

Sputnik from Below: Space Age Science and Public Culture in Southern Africa

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In his satirical novel *The Dixie Medicine Man*, Christian John Makgala writes of Leroy, an orthopaedic 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 and his popularity is soon felt as a threat by Jealousman, World War II veteran 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.¹

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 skeptics 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 American 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 United States' 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. One position is that the extra-planetary mineral should be returned to the moon "where God had kept it", and that all the nation's *dingaka* should be invited to "cleanse the rock of any ominous consequences it might bring to our country"; another position argues the rock's value as a museum showpiece and for "scientific experiments". When agreement is reached, it is not about the fate of the moon rock but about the figure of Charles Nelson who, as "the first black man to be appointed Ambassador in southern Africa", is proclaimed a genuine sign of progress.

¹ Makgala, Christian John (2010) *The Dixie Medicine Man*. New York and Bloomington; iUniverse, Inc. pp 9-10.

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...”²)—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.

This paper is an exploration of public responses in (mainly) South African newspapers to the 1957 launching of the Sputnik satellites.³ I focus on this moment, specifically its articulation in the culture of print, to reveal the local texture and variety of popular concerns expressed in relation to the uses and meanings of space science. Three main points guide my discussion. Firstly, although represented as transmitters of factual news, print media functioned also as a technology of rumour. An attitude of speculation and prediction was prevalent. Newspapers were one of the few sources of visual information, yet photographic and artistic representations served as much to expand imaginative interpretation as to verify scientific truth.

Secondly, 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,⁴ 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.

Finally, 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, drew out tensions between universalist and communitarian interpretations of

² Makgala, *Dixie Medicine Man*, p 67.

³ Influences include Pandora, Katherine and Karen A. Rader (2008) “Science in the Everyday World”. *Isis*, Vol. 99, pp. 350-364, p 351. Redfield, Peter (1996) “Beneath a Modern Sky: Space Science and its Place on the Ground”. *Science, Technology and Human Values*, Vol. 21, No. 3, pp. 251-274; Stoeger, William R. (1996) “Astronomy's Integrating Impact on Culture: A Ladrerian Hypothesis”. *Leonardo*, Vol. 29, No. 2, pp. 151-154; Toumey, Christopher P (1991) “Modern Creationism and Scientific Authority”. *Social Studies of Science*, Vol. 21, No. 4, pp. 681-699; Kinchy, Abby J. (2009) “African Americans in the Atomic Age: Postwar Perspectives on Race and the Bomb, 1945-1967”. *Technology and Culture*, Vol. 50, No. 2, pp. 291-315; Alder, Ken (2007) “America's Two Gadgets: Of Bombs and Polygraphs”. *Isis*, Vol. 98, No. 1, pp. 124-137; Epstein, Steven (2008) “Culture and Science/Technology: Rethinking Knowledge, Power, Materiality and Nature”. *Annals of the Academy of Political and Social Science*. Vol. 619, October, pp. 165-182.

⁴ For this exploratory paper, I have selected *Sunday Tribune*, *Ilanga Lase Natal*, *Indian Views*, *Leader*, *Rhodesian Herald*, and a few others. Content is inclusive of 6 months following 4 October 1957. I have also drawn upon content from these same periodicals for the months following Apollo 11 moon landing, 1969, selections of which are included here to indicate a strong continuity of trends.

scientific achievement and presented opportunities to challenge discriminatory practices. Space technology could alternatively be evoked as a ‘metric of modernity’ for signaling a racial or civilizational hierarchy of nations in a de-colonising world, but also could be leveraged in local practices of social differentiation, to mark out and delegitimize certain groups or ideas as ‘backward’.

On this last point, it bears remembering that although an embrace of the scientific paradigm which produced this technological feat was viewed by many in the 1950s as a measure of modern sensibility, the rejection of empiricism was a ubiquitous response around the world. This is yet the case today. Metaphysical understandings of the universe, and sub-cultures of skepticism about quantum physics and aeronautics, continue to inspire a defensive science education literature dedicated to combatting ‘pseudoscientific’ interpretations and ‘superstition’.⁵ Yet popular rejections of scientific technologies and knowledge often highlight socially significant challenges to authority and power. In North America (and elsewhere), comic book figures with superpowers derived from alien forces and distant planets populated the expanding genre of science fiction, communicating a popular anxiety and curiosity that bridged expert and lay readerships through plots serving up a mix of technological invention and imagination.⁶ In poetry, the first Sputnik satellite has featured as a metaphor for the unsettling of seemingly fixed social locations, from nationality to gender identity.⁷ Such examples suggest how a focus only with scientific accuracy or formal politics will fail to capture the social and political meaning of these events in popular culture.

This survey of newspaper content is an initial overview of local, mid-century public understandings and uses of the global spectacle of cold war space science. With the advent of new national scientific projects, including the Square Kilometre Array (SKA), secured by South Africa (with Australia) in 2012, understanding their potentialities and limitations for public engagement beyond a narrow, elite and largely masculine band of expertise will be an important task of humanities research. Projects of science and development continue to inform and be informed by the classificatory binaries of ‘modernity’ and ‘tradition’, ‘Western’ and ‘indigenous’, which are racially

⁵ See for example Comins, Neil (2001) *Heavenly Errors: Misconceptions about the Real Nature of the Universe*. New York: Columbia University Press; Percy, John R and Jay Pasachoff (2005) “Astronomical Pseudosciences in North America” Chapter 13 in *Teaching and Learning Astronomy: Effective Strategies for Educators Worldwide*. Pasachoff and Percy (eds.) Cambridge: Cambridge University Press, 2005; Nanda, Meera (2006) “How Modern Are We? Cultural Contradictions of India’s Modernity” *Economic and Political Weekly*, Vol. 41, No. 6, pp 491-496.

⁶ Consolmagno, Guy J. (1996) “Astronomy, Science Fiction and Popular Culture: 1277 to 2001 (And Beyond)” *Leonardo*, Vol. 29, no 2., pp. 127-132; Dick, Steven J. (1996) “Other Worlds: The Cultural Significance of the Extraterrestrial Life Debate” *Leonardo*, Vol. 29., no 2., pp. 133-137.

⁷ Davis, Betty (1961) “Sputnik”. *Prairie Schooner*, Vol. 35, no 1. Pp. 62-63.; Hales, Corinne (1995) “Sputnik: October 4, 1957”. *Prairie Schooner*, Vol. 69, No 4. Pp. 58-60.

deployed to leverage authority and class interests in diverse and often contradictory ways in South African nationalist discourses.

View from Earth

The first Sputnik satellite was launched 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 set 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. Anti-colonial nationalisms were played out in the context of Cold War rivalries, with Africa a theatre of contestation between the U.S. and U.S.S.R. 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 American or Russian, was inherited from 19th century European political ideology.⁸ 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. Assif A 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 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 post-war 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.⁹

Sciences function as a “metric of modernity” and its imperial roots were felt in the racial politics and cultural paternalism through which contemporary nation-building projects in African were viewed by the ‘West’. 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, for example, in a review of a volume published in 1964

⁸ Siddiqi, Assif A. (2010) “Competing Technologies, National(ist) Narratives, and Universal Claims: Towards a Global History of Space Exploration”. *Technology and Culture*, Vol. 51, No. 2. pp 425-443.; p 427.

⁹ Siddiqi, Assif A. (2010) *The Red Rockets’ Glare: Spaceflight and the Soviet Imagination, 1857–1957*. New York: Cambridge University Press.

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 man-power requires sharp judgment 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.¹⁰

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 not to mention military capacity of other nations. The mineral plunder of Africa had been critical to military-industrial innovations that were shaping the post-war world and its emerging superpowers. Uranium from the Belgian Congo had produced the hydrogen bomb dropped on Hiroshima in 1945.¹¹ 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.¹² In terms of space science, many political elites of independent Africa would continue where colonial elites left off. In 1976, Mobutu Sese Seko, 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.¹³ Italy's contribution to space science was located at the San Marco launch pad, in the Indian Ocean just off the coast of Kenya.¹⁴

Science and modernist aspirations are central themes in historiography of South African state-formation and governmentalities.¹⁵ 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 satellite

¹⁰ Ashby, Eric (1964) "United States' Foreign Policy: View from a Sputnik", review of Samuel Johnson (1964) *The Scientific Revolution and World Politics in Science*, New Series, Vol. 145, No. 3634, pp 803-804; p 803.

¹¹ Fleckner, Mads and John Avery (2005) "Congo Uranium and the Tragedy of Hiroshima" Conference Paper, 3.8; Hiroshima, Japan, 55th Pugwash Conference.

¹² Purkett, Helen and Stephen Burgess (2002) "South Africa's Chemical and Biological Warfare Programme: A Historical and International Perspective". *Journal of Southern African Studies*, Vol. 28, No. 2. pp 229-253; p 230.

¹³ McDougal, Walter A. (1980) "The Scramble for Space". *The Wilson Quarterly*, Vol. 4, No. 4, pp 71-82. The enterprise buckled under various political pressures within three years. p 75.

¹⁴ McDougal, "Scramble for Space", p 78.

¹⁵ See, for example, Saul Dubow "A Commonwealth..." "list to be added..."

introduced in the 1950s and early 60s. From 1961-1975, 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.¹⁶

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 1945, Arthur C Clarke, British science-fiction writer, conceptualised satellite radio relays drew on his experiences in the Royal Air Force as a radar specialist in the Second World War. 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.¹⁷ The South African Rocket Research Group was founded in 1959 by civilian Desmond Prout-Jones.¹⁸

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.¹⁹ By then, the National Party was a decade into its control of state and furthering its racial vision despite being met with concerted resistance. From the late 1950s, as more broadly, anti-colonial 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.²⁰

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 broadcasted more generally in news reports. While experts of the northern hemisphere were busy listening, so too were amateur radio enthusiasts in southern Africa. The morning of 5th October, "signals from the Russian satellite encircling the world were picked up by radio ham Mr Peter Louth of Livingston"²¹; later that

¹⁶ Martinez, Peter. (2008) "Space Science and Technology in South Africa: An Overview", *African Skies / Cieux Africains*, October, No. 12, pp 46-49; p 46

¹⁷ Gottschalk, Keith. (2010). "South Africa's space program". *Astropolitics*, Vol. 8, No. 1, pp 35-48, p 36.

¹⁸ Desmond Prout-Jones, Desmond. (2002) *Cracking the Sky. A History of Rocket Science in South Africa* Pretoria: UNISA Press.

¹⁹ Gottschalk 2010, p 36.

²⁰ Durban Artist Harold Strachan writes of his experiences in the earliest training cadres of Umkhonto we Sizwe in bomb-making, the basic skills of which he had acquired a fighter pilot in the second world war. Strachan, Harold. (2004) *Make a Skyf, Man!* Johannesburg: Jacana.

²¹ *Sunday Tribune*, 6 October 1957, p 1 "Heard in Union" and "In Rhodesia".

evening, a Mr H. Perkins of Durban picked up ‘pips’ from the satellite. Russian citizens, too, were said to be glued to their news radios in hopes of “hearing at least the latest progress communiqué, if not a ‘pip’ for the artificial moon itself”.²² In the days following initial reports, most of the related articles appearing in the *Rhodesian Herald* underscored an interest in the satellite’s palpability.

Russia’s artificial moon passed close enough to Salisbury at 10:20 yesterday morning for signals to be picked up strongly at Salisbury Airport – at a time when repetitive ‘beep-beep’ was switching to a code signal. It is believed that the change in note indicated a transmission of figures relating to a coded message. For a few minutes it was very strong, then it faded rapidly. Meanwhile amateur radiomen in Salisbury are keeping a close check on the satellite and its signals.... Some of the local ‘hams’ are combining their radio resources to keep track more efficiently. Mr. Russell’s station for example is working in with another Waterfalls station – Z. E. 3JV – operated by Mr. D. C. Hilton. Another amateur enthusiast in Salisbury, Mr. Solly Benatar was receiving the satellite’s signal on his television set yesterday on 7.5 metres. He described the sound as a ‘modulated carrier wave’.²³

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. A sense of the visual could be offered to the general public only in newspapers. 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.²⁴ 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 Upington 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.”²⁵

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 Africans²⁶ since 1940, displayed a photograph under the title “Looking for Sputnik?” of young men in school blazers queuing up to look through a telescope:

²² *Sunday Tribune*, 6 October 1957, p 1 “First Step to the Moon, Says Moscow”, Reuters-AP

²³ *Rhodesian Herald*: “Salisbury is still hearing ‘beeps’”, 7 October 1957.

²⁴ *Rhodesian Herald*, “If you have seen satellite your sight is phenomenally good”, 8 October 1957; “Satellite Spotters Keep Herald Phone Busy”, 12 October 1957; “Sputnik, Meteor, Comet: Fireball Flashes Across Rhodesia” 23 October 1957”.

²⁵ *Rhodesian Herald*, “Man Thinks Piece of Sputnik Hit Him”, 17 October 1957

²⁶ Maharaj, Prashanta “The Leader: A Preliminary Study of the First Decade of *The Leader* with Particular Reference to its stance on the Passive Resistance Campaign of 1946”. Unpublished History Honours Thesis, University of Natal, 1994.

At a time when everyone's attention is focused on the heavens, the students of Sastri College, Durban, are particularly fortunate in the possession of a 4-inch telescope which they bought themselves. Here the budding young astronomers are seen scanning the skies in which man-made satellites, as well as the stars, hang in space.²⁷

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. Noone, except the Russians, really know how it is designed. All we know is that it is round, 23 inches in diametre, and has a number of long things like the devil thorn coming out of it to send out radio signals to our earth. So lets play a guessing game. Get yourself a piece of drawing paper, pencil, crayons or paint. Now draw 'sputnik' the way you think it looks.²⁸

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 which emerged as a widespread response. Spreads of photographs and graphic illustrations, such as those carried by the *Sunday Tribune*, displayed technological expertise and authority in the same pages as works of artistic interpretation and fiction.



Photographic and artistic: "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; an illustration of the satellite's orbit and speed around the earth; renditions of space vehicles appearing in American Sci-Fi comic authors Oskar Lebeck and Alden McWilliams's "Twin Earth" (with detail).²⁹

The visual content of newspapers, on the one hand, offered verification in a context in which sight was a source of empirical verification. Yet, given the novelty of the technologies and the social

²⁷ *Leader*, 22 November 1957, "Looking for Sputnik?"

²⁸ *Leader*, 8 November, 1957, "Junior Leader".

²⁹ *Sunday Tribune*, 27 October 1957; Comic, 10 November 1957.

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

On October 6, 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:

Using a battery of electronic brains, Dr. [Henry] Richter and his assistants are working shifts trying to break the code. He believes secret coded signals are giving vital data on the temperature of outer space ‘which is what American scientists would seek first’ and information on cosmic radiation.³⁰

A week later, with Sputnik reported to have “completed 114 circuits around the earth and still going strong”, the *Tribune* headlines carried the American conjecture that aeronautical engineering secrets had been smuggled to Russia by Ethel and Julius Rosenberg, executed by the U.S. state four years earlier as Soviet spies.³¹ 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 surveying a tiny, round object orbiting distant planet earth: “I betcha its Roy McClean³² scoring sixes”. A Reuters-Sapa article reported that the British Prime Minister Harold MacMillan’s had ‘snubbed’ Sputnik’s potential threat, confident that the possession of the hydrogen bomb by the West that would keep Russian aggression in check.³³ A “luminous object” seen floating over Observatory in Cape Town was declared to be “not sputnik” but rather a

³⁰ *Sunday Tribune*, 6 October 1957, p 1 “Prospects Terrifying, Say Scientists”.

³¹ *Sunday Tribune*, 13 October 1957, “Sputnik Spy Shock”.

³² High scoring Springbok cricket batsman.

³³ *Sunday Tribune*, 13 October 1957, “MacMillan snubs threat of sputnik”.

“primitive type of fire balloon” that “raised to some 2000 feet”.³⁴ Application of space science to local agriculture was demonstrated in report from Port Elizabeth, announcing that “A Langkloof farmer, Mr. H Kritzenger of ‘The Dam’ at Misgund Oos, [was] preparing to wage his annual battle with hail clouds – with rockets!”³⁵

News articles and commentary contained the speculative reports of different kinds of experts, raising questions about the nature of the technologies, their origins, local application, 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, prompting ominous scenarios of the future. Over the weeks following the first sputnik lift off, the *Sunday Tribune*’s alarmist tone increased in relation to the technological breakthroughs being foreseen by British and American intelligence and boasted 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”.³⁶ On November 10, the headlines warned: “Hypersonic bomber glides at 14,000 mph: Red Horror Weapon from Space being Developed”. The Americans were reported to be “far behind”.

Russian scientists were reported today to be developing a weapon more terrible than the ‘ultimate’ intercontinental ballistic missile – I.C.B.M.—a manned, hypersonic bomber that could glide at fantastic speeds and bomb and spy on any place on earth.³⁷

A week later, the U.S. Air Force had disclosed its work “towards nuclear explosions in space as possible weapons to destroy enemy missiles”, “space bombs” which would be tested at Eniwetok Atoll in the Pacific.³⁸ In the days that followed, *Tribune* news warned that ‘Russia moved another step forward this week in her bid to dominate Africa’.³⁹

This same tone of alarm was conveyed Natal *Ilanga lase Natal*, which translated the rumours and speculations being expressed in the Anglophonic world to readers of isiZulu. On 23 November, *Ilanga* carried a story (“England’s warning”) 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 reporter then explains the destructive capacity represented by satellites, which has so alarmed this British leader:

³⁴ *Sunday Tribune*, 13 October 1957, “No, It Wasn’t Sputnik”.

³⁵ *Sunday Tribune*, 13 October 1957, “Farmer Uses Rockets to Fight Hail”.

³⁶ *Sunday Tribune*, 27 October 1957, “Russians to send a ‘see all’ laboratory into space: Super Sputnik will explore space wonder”.

³⁷ *Sunday Tribune*, 10 November 1957, “Hypersonic bomber”.

³⁸ *Sunday Tribune*, 17 November 1957, “Space Bombs”.

³⁹ *Sunday Tribune*, 24 November 1957, “Red Rockets for Suez Canal”.

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.⁴⁰

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 invisible waves [?] similar to the transmission of the wireless voice in the air. The type that is used by these satellites are like that”.⁴¹ Over the course of the month, the mood continued to be ominous, focusing on United States’ fears about Soviet submarine weapons capabilities. “Russia said they are able to reach enemy waters sending these self-propelled missiles for a distance of 900 miles. Intelligence sources in America said they believe that the submarine missiles [crocodiles] can destroy New York and other residential areas in the U.S. The situation is dire”.⁴² A week later, failed attempts by the US 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. In a subsequent launch attempt, it combusted [disappeared and turned into flames]. This, when the Russians were preparing to send a rocket for the third time.”⁴³ Meanwhile, Russian rockets ‘are still searching space. It is said they are preparing more rockets that will carry war bombs’.⁴⁴

Behind this revelation is the United States’ 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 February 15 of the following year, more announcements by the United States were reported to *Ilanga*’s readers. These included developments in missile technologies from both above (rockets) and below (submarines). A Russian official was said to have assured “with no doubt about their

⁴⁰ *Ilanga lase Natal*, 23 November 1957, “INgilandi Inevuso”. Sekubonakele nokuthi lemishini eyinkinga okuyiyona itumela izindilinga lezi phezulu inamandla ayethusile imibuso yaseNtshonalanga amaNgisi namaMelika, ngoba kuthiwa ingakwazi ukuthumela amabhomu lawa aqhuma kubheduke izintaba eMelika uqobo.

⁴¹ Lendilinga ishushuluza nje phezulu iphethwe khona eRussia uqobo ngezintambo ezingabonwayo njengoba nibona izwi lihamba emoyeni nje likaWayilense. Lunjalo uhlobo lwenzintambo ezihambisa izindilinga lezi.

⁴² *Ilanga lase Natal*, 14 December 1957, “In America”. Izingqapheli zezindaba zempi zaseMelika zithetha zineqiniso lokuthi iziNgwenya lezi zingawubhubhisa nya umuzimkhulu waseNew York neminye imizi emikhulu yaseMelika. Libamele ngothi bakithi.

⁴³ *Ilanga lase Natal*, 21 December 1957, “America is Failing”. Bathi bayawudubula usuke ufadalale nje. Bathe bethi bayawuthumela wasuka waphuma unuka kwagqamuka amalangabi kodwa phinde uyendawo wabhabhalala nje. Kuyilapho amaRussia aselungisa okwesithathueswuthumela phezulu.

⁴⁴ *Ilanga lase Natal*, 12 December 1957, “The Russians still wish for more”. Kuyezwakala ukuthi amaRussia kawahlezi phansi njengoba imiPhuphutheka yawo isazula ezinkangala zasemoyeni nje. Kuthiwa manje alumba eminye imiPhuphutheka ezothwala amabhomu empi. Oveze lenkinga yisikhulu saseMelika esithe sizwa ukuthi loMphuphutheka uzoba nezincingo zokukhuluma njengewayilense uthathe nezithombe, usakaze nenkulumo eyolotshwa igcinwe kuwona. Uthi mhla isiphezulu iyoba namandla okucimaonke amazwi akhulunywa kumawayilense, ivimbe nezincingo zokukhuluma kuzwakale kuphela elayo iphimbo.

power” that their missiles could “fly to the interior of America”. Americans were also “shocked” by submarines in their waters. “It is said that these submarines are carrying weapons of a type newly invented which can be sent unmanned [?], with explosive power can turn day into night”.⁴⁵

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 skepticism,

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.⁴⁶

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”.⁴⁷ In the *Leader*, a writer from Clairwood, identified only as “Scientist” also raised the question of whether “man’s exploration of space [is] contrary to the will of God”. “Many devout people seem to think that it is flouting God’s will to probe into secrets which they consider He meant to keep hidden for all time. While I respect their beliefs, I cannot share them.”

I cannot conceive that the Almighty would have created mankind with an inquiring mind if He had not intended us to use the faculties with which he endowed us. [...] I have not the smallest doubt that in the very near future men will land on the moon, and thereafter on other planets. God intended us to use our natural skills to acquire fresh knowledge of His marvelous ways. [...] I find it ironical that the godless Russians lead in the field of space exploration because their discoveries undoubtedly reinforce the evidence in favour of the eternal verities to which established religious subscribe.⁴⁸

Local expertise of various kinds also mobilized to discredit the rumours of techno-political danger posed by satellite technology. A talk by chemistry Professor A.A. Verbeek of the University of Natal to the Pietermaritzburg Indian Technical Student Society was reported in the *Leader* under the title “Satellite Won’t Set Alight the World”. The professor clarified that satellites themselves posed “no threat”: “It would be difficult to get a bomb away from a satellite and as it came nearer to earth, it would have to be slowed down considerably by some device to prevent it from disintegrating”, he explained. A comment in the *Jewish Herald* declared the idea of a satellite-launched arsenal to be the “groundless fears” of “panicky, part-time scientists [who] predict control

⁴⁵ *Ilanga lase Natal*, 15 February 1958, “KwelaseMelika”. Kuthiwa izingwenya lezi zithwele izikhali zona lezo zohlobo olusha ezizihambelayo nezinye eziqhuma.

⁴⁶ *Ilanga lase Natal*, 21 December 1957, “The Russians still wish for more”. Uma kunjalo kusobala ukuthi sekuya khona ukuba umhlaba ubhubhe, ushabalale ngoba uma sekukulunjwa izikhali ezifana nalezi ingozi yazo inkulu kakhulu. Futhi sekukhona nevuso elithi neZulu selabayinqaba nje ngaleminyaka yingakho ukuba khona kwemishini efana nale.

⁴⁷ *Sunday Tribune*, 24 November 1957, “Letter to the Editor”.

⁴⁸ *Leader*, 15 November 1957, “Is Man’s Exploration of Space Contrary to the Will of God?”

of the world for Russia”.⁴⁹ Yet the article, entitled “What Sputnik Means to the Middle East” conceded to its readers that the satellite, launched “on Yom Kippur 5718”, had immense psychological significance, in relation to which a future Cold War stand-off and its impact on Israel could be predicted.

Disarmament can become a reality, using satellites. If each side has satellites capable of detecting nuclear radiation in ‘enemy’ territory and if agreement existed allowing full inspection of nuclear research areas thus detected—to prove the peaceful purpose of such areas—disarmament could be made into a practical possibility. This, together with the need for international cooperation before the achievement of interplanetary travel, could very well lead to world peace.

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 both to convey her modernist optimism and to comment on the constraining roles attributed to women. She supplies her readers with a description of its size, shape, height above earth and the velocity of its orbit (“if you were to see off a few Hajis at the Reunion Airport, in the time it takes for you to get there and return home this object would already have gone round the earth two times.”) She draws upon historical analogy to consider whether the new satellite is “frightening or soothing”. National alarm over the new space technology is compared to outcries expressed in the previous century over the printing press and machine looms, which, she explains, threatened to put people out of work in the short term but which allowed for the benefits of a mass production of literature and fashionable garments in the long run. Similarly, it may be frightening to think about the immediate possibilities of warfare in which “a few technicians” could bring destruction on cities by means of a “hovering rocket”. Yet, she declares, “used properly it could make living on earth so easy and utterly delightful”. Her musings on what might be proper and delightful turn out to be a barbed comment on gender relations. Proper use is not wielded by men who appear to offer only violent scenarios; it lies rather in the possibilities that she felt female readers of her column were most likely fantasize about:

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.⁵⁰

⁴⁹ *Jewish Herald*, 18 October 1957, “What Sputnik Means to the Middle East”.

⁵⁰ *Indian Views*, 16 October 1957, “Fahmida’s World”.

Levelled as a gentle confrontation of gender authority and a satiric comment on the domestic culture she observed around her, Mayat's whimsical leisure-producing gadgets were consistent with the tone of modernist prediction taking place around her. Scientists attending an aeronautical conference held 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 travel into 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 appeared 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'.⁵¹ 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 announced for a Wednesday evening two weeks following the first news of Sputnik. Mr Angus-Leppan was a lecturer in the Land Survey Department of the University of Natal but it was promised that he would "also discuss space travel. He will show slides".⁵² An *Ilanga* reporter with news of yet another unfortunate American rocket whose "engine exploded in flames and sent smoke skyward" was clearly fascinated with the preparations that scientists were making towards eventual manned space flight through the simulation "flight" by Donald Farrell.⁵³

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 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 to have travelled there himself, thereby predating the achievement of Armstrong, Aldrin and Collins by a decade.⁵⁴ 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

⁵¹ *Sunday Tribune*, 27 October 1957, "Rocket mails by 1962, even R-liner, say the Germans".

⁵² *Sunday Tribune*, 27 October 1957, "Durban Talk on Rockets".

⁵³ *Ilanga lase Natal*, 3 March 1958, "Izindaba zemibuso yaphesheya kwezilwandle".

⁵⁴ *Leader*, 8 August 1969, "I went first to the moon, says Indian".

performance where Pawlous had “supposedly sent his mind into space” and now called for an official test of his powers.⁵⁵ The “Send me to the Moon Challenge” would involve Professor Pawlous sending Karsh himself into space through hypnosis, in order to prove it possible. A week later, an 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 tantalizing preview of the performance: Pawlous promised to do 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.⁵⁶

Privileged access to obscure knowledge was a resource of public prestige. This was also the case for science journalists and other experts, where news was often a performance of prediction. In the wake of the July 1969 moon landing, the *Tribune* carried international and local articles reporting the speculations about ‘man’ living outside the earth. Prediction drew on analogies of imperial history. John Moorehead, science journalist [?], 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 colonise other worlds just as our ancestors went out from Europe to open up the new world.”⁵⁷ He discussed the biological evolution that would be required for men to live outside of the envisioned geodesic dome structures popularized by Buckminster Fuller. 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 that would counter to Orwell’s dystopic vision of 1984.⁵⁸

The subcultural influences of science fiction were present in the *Tribune*, but *Ilanga* reported its readership as being concerned. On the brink of the lunar landing, a “majority of Durban residents” were said to have deep skepticism and were “criticising the American’s journey to send the man on the moon. They say this will lead to the end of the world and there those who say this decision is insane and is pure lies.”⁵⁹ Insights solicited by the reporter do not appear to include any enthusiasts

⁵⁵ *Leader*, 15 August 1969, “Send me to the Moon Challenge”.

⁵⁶ *Leader*, 22 August 1969, “Moon Challenge: Chest will Benefit”.

⁵⁷ *Sunday Tribune*, 27 July, 1969, “The Shape of Men to Come: How we will Survive Other Worlds”.

⁵⁸ *Sunday Tribune*, 27 July, 1969, “A Dramatic Vision of the Future”.

⁵⁹ *Ilanga lase Natal*, 19 July 1969, “Sebephikelele enyangu ngqo manje eMelika”.

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 secularisation 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 on 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-astronaut 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”.⁶⁰ *Ilanga* explained that humans had volunteered to make the journey for the cause of scientific observation, despite that 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.”

⁶⁰ *Ilanga lase Natal*, 23 November 1957, “Inkinga Yenja yase Russia”. Indaba esuke yabankulu phesheya embusweni yonke yedlula neyokwethuswa yindilinga yesibili ethunyelwe ezulwini yi Russia ngeyokuba kufakweinja kuyona. Beyohlola ngayo ukuthi umoya ulinyakazisa kanjani igazi nokuphefumula kwayo na.

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!⁶¹

Public concern about Laika the dog was made a pronounced appearance in the press. The *Rhodesian Herald* was preoccupied with the traveler aboard “Muttnik”.⁶² In “Rhodesians join protest” it was reported that

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’.⁶³

Yet, within the *Herald*, there were dissenting views in regards 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 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 that 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.”⁶⁴

In the South African press, too, the dog was a source of comment. In *Indian Views*, Zuleikha Mayat, under the subheading “Poochnik, Muttnik or Pugnik”, 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”.⁶⁵ 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, Russias official news agency issued a communiqué on the two satellites. But

⁶¹ Ibid, Kuthiwa amaRussia athi zikhona izinsizwa sakhona ezizinikela zathi makuthunyelwe zona phezulu ziyozizwela okukhona, zife uma sekufike ukufa . Kodwa enqaba athi azothumela yona inja leyo eseyafundiswa ukuthubelelza kanjalo. Yembathiswa uhlobo lwesambatho oluzoyivikela emimoyeni nase kushiseni kwezwe lelo elingabonange lihanjwe ngabantu abaphilayo. Inja leyo kuthiwa ikhalise umhlaba wonke uyizwela ubuhlungu, usola amaRussia ukuthi enze isenzo esibi sokulandela inja ukufa okubi kangako. Yinja yensikazi lena!

⁶² *Rhodesian Herald*, 4 November 1957, “Dog is First space traveller as second sputnik is launched”; 5 November 1957, “Fate of satellite dog has the world worried”; 7 November 1957, “Muttnik clocks million miles: space dog still healthy”.

⁶³ *Rhodesian Herald*, 5 November 1957.

⁶⁴ *Rhodesian Herald*, 9 November 1957, “Soviet Space Dog Better Treated than Many on Earth”.

⁶⁵ *Indian Views*, 20 November 1957, “Fahmida’s World”.

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.⁶⁶

To underscore the high emotion, a photograph of the large-eyed Pomeranian mix strapped into its gear appeared on the front page, above the melodramatic caption:

Little Laika takes a last look at the world she knows before being sent into a world unknown. A glance at a clock. A farewell, affectionate pat. Then the gallant little husky's compartment is sealed and she is shot into space. Will Little Laika ever know what its like to return to this world again...to the world that has made her more famous than any other dog in history? Or is time running out for her...?

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.⁶⁷

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 peoples 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 when the protesters are told:

"Attend in your thousand 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.

Colonial politics was 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

⁶⁶ *Sunday Tribune*, 10 November 1957, "Is Space Dog on its way Down?"

⁶⁷ *Ilanga lase Natal*, 23 November 1957, "Inkinga Yenja yase Russia". AmaRussia aphendula ngelithi labo abayisolayo mabazibheke bona babaphatha kanjani abanmnyama baseSouth Africa, nokuthi benzeni ezinganeni zamaNgilosi ezabe ziyofunda nabelungu eMelika, nokuthi babacekela phansi kanjani abaseAlgeria abafuna uzibuse na. Ngalokho ithi iRussia mabangabheki ohlangothini olubi bebe bengabokuqala ukuthumela indilinga okuthiwa Sputnik I. Lena yesibili kuthiwa yi Muttnik II.

problems in 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] American 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.⁶⁸

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 training in Britain.⁶⁹ In an article entitled "Communist Achievements", the social planning and progress of the Russian state was reported in appreciative terms.⁷⁰ 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 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 could wipe the human race off the face of the earth. Or the "Free World" [could] recognise the utter futility of trying to produce more deadly weapons and in turn realise that the problem is not one of frightful weapons but of one basically human.⁷¹

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

⁶⁸ *Indian Views*, 15 November 1957, "Space Dogs and the Oppressed Peoples".

⁶⁹ *Indian Views*, 20 November 1957, "Russian Help for India" and "Workers to be Trained in Britain".

⁷⁰ *Indian Views*, 13 November 1957, "Communist Achievements".

⁷¹ *Indian Views*, 15 November 1957, "Erasmus and the Sputniks".

effective defense 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:

[T]he 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 were part of a conception of modern innovation as a humanist and universalist endeavors. 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 case of political equality.

Space age technology as a “metric of modernity” was drawn into other debates. The *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 expertise:

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.⁷²

The “bickering” Mayat was referring 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 the *Indian Views* early in 1958.⁷³ It was focused around 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 the news subsequently conveyed by means of radio and telephone to clergy in other regions, particularly those in the global

⁷² *Indian Views*, 16 October 1957, “Fahmida’s World”.

⁷³ *Indian Views*, 8 April 1958, “The Crescent Moon”; 20 May 1958, “The Crescent Moon”; 22 April, “The New Moon Controversy”; 22 April 1958, “The New Moon”; 7 May 1958, “Follow Egypt on Moon Question”.

south. Against this call to unify Islam through simultaneous practices of fasting and celebration, dissenting local maulanās were called on to defend their position. They were cautioned to be reminded

of 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 judgment then and by their conduct to-day they tacitly acknowledge that their Fatwa of 1934 was a blunder. Before they answering the questions asked them to-day, we would beg them, in all humility, to ponder deeply and carefully lest they commit another such blunder.⁷⁴

The debate, which continues today, raised theological issues and questions about the authenticity of evidence and of visual and aural verification, as well as highlighting 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. Skeptics of space technology were, through scriptural interpretation and continual reference to the authority of modern progress were, in the pages of *Indian Views*, ridiculed as behind the times.



Translation: Question of the moon sighting--
In the Name of the Sharia: A farcical tale.
(Local moon committees)
“In this age of moon rockets”.
Indian Views, 22 April 1958.

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 FJ Mitchison argued that 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 ...”.

⁷⁴ *Indian Views*, 8 April 1958, “Important Statements by Maulanas”.

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 Pietermaritzberg 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."⁷⁵

In other cases, 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" which reported how "African people in all their heterogenous cultural strata had reacted in various ways [...] according to their ancient and modern beliefs and concepts."⁷⁶ 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 "a labourer", a Christian pastor, a Sangoma and Inyanga, the latter of whom both expressed interest in the muti 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.

⁷⁵ *Leader*, 11 October 1957, "Science Killed by Caste System".

⁷⁶ The *Springs African Reporter*, 25 July 1969, "Man has walked on the Moon: How Africans Reacted".

Conclusion

This blend of responses and perspectives regarding science and modern technological change emerge in Makgala's fictional tale, with the author using humour and irony as light-hearted political commentary. Leroy, the Dixie Medicine Man, remains in Botswana for 30 years, a period in which diamond heists, HIV, environmental degradation and the expansion of information technologies transform his profession. When his marriage and life savings is all but destroyed (his wife falls under sway of a prosperity church, "Curse Breaker International Ministries") he returns to the USA, where his story—now published as a book—is promoted by talk-show host 'Orapa Windfree'. During these three decades, Jealousman remains an avid reader of newspapers and is the first to acquire an ATM card and a cell phone, but continues to deny the lunar landing. The book ends with his determination to write his "side of the story".

Newspapers conveyed many "sides of the story" with regard to space technologies in the mid-20 century. From this initial survey of select newspapers, a number of observations can be made about the ways that Sputnik appeared in print media and the public engagement it engendered. Firstly, despite their self-representation as instruments of civic rationality and as purveyors of the factual information, newspapers functioned also as a technology of rumour and speculation. 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.

A related second point is that, in regards to these events of space science, newspapers provided the most important point of contact between experts and laypersons. In their capacity as a forum of public sphere debate, newspapers created the most important platform for negotiating the criteria for what constituted expertise. This was the case regardless of whether the nature of the knowledge at stake was scientific, political or theological. Technologies of modern space science could be drawn into local power struggles and struggles over authority, expertise and knowledge-making.

Finally, through the medium of the 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 definitions of progress and modernity were contested. Social critics could speak of the discriminatory bases for awarding rights and sovereignty in the context of Africa, with specific reference to apartheid in South Africa and 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. In other cases, space-age technology engaged questions around cosmological empiricism and religious knowledge, drawn into local struggles over doctrine and ecclesiastical authority.

These various issues raise questions about current trends of scientific enterprises, specifically astronomical research, that are heralded as national projects. Yet how do public discussions of SKA, heralded as a catalyst for science education and interest, depart from or replicate the discursive binaries between “modernity” and “tradition”, “history” and “culture”, “Western” knowledge and “Indigenous Knowledge Systems” that continue to shape political and class interests? There is certainly more to be learned through a deeper and much more contextually directed investigation of print media around moments of scientific innovation and political ferment.