyn Baring, Eastwood described being 'struck at the Conference by the general feeling that Africa was beginning to grow up scientifically'. For the delegates, this new-found maturity would be expressed in Africa becoming a site of its own 'museums' and 'libraries' – the hallmarks of Enlightenment culture and learning – rather than Africans having to visit the metropole. Yet, this sense of optimism was tempered by his view that it would be 'very easy to exaggerate the extent to which African can in fact be independent of Europe scientifically'. There remained an important – and leading – role to be played by European scientists and experts and Europe would, for the foreseeable future, remain the site where scientists were skilled – and then dispatched to Africa. Baring also drew attention to the concerns of the Belgians who were forging ahead in the plans for the speedy development of the Congo. Having been invaded during both World Wars, the Belgians saw their African colony as the potential repository 'of Belgian culture and civilisation' should the country once again be subject to invasion and occupation.[99] Thus, while there was acknowledgement and suspicion of South Africa due to its overt racism – increasingly intractable and anachronistic in 1949 – there was little recognition on the part of the colonial powers of the ways in which science and development were intertwined with the maintenance of cultural and scientific hegemony, even as decolonisation loomed.

As the Conference drew to a close, the various delegations prepared to make public statements about the outcome. For the British, other than a lauding of the delegations, a significant outcome was the reiteration of the proposal for the establishment of 'an African Scientific Council'. Perceived to be a purely 'advisory' body without any power to dictate policy to governments, an early role for the Council was the collation and sharing of 'information'. It would be staffed by 'scientists of the highest calibre' with a specific expertise in addressing African challenges. While its headquarters were yet to be determined, Conference delegates had recommended that P.J. du Toit serve as the head of the Council for at least its initial two years.[100] However, while Du Toit's scientific merits were recognised, his nationality was a source of contention. The Belgians had proposed Du Toit for the chair of the new organisation however the West African delegation was concerned that, should he accept the position – and it was likely that he would – it would 'not at all be popular in West Africa'. Despite the prospective opposition, the British were willing to endorse Du Toit. There was, however, further concerns that should future conferences be

held in South Africa, indigenous West African representatives would not attend as it would be difficult to prevent 'unfortunate incidents in public places'. Other parts of Africa were seen as being more conducive to hosting both black and white representatives.[101] The spectre of black exclusion was also evident in the proposed headquarters of the new organisation.

Almost three weeks before the start of the Conference, Eastwood expressed his concerns to Hilton Poynton, regarding the potential home of a scientific organisation in Africa. Eastwood – while unequivocal about his opposition to the proposed organisation being based in South Africa – suggested that the British delegation may wish instead to leave the demurral to the French and Belgians due to their 'distrust of the South Africans'. The proposed solution would be an organisation based in the Congo. While the British would not actively oppose the South African headed organisation, they would instead suggest the Congo as a 'compromise to reconcile opposing views'.[102] Poynton's lengthy reply however was an avowal of British commitment to the South Africans – which had to be openly expressed at the Conference. He was nevertheless aware of the potential 'political difficulties' that such support could entail – especially in terms of the British relationship with West Africa – and wanted 'assurances' from the South African government that should African delegates be sent to meetings, they would be accorded the same treatment as their European counterparts. There was also the concern that, should the organisation be in South Africa, it could conceivably be 'dominated' by the country's 'political policies' which would be 'not acceptable' to either the colonial powers or to Africans themselves. Poynton recommended that a private meeting be held with the South Africans to obtain the 'satisfactory assurance', and should it not be forthcoming – which would likely be the case – then the South Africans would be informed that Britain would oppose the headquartering of the proposed organisation in South Africa. He simultaneously suggested a further compromise – while the organisation would be in South Africa, its meetings could be held in other African countries, thereby circumventing the potential embarrassment of African delegates being exposed to South African discrimination.[103]

Despite the amiability and collegiality of the African Regional Scientific Conference then and the professed apolitical nature of scientific discussion and collaboration, there existed ambivalence and tension, particularly on the part of the British – caught between their historical alliance with a Dominion with a new nationalist and potentially hostile government and their future and necessary economic alliances with African states on the cusp of independence.

A resolution was drawn up by the South Africans and adopted on 27 October 1949 for the creation of the Scientific Council for Africa South of the Sahara (CSA). Its role would be purely 'consultative and advisory', its membership would be the scientists representing the various territories and the associated scientific disciplines and its chair was to be 'a scientist with a knowledge of

African problems'. The CSA would hold regular meetings after which 'recommendations' would be made to governments who would then be responsible for taking action.[104] Should these recommendations apply across territories, co-ordination regarding the funding and political implications should ideally be discussed at the Commission for Technical Co-operation in Africa South of the Sahara (CCTA) with a representative of the CSA present.[105]

Described as both 'the last of the magnificent Victorians who staked out their claims in Africa' as well as 'an architect of decolonization', colonial administrator Andrew Cohen promoted independence in Africa through political reform, economic development and education.[106] Writing of the impending formation of CSA in early 1950, Cohen emphasised the largely apolitical nature of the new organisation. Pointing out the 'intense suspicion and dislike of South Africa' by the West Africans, Cohen wrote of the importance of allaying West African fears that the organisation – with its genesis in the Conference held in South Africa – would permit South Africa to 'exercise an influence over West African problems'. Unlike the CCTA which was dominated by the 'colonial powers' and inevitably political, the CSA was to be a scientific body, staffed by scientists and dedicated to the free exchange of scientific knowledge. It would not likely be as dominated by South Africa as had initially been feared.[107]

As a result of the recommendations made at the Conference, the CSA was formed in 1950 and held its first meeting in Nairobi, Kenya in November of that year. Its South African members included Schonland and Du Toit, who served as the chairman. Also represented on the CSA were Britain, Portugal, France and Belgium and their scientific representatives in their respective colonies. The initial mandate of the Council was to co-ordinate the movement of scientists and research across territories and to maintain 'friendly [but not supervisory]' ties with the existing scientific organisations based in the various territories.[108] By the time of its third meeting held in the Belgian Congo in 1952, the areas of research considered by the CSA were a reflection of those considered at the Conference in 1949 – surveying, geology, meteorology and fisheries. Of particular importance was social science and the necessity for 'collaboration' in social science research across the continent.[109] Almost a decade into its existence and the work of the Council had acquired an even greater focus. The meeting in 1959 was held in the Ghanaian capital of Accra just two years after Ghana became the first African country to achieve its independence. Along with the usual collaboration and movement between scientific experts across the region was the increasingly prominent role expected to be played by the Foundation for Mutual Assistance in Africa South of the Sahara which would decide how best to respond to appeals for 'technical assistance' by African states and allocate resources accordingly. At the meeting, too, there was a growing urgency in protecting African natural resources so that African needs could be met and that resources were neither rendered 'extinct' nor 'rapidly exhausted'. The emphasis was on conservation,

renewability and sustainability. In a climate of independence and African nationalism, there was still an acknowledgement of the relevance of 'European scientists, institutes and technical departments' in fostering development on the African continent and the continuing relevance of the CSA.[110] This, however, was not to last. The role of the CSA since its inception had been to make recommendations to the CCTA and the two would officially combine in 1954 to become the CCTA/CSA.[111]

Castelo and Ágoas discuss the ways in which the CCTA still strove to maintain colonial dominance by using cross-regional co-operation to present a 'united front' against the anti-colonialism of the United States, the UN and its various organs. Development in this context was associated with colonial intervention and control. These tensions played out in the field of social research with the CCTA assuming expertise in the face of the challenge of UNESCO which sought to examine the impact of modernisation and development on the African continent.[112] In her discussion of Francophone Africa in relation to health initiatives, Pearson points to a similar tension between the French Union – the association of France and the colonies formed in 1946 – and WHO, with the latter perceived by the French as a potential 'rallying point for anti-colonial voices'. Health was politicised, a symbol of the desire to maintain an existing colonial hierarchy.[113] In the area of education, post-War colonial policy prioritised basic elementary education, adult education and the education of women along with skills-based training. A meeting of the CCTA in 1950 would draw upon this policy and the provision of education became a way of asserting the moral prerogative of colonialism, its association with 'social, technical and scientific progress', as a counter to the perceived interference by the UN.[114] As Jerónimo and Monteiro point out, education was less about liberation and progress than it was about 'indoctrination', a means of ameliorating discontent with colonial authority. Similarly, as evident in Lusophone Africa, conditions of labour were improved so as to prevent unrest while, simultaneously, the organisation of labour was prohibited as this would promote radicalism.[115] The period of late colonialism as evident in the CCTA was therefore marked by development initiatives that sought both to assert colonial autonomy in the face of international intervention and limit the possibilities of development – and independence. These efforts proved fruitless.

With independence, African states began to play a greater role in the CCTA and there was an emphasis on national interests and the implementation of practical schemes for development. The appointment of members of the CSA and the CCTA was no longer simply based on scientific expertise – as had been the case with Du Toit who resigned as chair of the CSA in 1960[116] – but on national identity and ideological stance. South Africa and Portugal were subsequently 'expelled', their racial and/or colonial policies out of sync with the changing times.[117] While the CCTA joined with the Organisation of

African Unity, the CSA came to an end in 1965. In his history of the South African CSIR, Denys Kingwill described briefly the end of an organisation that, despite is 'non-governmental' stance, had nonetheless acquired 'the taint of colonialism', making it an anachronism in independent Africa.[118]

In 1949, the African Regional Scientific Conference was touted as a space for scientific discussion about the future of Africa, that left little room for politics. However, the ideological nature of the Conference was evident in the privileging of European expertise and the marginalisation of Africans who were given little voice in articulating their own vision for development in Africa. Faced with South African intellectual and economic dominance on the continent, European powers were ambivalent in their challenge to South African racial policies, even as they harboured suspicion towards the ambitions of the apartheid state. They were furthermore oblivious to the ideological nature of development itself as it related to Africa. With a focus on land, the flora, fauna and indigenous Africans, the discourse of development was imbued with notions of 'civilisation', becoming a new way of articulating the 'civilising mission'.

While addressing the second half of the twentieth century, Joseph Nye's concept of 'soft power' is particularly apt in describing the relationship of the soon to be former colonial powers as well as South Africa to the rest of Africa.[119] Faced with a shifting world order initiated in part by the Second World War and exacerbated by the conflicting ideologies associated with the Cold War and the prospect of decolonisation, the African Regional Scientific Conference occurred at a pivotal moment in the twentieth century. While believing ardently in the importance of science and technology in fostering development in a post-war world and, in particular on the African continent, Conference delegates embodied the hierarchies of power that had been in place since the nineteenth century – and even earlier. At a time when the traditional application of force was no longer acceptable, science, technology and associated with them, the narratives of development and modernisation were an articulation of 'soft power:' the implementation of policies based on a knowledge system that would continue African subordination as attempts were made to remake the continent in the image of the West.

Notes

1. Hancock, *Smuts*, 225.
2. Cell, "Lord Hailey," 481.
3. Hodge, *Triumph of the Expert.*
4. Lorenzini, *Global Development.*
5. Unger, *International Development.*
6. Tilley, *Africa as a Living Laboratory.*
7. Clarke, *Science at the End of Empire.*
8. Wicker, "Colonial Development and Welfare," 170–92.

9. Interview with Sir Arthur Hilton Poynton.
10. Wicker, "Colonial Development and Welfare," 170–92.
11. Interview with Sir Arthur Hilton Poynton.
12. Wicker, "Colonial Development and Welfare," 170–92.
13. Macleod, "'All for Each'," 80–81.
14. Bigg et al., "The Art of Gathering," 426–27.
15. Frankel, "Obituary: Professor S. Herbert Frankel."
16. Frankel, "Africa in the Re-Making," 199–222.
17. "Schonland Wants Research Body for Africa."
18. "Commonwealth Scientific Official Conference," TNA.
19. Schonland, "Recent Developments in Scientific Research," 70–80.
20. Broadley, "Regional Organisation of Research," TNA.
21. *Nature*, No 4085, 231.
22. Du Toit "Draft Agenda," TNA.
23. "Conference on Regional Research in Africa," TNA.
24. Bright, "Men, Women, Events."
25. Forsyth, "Regional Research in Africa," TNA.
26. Broadley, "Regional Organisation of Research," TNA.
27. Clausen, "Regional Organisation of Research," TNA.
28. "Scientific Research in Africa."
29. "Britain Accepts a Malan Call."
30. "Egeland attacks 'Observer' for Article."
31. Egeland, "Science in S. Africa."
32. Dubow, *A Commonwealth of Knowledge*, 257.
33. "World Scientists to Attend Talks."
34. "Malan Opens African Conference."
35. Berridge, *South Africa and 'African Defence'*, 3–4, 13.
36. Ibid., 8–9.
37. "Louw Calls for Trade."
38. Ashforth, *The Politics of Official Discourse*, 76–81, 89, 163.
39. Berridge, *South Africa and 'African Defence'*, 6.
40. Du Toit, "Regional Organisation of Research," TNA.
41. Chancery, "Regional Organisation of Research," TNA.
42. African Department, "Regional Organisation of Research," TNA.
43. Hibber, "Regional Organisation of Research," TNA.
44. Byaruhanga, "Developments in the Strategy of Red Locust Prevention," 260–61. Like the CSA, this, organisation, too, would break up after independence but would later re-form without South Africa, Rhodesia and the Portuguese colonies of Angola and Mozambique.
45. Colonial Office, "Notes on International Co-operation," TNA.
46. Telegram 4, "Regional Organisation of Research," TNA.
47. Edgerton, *The Shock of the Old*, 132.
48. This was the "European civilisation" alluded to by Frankel who were largely pastoralist and remained centuries behind in terms of "economic development" – Frankel, "Africa in the Re-making," 212.
49. Dubow, *A Commonwealth of Knowledge*, 115, 176–78, 254–55.
50. Subtitle taken from Interview with Sir Arthur Hilton Poynton which refers to the initial lack of importance accorded to 'colonial policy'.
51. Kingwill and Schonland, "Petrus Johann du Toit," 258–59.

52. South African Council for Scientific and Industrial Research, "Fourth Annual Report," 8–9.
53. "Malan Opens African Conference."
54. "No Vacation at Wits."
55. "Wants Afrikaans Used at Congress."
56. "Dr Malan Will Open Conference Today."
57. "Wants Afrikaans Used at Congress."
58. Dubow, *A Commonwealth of Knowledge*, 254–55.
59. "World Scientists to Attend Talks."
60. "Dr Malan Will Open Conference."
61. "Visiting Scientists Honoured by Wits."
62. "Doctors Advise Malan."
63. Austin, *Schonland: Scientist and Soldier*, 386–87.
64. "Malan Opens African Conference."
65. "Africa's 'Large Space'"; "Regional Organisation of Research," TNA.
66. Frenkel, "Edward Blyden and African Personality," 279–80.
67. Eckert, "Bringing the 'Black Atlantic' into Global History," 243, 245, 248–50.
68. "Malan Opens African Conference."
69. "Malan Opens African Conference."
70. "If Science Fails."
71. Rijpma, *David Livingstone and African Poverty*, 2–3, 6, 12, 15, 36–39, 46–47.
72. Coghe, "Between Colonial Medicine and Global Health," 387–89.
73. "Drought Threatens Food Crisis."
74. Eastwood, "Regional Organisation of Research," TNA.
75. "Physical Environment," TNA.
76. "Technology", "Regional Organisation of Research," TNA.
77. "Physical Environment."
78. Robertson, "A Note on the Soil Conference," 251.
79. "Commonwealth Scientific Official Conference."
80. Robertson, "A Brief Note on the Soil Conference," 252–53.
81. Beinart, "Soil Erosion, Conservation and Development," 52–55, 61, 83.
82. Hodge, "The Hybridity of Colonial Knowledge," 217–19, 221–22.
83. "Resolutions Presented by Section B," TNA.
84. "Biology and Animal Husbandry," TNA.
85. "Health and Medical Research," TNA.
86. Huntington, *Civilization and Climate*, 9, 26–27, 35, 38.
87. "Health and Medical Research."
88. "Social Research," TNA.
89. In this context, Biesheuvel uses the term "European" to denote white South Africans.
90. Biesheuvel, *African Intelligence*, 27–28, 38, 46, 59, 152, 158.
91. Eastwood, "Regional Organisation of Research," TNA.
92. "Note by West African Delegation," TNA.
93. Eastwood, "Regional Organisation of Research," TNA.
94. Ibid.
95. Worthington, *Science in Africa*, 22–23.
96. Matasci, "Internationalising Colonial Knowledge," 896.
97. Telegram 361, TNA.
98. Telegram 362, TNA.
99. Eastwood, "Regional Organisation of Research," TNA.
100. Telegram 377, TNA.

101. Telegram 374, TNA.
102. "Extract from letter to Sir Hilton Poynton," TNA.
103. Poynton, "Regional Organisation of Research," TNA.
104. "Establishment of a Scientific Council," TNA.
105. "Council for Scientific Research in Africa," TNA.
106. Apter, "Sir Andrew Cohen: An Obituary," 2–3.
107. Cohen, "Regional Organisation of Research," TNA.
108. "Scientific Council for Africa South of the Sahara," *Nature*, No 4227, 4 Nov 1950, p. 765.
109. "Scientific Council for Africa South of the Sahara," *Africa*, Vol 24, Issue 3, July 1954, 271.
110. "Scientific Council for Africa," *Nature*, No 4661, 585–86.
111. Kingwill, *The CSIR*, 64.
112. Castelo and Ágoas, "Inter-African Cooperation," 71, 73.
113. Pearson, *The Colonial Politics of Global Health*, 3.
114. Jerónimo and Dores, "Enlightened Developments?" 241–42, 245.
115. Jerónimo and Monteiro, "The Labours of (In) Security," 504, 512.
116. Ibid., 66.
117. Nworah, "The Integration of the Commission," 56–58.
118. Kingwill, *The CSIR*, 66.
119. Nye, "Soft Power," 153–71.

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ORCID

Suryakanthie Chetty http://orcid.org/0000-0002-4155-8583

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