

SPUTNIK FROM BELOW

Space Age Science and Public Culture in Cold War
Southern Africa

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The global space race of the Cold War has largely been written as a drama between state bodies of the northern hemisphere. This essay decentres that narrative by considering the production of popular meanings and local responses of Southern African publics to the 1957 launching of the Sputnik satellites, as articulated in a selection of mostly South African newspapers targeting various linguistic and cultural readerships. Newspapers were the most important points of contact between experts and laypersons, but were also the primary medium through which the authority of expertise could be contested and appropriated. The circulation of space science news occasioned debates about modernity and progress in relation to the issues of rights and racial politics. Cold war science innovations, aligned to projects of state, presented opportunities for publics to challenge discriminatory practices, yet could also be leveraged in local practices of social differentiation, to mark out and delegitimize certain groups or ideas as 'backward'.

In his satirical novel *The Dixie Medicine Man*, Botswanan author Christian John Makgala writes of Leroy, an orthopedic surgeon from Mississippi,

who arrives in the town of Morwa, Botswana in 1971. Here, local excitement over the United States' recent moon landing instantly makes him the focus of keen community interest. His popularity is soon felt as a threat by Jealousman – a veteran of the Second World War and resident headman – whose authority has rested on his reputation for knowledge of the world outside the village. In the scene of their first encounter, we learn that the headman is an avid reader of news media and a show-off who enjoys the sense of snobbery that literacy affords him. Jealousman

held a dilapidated copy of the liberal *Rand Daily Mail* newspaper from Johannesburg and a badly dog-eared *Time* magazine. Some parts of the newspaper pages had been torn off for rolling tobacco ... 'That one still believes that the earth is flat and he does not know the moon revolves around the earth,' jibed Jealousman, pointing dismissively at Phandlane [his friend] with a copy of *Time* magazine held in his right hand. (Makgala 2010, 9–10)

As the fortunes of Leroy and Jealousman become entwined, tensions between different authoritative sources of knowledge and of social power become personal as well as increasingly muddled. Once an Apollo 11 enthusiast who sought to convince sceptics of the realities of space-age science, Jealousman now declares the celebrated lunar landing to be a hoax in a bid to undermine the celebrity of the US visitor. Meanwhile, Leroy has taken up training under a locally renowned *ngaka* medicine man and has traded in his professional career of setting bones for one of throwing them. When it is discovered that US Ambassador Charles Nelson will be gifting a moon rock to Botswana President Sir Seretse Khama, the ensuing debate reveals a range of views about the meanings and consequences of modern progress.

Makgala's witty fictional tale portrays the global spectacle of the Cold War space race as entangled in local struggles over authority and expertise, information and belief, and in debates about modernity, set against the racialized background of apartheid to the south and decolonization politics to the north. It points also to the agency of the news media – specifically, radio and newspapers ('There was not even one television set in the whole of Botswana in 1969' [67]) – which function not merely as conveyers of news and information, but as catalysts and transmitters of the public cultures and popular sense-making that emerged in response.

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I should like to acknowledge the influence on this essay of scholars writing about the cultural meanings of space science in western contexts, including Pandora and Rader (2008, 351), Redfield (1996), Stoeger (1996), Toumey (1991), Kinchy (2009), Alder (2007) and Epstein (2008). Thanks also to anonymous reviewers for helpful suggestions and insights.

targeting various linguistic and cultural readerships.¹ I focus on three newspapers: *Ilanga lase Natal*, the long-running weekly, founded at the beginning of the twentieth century by first African National Congress president John Dube, serving a largely Christian *isiZulu*-speaking public; *Indian Views*, a Gujarati and English newspaper produced for Southern African Muslim readers, which was in the 1950s edited by M. I. Meer, patriarch of the political Meer family; and the *Sunday Tribune*, an English-language weekly newspaper, part of the then Argus group. In order to highlight relevant trends and continuities, I also examine the content of these newspapers in regard to the 1969 lunar landing.

Through my reading, three basic dynamics become apparent. First, although represented as transmitters of factual news, print media functioned also as a technology of rumour. An attitude of speculation and prediction was prevalent, and the facts presented were sometimes greeted with incredulity and doubt. While radio produced the signature staccato universally identified with Sputnik, newspapers were one of the few sources of visual information. Yet these visuals – both photographic and artistic representations – served as much to expand imaginative dreams of the possible as to verify empirical truth.

Second, newspapers were the most important points of contact between experts and laypersons and were also the primary medium through which the authority of expertise could be contested and appropriated. Manifested in the reports, editorials and commentary published in newspapers, the aeronautical nature of this event triggered debate and intrigue around matters cosmological, theological and political. Alignment to the authority of scientific modernity could bolster one's position within localized knowledge-struggles – as could, in other circles, the outright rejection of empiricism in service of the moral or the marvellous.

Third, the circulation of space science news occasioned debates about modernity and progress in relation to the issues of rights and racial politics on a decolonizing continent. Cold War science innovations, aligned to projects of state, drew out tensions between universalist and communitarian interpretations of scientific achievement and presented opportunities both to bolster and challenge discriminatory practices. Space technology could be evoked as a 'metric of modernity' for signalling a racial or civilizational hierarchy of nations in a decolonizing world, and also could be leveraged in local practices of social differentiation, to mark out and delegitimize certain groups or ideas as 'backward'. At the same time, however, African anticolonial voices drew upon the triumph of the Sputnik launch as a symbol of modernity's humanist and progressivist power, arguing both for civic rationality over the illogic of race ideology and for the application of science to 'earthly' problems, such as malnutrition and infant mortality.

As Sputnik entered public space it served both to confirm and challenge the idea that scientific and enchanted worldviews represented binary discourses,

discourses attributable, respectively, to colonial and colonized subjects (Saler 2006, 706). It showcased the fanciful nature of western progressive aspirations, inspired by science fiction writers, and included new colonial prospects for lunar and distant planetary frontiers. At the same time, it prompted a language of positivist claim-making among defenders of moral and spiritual views of nature. Even as they were articulated as a triumph of scientific rationality, these events presaged the simultaneous production of new expressions and forms of enchantment (Comaroff and Comaroff 2000, 293), from claims about telepathic lunar landings to the spectral ‘racecraft’ redeployed by proponents of segregation (Fields and Fields 2012). Collectively, these articulations reveal differing responses to a singular modernity, in which the local and the global, the traditional and the modern, the magical and the disenchanting, are variously defined and attributed value.

View from Earth

The first Sputnik satellite was launched on 4 October 1957, seven months after Ghana declared independence from British colonial rule. A little more than a decade later, by July 1969, when Apollo 11 touched down in the lunar Sea of Tranquility, Angola, Mozambique, Rhodesia and South Africa were among the very few territories on this continent whose national status remained embattled. Anticolonial nationalisms were played out in the context of Cold War rivalries, with Africa a theatre of contestation between the United States and the Soviet Union. The so-called space race was a global performance of military–industrial sovereignty that helped entrench a bipolar world of national superpowers.

The idea of space technology as a top-down administrative and specifically national achievement, whether US or Russian, was inherited from nineteenth-century European political ideology (Siddiqi 2010a, 427). When ‘the European colonial project reached its peak, the discussion over modern technology became inseparable from empire-building; technology, in effect, became a dominant metric of modernity.’ Yet celebrated material and instrumental alliances between science and state power often concealed their relatively limited efficacy. Siddiqi has demonstrated that, far from constituting the culminating achievement of a heavily bureaucratic machinery of state – as it was represented by both Cold War superpowers for different reasons – the Russian launch of Sputnik was significantly a product of informal and dispersed human agency and networking. The generative period for its success was in the three decades following the 1920s in which a climate of scientific interest was nurtured almost exclusively by Russian amateur rocket enthusiasts and science fiction writers. Building on this platform in the postwar period were

German scientists engaged by Russian engineers: only eventually (as late as the middle 1950s) were these strands of activity drawn into collaboration with state-led programmes (Siddiqi 2010b).

Science's function as a 'metric of modernity' and its imperial roots were felt in the racial politics and cultural paternalism through which the 'West' viewed contemporary nation-building projects in Africa. Political strategists and analysts in the North Atlantic basin placed the continent squarely within the agenda of what space-age technologies would bring to teleological projects of modernization. Sir Eric Ashby (1964), for example, in a review of a volume published in 1964 on this topic, applauds the author's caution regarding the growth of science programmes in Africa and supports the recommendation for a 'judicious selection and adaptation of well-known scientific data'. The reasons for a wary approach, he implies, are self-evident: 'The export of technologies to countries low in capital resources and high in unskilled manpower requires sharp judgement and severe restraint. It is not much use to propagate technologies in Tanganyika that would be appropriate in Texas.' Still, he magnanimously concedes,

Even though indigenous scientific research may be relatively unimportant as a means of solving technological problems, it is important as a means of promoting 'style' and a sense of values of a scientific world: also a developing country gains self-confidence if its nationals play a part, however modest, in the advancement of science. (Ashby 1964, 803)

Africa had played a more than modest part in the advancement of science, but in a way that had long built up the 'style', development, self-confidence and military capacity of other nations. The mineral plunder of Africa had been critical to military-industrial innovations that were shaping the postwar world and its emerging superpowers. Uranium from the Belgian Congo had produced the hydrogen bomb dropped on Hiroshima in 1945 (Fleckner and Avery 2005). During the war itself, South African laboratories had manufactured mustard gas and Prime Minister Jan Smuts had been involved in the British War Cabinet plan involving a retaliatory attack on Nazi livestock involving anthrax spores embedded in cattle feed (Purkett and Burgess 2002, 230). In terms of space science, many political elites of independent Africa would continue where colonial elites left off. In 1976 President Mobutu, in a bid to make Zaire the 'Cape Canaveral of Africa,' invited the West German company OTRAG to rent 39,000 square miles of Congolese plateau for the development of their 'volksrocket' for an annual sum of \$50 million, an enterprise that buckled under political pressures within three years (McDougal 1980, 75). Italy's contribution to space science was located at the San Marco launch pad in the Indian Ocean just off the coast of Kenya (78).

Science and modernist aspirations are central themes in historiography of South African state-formation and governmentalities (see Dubow 2006, 2009). The application of scientific rationality to military, industrial and civic regulation and development formed the context for the state's race-based political economy and the ideological crafting of its national identity as belonging to the 'West'. South Africa participated in the 'Moonwatch' programme for the tracking and recording of satellites introduced in the 1950s and early 1960s. From 1961 to 1975, Hartebeesthoek just west of Johannesburg became a site of NASA's Deep Space programme to support interplanetary robotic missions such as the Mariner IV fly-by of Mars (Martinez 2008, 46).

Worldwide, amateur and professional developments in the linking of rocket science to weapons were firmly grafted to local, as well as international, political contexts. In South Africa, local rocket science, too, had amateur roots. In Johannesburg in 1953, astronomical enthusiasts formed the South African Interplanetary Society; another group emerged in Port Elizabeth (Gottschalk 2010, 36). The South African Rocket Research Group was founded in 1959 by civilian Desmond Prout-Jones (Prout-Jones 2002).

National politics in this period shaped these developments. The government banned civilian rocket-launching initiatives in 1963 when the South African military began to develop surface-to-air missiles (Gottschalk 2010, 36). By then, the National Party was a decade into its control of the state and furthering its racial vision despite being met with concerted resistance. From the late 1950s, as more broadly anticolonial movements were fostered through labour strikes and protest actions, coalition-building between various organizations was strengthening the popular movement in various campaigns. Sputnik was launched the year after Nelson Mandela and 155 others were arrested and accused of treason in a series of trials that continued through 1961. The post-Sharpeville decision by leadership in the ANC that the movement would take up arms to end white racial rule would draw on amateur explosives expertise.

Sputnik in Public Space

The audibility of Sputnik was among its few sensory characteristics that made it perceptible to civilian technology, its signature blipping noise picked up by ham radio and broadcast more generally in news reports. While experts of the northern hemisphere were busy listening, so too were amateur radio enthusiasts in Southern Africa. On the morning of 5 October, 'signals from the Russian satellite encircling the world were picked up by radio ham Mr Peter Louth of Livingston'; later that evening, a Mr H. Perkins of Durban picked up 'pips' from the satellite (*Sunday Tribune*, 6 October 1957).

Though radio readily carried both news and audible traces of the satellite's presence overhead, in another sense Sputnik was strictly a spectacle of print media. Navigating in the air space over continents and oceans with all the Earth under its gaze, part of what was tantalizing about the satellite was its apparent reversal of vision. While it seemed to have omnipotent capacities as a surveillance technology, the question of whether or not it was possible to spot the satellite without the aid of binoculars or telescopes was unclear (*Rhodesian Herald*, 8, 12 and 24 October 1957). Thousands in Bulawayo, Salisbury and elsewhere were reported to have 'tried to catch a glimpse' of the satellite, many of whom 'were disappointed'. A Salisbury resident, who 'refused to give his name', phoned the *Herald* with the claim that he had seen the satellite's rocket case disintegrate; meanwhile, a farmer in Uppington was 'hit by a fragment of metal' that 'could "just possibly be a piece of Sputnik, or its rocket", Her Majesty's Astronomer at the Cape, Dr R. H. Stoy, said' (17 October 1957).

The general desire for visual knowledge was itself the object of news reports. One issue of the Durban-based newspaper the *Leader*, produced as a newspaper for Indian South Africans since 1940 (Maharaj 1994), displayed a photograph under the title 'Looking for Sputnik?' of young men in school blazers queuing up to look through a telescope (22 November 1957).

The elusive visibility of Sputnik made it an object of speculation and imagination, a point made explicit by the *Leader's* regular children's column ('Junior Leader'), which encouraged readers to 'Send us your drawings of the satellite'.

Hello Boys and Girls! Russia's baby moon, affectionally called 'Sputnik' by the Russians and the rest of the world, is going round and round the earth. It is moving slower now but it is still very much alive. I am sure you know lots about the baby moon because the newspapers have been so full of it. No one, except the Russians, really know how it is designed. All we know is that it is round, 23 inches in diameter, and has a number of long things like the devil thorn coming out of it to send out radio signals to our earth. So let's play a guessing game. Get yourself a piece of drawing paper, pencil, crayons or paint. Now draw 'sputnik' the way you think it looks. (*Leader*, 8 November 1957)

Where direct vision and sound failed as a source of knowledge-making, newsprint constituted the primary transmitter of images which – in the absence of television – offered the only visual content against which the imagination of South African publics could be formulated. Their mediated nature raised implicit questions about credibility and the possibilities of verification, contributing to the mood of speculation and contestation that emerged as a widespread response. Spreads of photographs and graphic illustrations, such as those carried by the *Sunday Tribune*, displayed technological expertise and



Figure 1 'The story in pictures of the little red moon' includes an image of the 'Russian Missile Men' Professors Poloskoy, Blagonravov and Kasatkin celebrating their achievement at a conference on rockets and satellites in Washington, DC; an illustration of the satellite's orbit and speed around the earth (27 October 1957); and renditions of space vehicles appearing in US sci-fi comic authors Oskar Lebeck and Alden McWilliams' 'Twin Earth', with detail (10 October 1957).

authority in the same pages as works of artistic interpretation and fiction (figure 1).

The visual content of newspapers, on the one hand, offered evidence in a context in which sight was a source of empirical verification. Yet, given the novelty of the technologies and the social uncertainties they produced, these images became part of a general climate in which rumour, speculation and imagination were validated as discourse of expertise. Performances of prediction by scientists and civilians alike responded to future possibilities, both pessimistic and optimistic.

'If it is like that': Rumour, Speculation, Prediction

Prediction was a low-stakes means of enhancing the prestige of government officials, and responses to unclear information with prophecy were also a boost for civilians seeking professional gain, status and spiritual entrepreneurship. News articles and commentary containing speculative reports by different kinds of experts raised questions about the nature of the technologies, their origins, their local application, and their political and religious implications. Cryptic explanations of the satellite's technological capabilities and construction, combined with the rumours of its destructive power as a political weapon, prompted ominous scenarios of the future for western-aligned African governments. For example, on 6 October 1957 the front page of the *Sunday Tribune* carried the headline 'Red Army takes control of journey into space: How Russians can scan the earth with satellite.'

The launching by Russia of the first man-made earth satellite – radio messages were received from it today – has profound military significance say military experts in London. It means that Russia will be able to scan the earth continually with radar and electronic devices. No country will be able to escape her ‘gaze’.

Words such as ‘scan’, ‘radio messages’, ‘electronic devices’ and ‘military significance’ suggested an omnipotent surveillance enacted through powerful, if cryptic, technologies. The vagueness of the information itself lent power to a narrative of political alarm. Even the satellite’s description as an ‘artificial moon’ suggested a capacity to transmogrify the natural world into a hostile force. North Atlantic scientists were reported to be deeply frightened (‘Prospects Terrifying, say Scientists’) and to be applying their own mysterious technical expertise.

Uncertainties about what Sputnik was and what it meant created space for alarm, but accommodated other moods: wit, defiance and curiosity. A political cartoon depicted impish Martians with telescopes speculating on cricket statistics as a tiny, round object orbits distant planet Earth. A ‘luminous object’ seen floating over Observatory in Cape Town was declared to be ‘not sputnik’ but rather a ‘primitive type of fire balloon’ that ‘raised to some 2,000 feet’ (*Sunday Tribune*, 13 October 1957). Application of space science to local agriculture was demonstrated in a report from Port Elizabeth announcing that ‘A Langkloof farmer, Mr H. Kritzinger of “The Dam” at Misgund Oos, [was] preparing to wage his annual battle with hail clouds – with rockets!’

Still, over the weeks following the first Sputnik lift off, the *Sunday Tribune*’s alarmist tone increased in relation to the technological breakthroughs foreseen by British and US Intelligence and boasted of by the USSR. A ‘Super Sputnik’ to be launched was portrayed as a “see all” laboratory’ equipped to ‘help solve the greatest mysteries of man’ and ‘to explore the innermost mysteries of nature’ (*Sunday Tribune*, 27 October 1957).

This same tone of alarm was conveyed in *Ilanga lase Natal*, which translated the rumours and speculations expressed in the Anglophonic and pro-West world to readers of *isiZulu*. On 23 November *Ilanga* carried a story expressing the British prime minister’s concern over Russian military capacity and ‘the threat posed by the communists’, against which Western Europe should unite. The threat, Macmillan is reported to have said, was approaching: ‘Today it can spread to Africa.’ The *Ilanga* reporter translates this destructive capacity:

It has been seen that the machines able to launch rockets into space are extremely dangerous and powerful. These satellites present a threat and make Western governments, such as England and America, afraid because it is said that it can distribute bombs that explode and can destroy mountains in America itself.

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This was the first instance in which *Ilanga* offered its readers a way to conceptualize a satellite: ‘This oval [satellite] flies upwards, controlled in Russia with radar similar to the transmission of the wireless voice in the air. The type that is used by these satellites are like that.’ Over the course of the month, the mood continued to be ominous, focusing on US fears about Soviet submarine weapons capabilities. ‘Intelligence sources in America said they believe that the submarine missiles [crocodiles] can destroy New York and other residential areas in the US. The situation is dire’ (*Ilanga lase Natal*, 14 December 1957). A week later, failed attempts by the United States to launch a satellite of its own were reported to *Ilanga* readers. ‘They [Americans] tried to send a rocket but instead of flying upwards it failed to go anywhere at all’ (21 December 1957). Meanwhile, Russian rockets ‘are still searching space. It is said they are preparing more rockets that will carry war bombs.’

Behind this revelation is the US leader who claimed he has heard that this rocket will have communication systems [telephones] like radio, it will take photographic images and broadcast speech which will be recorded. He said when the rocket is in the space it will have the capacity to erase all voices spoken via wireless [radio] and will prevent telephones and enable only their [Russian] voices to be heard.

On 15 February 1958 more announcements by the United States were reported to *Ilanga*’s readers. ‘It is said that these submarines are carrying weapons of a type newly invented which can be sent unmanned, with explosive power that can turn day into night.’

These reports about weapons of mass destruction were accompanied by commentary. An early report in *Ilanga* appraises the meaning of these developments for humankind: ‘If it is like that,’ writes the author, with evident scepticism,

it is clear that the end of the world is slowly approaching and will disappear because the talk about weapons with this kind of destructive capacity signifies an immense threat. And there is a general belief that even heaven has become horrible in these years because of machines like these. (21 December 1957)

A similar theological interpretation of space exploration appeared in a letter to the *Sunday Tribune*, which declared that ‘Sputniks dominate every newspaper ... but shows a world turned away from Christ’ (24 November 1957).

Local expertise of various kinds also mobilized to discredit the rumours of techno-political danger posed by satellite technology. Discussions of interplanetary travel sat within a broad and varied discourse of futuristic imagination and speculation. Zuleikha Mayat, a columnist in *Indian Views*, a Gujarati–English-language weekly directed to Muslim readers, expressed immense

intrigue with the ‘metal man made moon’. In her women’s page ‘Fahmida’s World’ she weighed up its possible consequences with a tongue firmly in cheek. Far from a threat, she sees the Sputnik as a positive sign of technological progress, joking:

From a housewife’s point [of view] it could mean controlled cooking and household chores whilst she sit and gossip around with friends. It can mean the sending of a little gadget to hover over the housetop of your friend and let it relay the gossip which is going on about you there, on your little receiver at home. (16 October 1957)

Mayat’s whimsical leisure-producing gadgets were consistent with the tone of modernist prediction taking place around her. Scientists attending an aeronautical conference in Barcelona were reported to have discussed the lack of international treaties on airspace, the possibility of rocket freights and the goal of lunar travel (‘Man Will Fly to the Moon Sooner than we Think, Say Experts’). This last theme was taken up by the *Tribune* science reporter in three separate installments that considered the human exploration of space. The first, entitled ‘Journey of No Return’, summarized the current scientific predictions and technical specifications that would enable manned space flight. Predictions of rockets as modes of travel circulated in different contexts. The Germans were reported to be working on a transoceanic ‘postal rocket project that will deliver mail by 1962’, as well as a ‘rocket-liner for passenger travel’ (*Sunday Tribune*, 27 October 1957). Local rocket enthusiasts could now bring their amateur know-how into a public arena to be hailed as experts. A ‘talk on space rockets’ was given by a Mr Angus-Leppan, lecturer in the Land Survey Department of the University of Natal and it was promised that he would ‘also discuss space travel. He will show slides.’

The Sputnik satellites appeared in the press as rumour and sign-readings of the future by both expert and lay opinion. The 1969 actualization of a manned lunar landing by Apollo 11 again stimulated performances of prediction. Linking these two achievements of space science in the local Durban scene was arguably the most flamboyant claim to prophetic power and epistemological method, announced with a flourish of showmanship by a well-known hypnotist who performed under the stage name of Professor Pawlous. The *Leader* reported the professor’s claim (‘I went first to the moon, says Indian’) that he had – in 1959 – not only predicted the lunar landing, but had travelled there himself, pre-dating the achievement of Armstrong, Aldrin and Collins by a decade (4 August 1969). The object of his journey, which was to determine the fate of a Russian rocket that had disappeared, had proved successful: he had ‘determined that the impact of the rocket had penetrated the moon’s surface to a depth of five miles’. The

story was news again a few days later. A member of the professor's own performing fraternity, a man named Karsh (a 'former magician, illusionist and hypnotist who practiced on the stage for almost 15 years'), had apparently attended the 1959 stage performance where Pawlous had 'supposedly sent his mind into space' and now called for an official test of his powers (*Leader*, 15 August 1969). The 'Send Me to the Moon Challenge' would involve Professor Pawlous sending Karsh himself into space via hypnosis, in order to prove it possible. A week later, a *Leader* article advertised the 'moon challenge' extravaganza, announcing that its proceeds would benefit charity. The 'launching pad' would be Durban City Hall; a photograph of the dashing turbaned professor proclaimed him 'mission commander' of the space venture. Suitable fighting talk offered a tantalizing preview of the performance: Pawlous promised to perform a mass hypnosis of the audience to demonstrate his power. He also expected Karsh to do the same since he, the professor, doubted his credentials:

If he were a hypnotist, he would know that it is possible to send one's mind under hypnosis to any place one likes ... Professor Pawlous explained that he [himself] was presently working on a project to send his mind to the back of the moon and also on the far more ambitious task of sending his mind to Mars. (22 August 1969)

Privileged access to obscure space-age knowledge was a resource for public prestige. This was also the case for science journalists and other experts, where news was also often a performance of prediction. In the wake of the July 1969 moon landing, the *Sunday Tribune* carried international and local articles reporting the speculations about 'man' living outside the Earth. Prediction drew on analogies of imperialist histories. For example, John Moorehead imagined 'millions of communities, descended from this planet' who would be living outside the solar system: 'To us, of course, July 21 1969 means the day man first stepped off his own planet to explore the moon, the day we sent out pioneers in space to colonize other worlds just as our ancestors went out from Europe to open up the new world.' On the same page, in 'A dramatic vision of the Future', Dr Thomas Paine imagined that new colonies would open up a new destiny for human beings (27 July 1969).

The subcultural influences of science fiction were present in the *Tribune*, but *Ilanga lase Natal* reported its readership as being concerned. On the brink of the lunar landing, a 'majority of Durban residents' were said to have deep scepticism and were 'criticizing the American's journey to send the man on the moon. They say this will lead to the end of the world and there are those who say this decision is insane and is pure lies' (19 July 1969). Insights solicited by the reporter do not appear to include any enthusiasts for the space adventure, but rather evidence an overwhelming concern with human

meddling in sacred knowledge. A Mr Daniel Nkabinde expressed his disapproval for ‘clever people who think they can discover Jesus’s secrets. The Lord will create anger in their hearts and burn them with the fire they are making. This will result in the end of the whole world.’ Apprehension, in more than one view, is related to the practices of ‘whites’, whose tampering with the sky is related to problems of weather (‘These days there is always sun. Rain is scarce.’) and arrogance (They ‘want to reach heaven to see the Lord with their eyes’). Mr Albert Zaca pronounced the enterprise a ‘delusion’ and a ‘waste of time’ by ‘people who have run out of things to do.’ A later issue of *Ilanga* reported a popular prediction that the lunar landing would result in a general secularization of society ‘because they [people] believe that the American success clearly shows them the uselessness of religion’. A policeman is alleged to have come precisely to such a conclusion: ‘And then this heaven we were told is just around the corner? Travelling takes a few days and then a person comes back alive ... there was nothing resembling [heaven].’ A pastor of the Zionist Church, David Zulu, explained that this general state of theological doubt came at a time when religious belief was already in crisis ‘because of what is happening on earth’.

Space Dogs, Rights and Measures of Progress

What was happening on Earth in relation to Southern Africa was the focus of discussion about issues of political dignity. Sputnik, and space science more generally, provided a context in which to consider contradictions between universalisms and particularities in the human experience, globally and in national contexts. Issues of rights and race were both implicit and explicit in the debates about the applications and meanings of space science. The first mammal sent into space, the mongrel-cum-aeronaut Laika, figured prominently as a catalyst in questions about scientific progress and its beneficiaries.

A second Sputnik satellite, this time with a passenger aboard, was sent up in November 1957. *Ilanga lase Natal* covered the story in an article entitled ‘A Brilliant Russian Dog’: ‘The breaking news in governments overseas, surpassing the shock of a second satellite sent to the moon, is a dog placed inside the satellite [oval] to observe how the environment affects its blood pressure and breathing’ (23 November 1957). *Ilanga* explained that humans had volunteered to make the journey for the cause of scientific observation, despite the fact they would ‘die if it came to that eventuality’, but that ‘Russia refused and declared they will only send the dog which had already been trained for space flight’.

It was covered with a type of blanket that would protect it from bad wind and heat of that planet where no human has walked before. Regarding the dog, it is said that the whole world was shaken up feeling its pain, blaming the Russians for bringing horrible death to the dog. It is a female dog!

Public concern about Laika the dog made a pronounced appearance in the press. The *Rhodesian Herald* was preoccupied with the traveller aboard 'Muttnik' (4 November 1957). In 'Rhodesians join protest' it was reported:

The Salisbury headquarters of the Society for the Prevention of Cruelty to Animals plans to lodge 'an extremely strong' protest with the World Federation for the Protection of Animals in Zurich against a dog being sent up in Muttnik. 'We all feel that it is extremely problematic whether the dog would still be alive even in the unlikely event of the satellite returning to earth. Surely they could find someone sporting enough to go up without sending a dog' (5 November 1957)

Yet, within the *Herald*, there were dissenting views in regard to the moralism around animal welfare. Letters to the editor were a bit puzzled about the concern shown about the space dog. A writer signing as 'Hound of Heaven' of Salisbury observed that not much concern was given to 'dozens of apes, dogs and rabbits' experimented upon in England, nor the 'lion, zebra and buck' killed in sport at home. Kay Nine of Gatooma thought that the space dog was fortunate when compared to 'the miserable starved specimens to be found in any Native compound'. Patricia MacLaughlan thought the public should 'go first into the question of Africans owning dogs, which just survives on nothing, whereas this dog, I presume, has all the facilities of a new-born babe in an oxygen tank' (9 November 1957).

In the South African press, too, the dog was a source of comment. In *Indian Views* Zuleikha Mayat, under the subheading 'Poochnik, Muttnik or Pugnisk', raised concern about the dog: 'A little boy cried broken-heartedly when he learned that "Laika, the brave puppy who went up all alone may be dead". He wants to be reassured [that] the doggie is perhaps just asleep and for that reason not barking.' On 10 November the *Sunday Tribune* had asked:

Is Little Laika dead? This was the question the whole world was asking this morning ... Last night, Tass, Russia's official news agency, issued a communiqué on the two satellites. But nothing about Little Laika. There has been no mention for three days of the first living thing in outer space. The Russians say that the dog has enough food to last through tomorrow.

The issue of animal rights, not surprisingly, raised the question of human rights and social justice. Russia itself was quick to draw global race politics into the frame, as *Ilanga lase Natal* pointed out.

Russia responded [to accusations of animal cruelty] by saying that those who blame them must look at themselves and at how they treat Blacks from South Africa , and also what they did to children of Negroes who went to study with Whites in America, as well as on how they destroy Algerians who want independence. Therefore, Russia says, they must not look at the negative side of Russia. (23 November 1957)

On 18 January 1958 an *Ilanga* column, ‘Rolling Stone’s Corner’, published the spoof report ‘Mice Say: Send Cats up in Sputnik’, which told of the fear of ‘Micedom’ of ‘Magundane Hall’ who ‘couldn’t care less about the fate of the dog Laika’ but who were merely trying to raid other people’s food and avoid cats, ‘their natural enemies’. In this tale a protest meeting led by a ‘King Rat’ reaches consensus that researchers conducting experiments should rather ‘pick on those animals who are a menace to the people’ because ‘innocent lives are at stake’. The story turns into recognizable political parable, with local flavour, when the protesters are told:

‘Attend in your thousands so as to demonstrate your democratic stand against tyranny and oppression posing in the name of science’... An experienced old mouse with whiskers as long as West Street in Durban and a tail the length of the Marine Parade was placed at the hole mount to watch for cats that might come prowling along thinking they were the Special Branch [Political Police].

Colonial politics was more explicitly raised in an *Indian Views* editorial entitled ‘Space Dogs and the Oppressed Peoples’. ‘The launching into space by the Soviet Union of Sputnik II has created a situation in which the oppressed peoples of the world, and particularly those in Africa, must see their problems in a wholly new light.’ The event should, said the editors, push the West into considering more critically their political leverage. Faced with the reality of the Russian superpower’s domination in the field of science, and therefore with more on offer for the decolonizing African continent,

the Free World is not likely to retrieve its former position. For, to do this, it will have to offer the oppressed peoples something more dazzling than the excitement over the Soviet achievements ... [And] America cannot do this in Africa where, side by side with her qualified and often halting support of liberation movements, she subsidizes apartheid in the form of loans, investments and public support given in the form of a neutrality which works to the advantage of apartheid. Britain is in a similar position.

Although, in recent years, she has taken up a fairly realistic attitude to the whole colonial question, progress in large parts of Africa is too slow to neutralize the effects of launching a Russian dog into space. (15 November 1957)

The space race, the editors contend, is most of all a ‘race for stomachs’. ‘What the times call for ... is bold, swift, and defensive action on the part of the Western Powers to convince the peoples of uncommitted Africa that the Free World is in the position to contribute positively and immediately towards their emancipation’. The measured tone in which this analysis is offered was characteristic of *Indian Views*, which refrained from explicit Cold War sympathies. In its pages, Russian economic aid for industrial development projects in India is recounted alongside reports of Indian university graduates being trained in Britain (20 November 1957). In an article entitled ‘Communist Achievements’ the social planning and progress of the Russian state were reported in appreciative terms (13 November 1957). Yet critics of the communist cause were also featured.

A political analysis by journalist Jordan Ngubane, who had by then left the ANC for the Liberal Party, appeared in a November article. In ‘Erasmus and the Sputniks’ Ngubane was sober about the threat to life that space science foreshadowed, but argued the United States must choose between trying to

overtake the Soviets in a new and more instant race to waste valuable millions of money on experiments which can only end in a war that could very well wipe the human race off the face of the earth. Or the ‘Free World’ [could] recognize the utter futility of trying to produce more deadly weapons and in turn realize that the problem is not one of frightful weapons but of one basically human. (15 November 1957)

What was happening in the world, continued Ngubane, was ‘basic uncertainty in the minds of men’. Nations live ‘in fear of attack; in fear of hunger; in fear of lower standards of living; in fear of unemployment.’ Against this ontological state, addressing material want would be the ‘only effective defence against communism in any part of the world and the only means for South Africa to play her rightful role in Africa’. The Cold War could be won through a delivery of meaningful rights:

The sense of security which comes with the feeling that one can reach one’s goals in reasonable safety; that one can have a roof over one’s head; have enough to eat; enjoy a happy life with his family and give his children the opportunity to enjoy the best things in life – this, in the final reckoning, is the only answer to the Sputniks.

The juxtaposition of innovations in space technology with issues of political and economic justice was part of a conception of modern innovation as a

humanist and universalist endeavour. The politics of colonialism and apartheid, as projects of race, constituted barriers to progress under this definition. Sputnik, as a measure of human advancement, was utilized in these arguments as moral and intellectual leverage for the cause of political equality.

Space-age technology as a ‘metric of modernity’ was drawn into other debates. *Indian Views* was the vehicle for challenges around doctrinal authority within local Durban Islamic circles in which modernists – like those at the helm of *Indian Views* – looked to global scientific trends and to religious expertise from the geographical centre of Islam to confront local clergy they accused of being parochial and tradition-bound. Zuleikha Mayat utilized a few lines in her women’s column to speak her own mind on an issue under intense discussion among local religious and patriarchal experts:

Our learned Ulemas can still bicker over the birth of the moon despite the stupendous findings and forecastings of scientists. Let us play a prank next Ramadan Eid by getting a scientist friend to launch a crescent shaped satellite in the horizon say two days before Eid and see whether they observe it. (16 October 1957)

The ‘bickering’ to which Mayat referred was not new. But in the months following Sputnik’s launch, a pronounced debate affecting Muslim residents of the southern hemisphere was taking place about the uses of science and technology in religious practice. At stake was nothing less than issues pertinent to the modern globalization of Islam and the centralization of its clerical authority. The so-called ‘New Moon Controversy’ appeared as a series of articles in *Indian Views* early in 1958.² It was focused on the question of whether an orthodox sighting of the crescent moon by leaders situated at the geographical centre of Islam could be procured by telescope and the news subsequently conveyed by means of radio and telephone to clergy in other regions, particularly those in the global South. Against this call to unify Islam through simultaneous practices of fasting and celebration, dissenting local Maulanas were called on to defend their position. They were cautioned to remember the Fatwa most of them signed in 1934 declaring it as absolutely illegal and sinful to accept any news of the new moon conveyed over the telephone, by telegrams, letters or wireless. ‘It now transpires that they were wrong in their judgement then and by their conduct today they tacitly acknowledge that their Fatwa of 1934 was a blunder. Before they begin answering the questions asked them today, we would beg them, in all humility, to ponder deeply and carefully lest they commit another such blunder’ (8 April 1958).

The debate, which continues today, raised theological issues and questions about the authenticity of evidence and of visual and aural verification, and highlighted a contest between regional loci of ecclesiastical power and authority in a context where South Africa was in the position of peripheral ‘village’ in relation to the signals of the Islamic metropol. Sceptics of space

² *Indian Views*, 8 April, 22 April, 7 May, 20 May.



Figure 2 ‘Question of the moon sighting – In the Name of the Sharia: A farcical tale. (Local moon committees) “In this age of moon rockets.”’

technology, through scriptural interpretation and continual reference to the authority of modern progress, were, in the pages of *Indian Views*, ridiculed as behind the times (figure 2).

From other quarters, the phenomenon of Sputnik was drawn into discourses that undergirded cultural prejudices of various kinds, and identified progress as a sign of advancement. This view could be leveraged on a number of fronts against a number of identified populations and drawn into different kinds of political arguments. In a *Tribune* letter to the editor, Pietermaritzburg resident F. J. Mitchison argued the Sputnik launch brought ‘into sharp relief the folly and danger of a Broederbond-inspired sectionalism and isolation’ which, he or she declared, had alienated western allies in a moment of increased vulnerability to communist attack. Criticism of National Party thinkers was here delivered with a serving of cultural bigotry: ‘As they watch the speeding herald of the new age, perhaps those inspired will have time to reflect that they have also progressed from the era of the oxwagon.’

Such cultural chauvinism could also be paternalistic in tone. For example, as the *Leader* reported, a University of Natal professor, E. T. Verdier, in an address to the Pietermaritzburg Indian Technical Students’ Society on ‘The Origin of Science’, had an optimistic, but Orientalist, lesson tailored to his diasporic audience. Science ‘was not the privilege of any one caste, race, group, nation, or culture’, but had begun ‘thousands of years before Christ’ on the

Asian continent. 'It was generally thought that numbers were of Arabic origin but actually India was responsible.' Yet scientific development here was 'fundamentally slow, while today [it] is stupendous'. The difference in this pace of progress, he moralized, could be explained as a cultural flaw: 'Unfortunately, the development of science was killed by the Caste System' (11 October 1957).

In other cases there are reports on the 'quaint' responses of various subalterns. Zuleikha Mayat aimed to entertain her readers with an anecdote: 'Said Ammah who does the family washing, in hushed tones. "You know Bhenie, they have sent a dog up to the moon. We watched for a long time last night but could only see something like a dog's head."' She adds that the 'indigenes' in Mombasa had been frantic to discover whether a partial lunar eclipse could be attributed to a Russian landing on the moon.

The 1969 landing of Apollo 11 evoked similar interest in the responses of various 'others'. In the days following this event the *Springs African Reporter* headlined 'Man has walked on the Moon: How Africans Reacted' reported how 'African people in all their heterogeneous cultural strata had reacted in various ways ... according to their ancient and modern beliefs and concepts' (25 July 1969). Various responses, written to amuse, were offered from a lively selection of respondents including 'old Charley Gumba of Daveyton' who worried about 'God's feelings' when approached by the astronauts 'in the flesh' ('Hawu! These White People!'). A salesman, the 'happy-go-lucky Oscar Mabika', declared his excitement at the achievement of Armstrong, Aldrin and Collins and offered an explanation for their success ('These three chaps ... are all college graduates'). Mabika is quoted at length relaying his amusement about an uninformed train commuter he had spoken to, who allegedly insisted the moon to be made of green cheese. A 'witch doctor from Wattville' was reported to have been confused about the space module, the Eagle. ('It couldn't have been an eagle. It must have been an owl. Witches and wizards always fly to the moon'). Other public views were derisively represented, attributed to a 'labourer', a Christian pastor, a Sangoma and Inyanga, the latter of whom both expressed an interest in *muthi* [medicine] that might be found in moon rocks. The report concludes with a Mr Zondo of Kempton Park, who comments on the Apollo landing as the fulfilment of John F. Kennedy's dream. 'Listen to one of these educated Africans', declares the writer.

Conclusion

News about the Cold War Sputnik space technologies was appropriated by reading publics in Southern Africa to engage popular questions around cosmological empiricism, religion and knowledge. It was drawn into local

struggles and rivalries over ecclesiastical authority and political rights and power. These space-age innovations both confirmed and subverted boundaries between secular and enchanted readings of nature and their respective attribution to colonial and colonized subjects. Dreams of progressives revealed themselves as much in fanciful speculations as empirical data and spiritual moralists defended their beliefs also in the language of positivism. Whether confirming or challenging a particular worldview, these events were universally appreciated as a serious and significant development. Yet public expressions conveyed a variety and coalescence of timbres and moods. Across the cultural spectrum represented by the brands of newsprint surveyed in this essay, writings that reflected play, humour and flights of fancy were as ubiquitous as expressions of solemnity or alarmist dread.

Despite their self-representation as instruments of civic rationality and as purveyors of factual information, newspapers functioned as a technology of rumour, speculation and imagination. This was clearly the case for all reading publics, despite the cultural partitioning of newsprint rooted in the spatial and social segregation policies of colonial and apartheid regimes. The event of Sputnik's launching, echoed also in the 1969 moon landing, inspired narratives of prophecy and conjecture in relation to different kinds of uncertainty. Sign-reading and various stylistic performances of prediction coalesced around different aims and concerns, and offered avenues to public voice and prestige. The print medium provided the most important point of contact between experts and laypersons. It was also the most important public platform for negotiating the criteria for what constituted expertise, whether scientific, political or theological. Overwhelmingly significant to shaping the balance of large-scale Cold War rivalries, space technologies were deployed also in local power struggles and struggles over authority, expertise and knowledge-making.

In the domain of public newspapers, the event of Sputnik was a moment that further drew into relief the contradictions between, on the one hand, universalistic claims of human achievement and progress and, on the other, discourses of racial-cultural particularity. It was a moment in which progress and modernity were defined and contested, as well as deployed. Progress and scientific achievement, evident in these stratospherical developments, gave leverage to social critics who were denouncing the discriminatory bases for awarding rights and sovereignty in Africa, whether apartheid in South Africa or persistent colonial or minority rule further north.

It was also a moment in which science as a 'metric of modernity' played to racist and chauvinist political cultures of subjugation. Responses to feats of space science alleged to be 'quaint' were exhibited in ways clearly aimed at generating a titter of amused condescension that confirmed in literate readers their belonging to a superior caste. Yet these discourses were also deployed in the service of other chauvinisms, and not limited to maintaining

racial or colonial divisions. For example, white English-speaking South Africans considered the National Party's failure to win unambiguous recognition as the 'natural' ally of the West as residing in a lack of sophistication, confirmation of a longstanding British stereotyping of Afrikaners.

The Cold War and its technological space-age innovations influenced large-scale political transformation in the global South. Africa was a theatre for engagement with and between polarized superpowers, as anticolonial and national independence movements strategized global, as well as local, alignments. US and Soviet finance, training and weapons helped shape the seizures of state power, power-holding and 'hot war' conflicts between rival liberation armies. The apartheid state would draw on such discourses and conflate its anti-communist project with the drive to maintain white racial rule. The macro-level effects of Russia's launch of the Sputnik satellite (echoed a decade later by the US moon landing) are well-known for the major shift they heralded in the nature and scale of modern scientific invention and of the possibilities of political power.

Yet, accompanying these instrumental, if complex, political impacts were other important responses and effects. Sense-making of these events by reading publics, as exemplified through this brief survey of Southern African newspapers, suggests that agency and interpretation cannot be collapsed or simplified with reference to dualistically constructed interests or identities. Nor, relatedly, can we see in these narratives much evidence either of a stable grand narrative or an unfolding of culturally bounded, alternative modernities. Rather, it demonstrates an uneven, multi-tonal and interactive grappling with a single, global modernity.

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