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The Missionary and the Rainmaker: David Livingstone, the Bakwena, and the Nature of Medicine

Abstract

The dialogue between the missionary and the rainmaker found in various forms in David Livingstone's writings needs to be interpreted against the background of Livingstone's relationship with the Bakwena during the late 1840s, a time of severe drought and one in which chief Sechele's repudiation of his rainmaking functions after his baptism threatened the displeasure of the ancestors.

Livingstone's recording of the dialogue reveals his indebtedness to the moral philosophy of the Scottish thinker, Thomas Dick, but also suggests that Livingstone remained fascinated by the very African cosmology that his Christian faith and Scottish scientism led him to repudiate.

Keywords

David Livingstone; Bakwena; Sechele; rainmaking; irrigation; medicine

Introduction

The dramatic reconstitution of a dialogue between a missionary and an indigenous rain doctor or rainmaker appears in several different but broadly similar versions in the writings of David Livingstone. It is a dialogue that has attracted some scholarly attention, most notably by the American anthropologists, Jean and John Comaroff, in their controversial investigation of the role of British Nonconformist missionaries in the dissemination of European hegemonic discourse or "colonizing conversation" among the Tswana peoples

of southern Africa.¹ This article places this dialogue in the context of Livingstone's changing and sometimes problematic relations with the Bakwena people during the early years of his missionary activities in southern Africa. It also uses the dialogue to reflect on Livingstone's early intellectual formation in Scotland, particularly with reference to his belief in the harmonious relationship between science, medicine, and Christian faith, a subject that has attracted surprisingly little attention in the scholarship on Livingstone: George Shepperson is one of the few scholars to have begun to explore this theme.² The dialogue illuminates Livingstone's ambiguous, even self-contradictory, attitude to indigenous African beliefs and rituals: the text frequently reveals to the present-day reader his failure to comprehend or at least to accept the rainmaker's view of the natural world and of how it may be subjected to effective human manipulation; yet the very fact that Livingstone recorded this lack of comprehension and acceptance so painstakingly, initially for his own interest, and then subsequently for a public readership, suggests that he was striving both to attain himself and to encourage in others a more discerning insight into the world view of the Tswana peoples. More broadly, the dialogue illustrates how in encounters between missionaries and indigenous authorities in nineteenth-century southern Africa the question of how to respond to the critical circumstance of prolonged drought tended to uncover both the fundamental contradictions and the areas of potential convergence between European and African cosmologies. It also raises issues about divergent perspectives on the relationship between humans and the natural environment that are of ongoing significance.

¹ Jean and John Comaroff, *Of Revelation and Revolution. Christianity, Colonialism, and Consciousness in South Africa Volume One*, Chicago and London: University of Chicago Press, 1991, pp. 206-13.

² George Shepperson, "Livingstone and the Years of Preparation 1813-1857" in Bridglal Pachai (ed.), *Livingstone: Man of Africa. Memorial Essays 1873-1973*, London: Longman, 1973, pp. 7-28; see also his "David Livingstone the Scot", *The Scottish Historical Review*, Vol. 39 (2), October 1960, pp. 113-121. Lawrence Draitsas, *Zambesi. David Livingstone and Expeditionary Science in Africa*, London and New York: I.B. Tauris, 2010, is a fine study of Livingstone as scientific collector but does not explore the roots of Livingstone's understanding of science and its relationship to theology.

The most widely known version of the dialogue was published in 1857 in Livingstone's best-seller *Missionary Travels and Researches in South Africa*.³ An earlier version is found in Livingstone's private journal for 12 October 1853, and it is this version, on account of its probable superior authenticity, that forms the primary textual basis of this article.⁴ The private journals are preserved in two small notebooks presented in 1954 by his great-granddaughter, Miss D.L. Bruce, to the archives of what was then the Central African Federation, and which are now to be found in the National Archives of Zimbabwe.⁵ They were published in 1960 in a critical edition edited by Isaac Schapera, the notable anthropologist of southern Africa and lifelong student of the Batswana. There is also a third and shorter version of the dialogue found in a notebook that is preserved in the David Livingstone Centre in Blantyre, Scotland. This version is undated, and has no introduction or accompanying comment. However, it appears in the notebook immediately after a page of astronomical calculations dated 27 March 1853, which is itself preceded by various entries dating from late 1852, so it is probably the earliest and original version of the dialogue itself, dating from 1852-3.⁶ Earlier still, dating from Livingstone's journal for 22 October 1848 and a letter written on 1 November 1848, are some fragments describing comments made to him by members of the Bakwena people on the topics of missionary medicine and rainmaking which Livingstone subsequently

³ David Livingstone, *Missionary Travels and Researches in South Africa*, London: John Murray, 1857, pp. 23-5.

⁴ Isaac Schapera (ed.), *Livingstone's Private Journals 1851-1853*, London: Chatto & Windus, 1960, pp. 239-43.

⁵ *Ibid.*, pp. ix, xxii; G. W. Clendennen and I. C. Cunningham (comps.), *David Livingstone. A Catalogue of Documents*, Edinburgh: National Library of Scotland for the David Livingstone Documentation Project, 1979, p. 272.

⁶ Schapera (ed.), *Livingstone's Private Journals*, p. 239; G. W. Clendennen and I. C. Cunningham (comps.), *David Livingstone: A Catalogue of Documents*, p. 278. There is a photocopy of the Blantyre notebook in NLS [National Library of Scotland, Edinburgh], MS 10711, fols. 85-8. In this source the dialogue is followed by an undated manuscript version of Livingstone's oft-quoted sermon on 'God had an only son and he was sent to earth as a missionary physician'. Livingstone used a similar phrase (about God's only son) in a letter to his sister dated 5 February 1850, but the sermon may be somewhat later. Clendennen and Cunningham thus estimate the date of the record of the dialogue as 1852, perhaps following the editorial annotation at the opening of the notebook, which estimates the period of the notebook entries as 1850-52.

puts into the mouth of the rainmaker and incorporates into the various versions of the dialogue.⁷

The identity of the two parties to the dialogue

The textual history thus suggests that the dialogue, at least in its later forms, represents, not an exact record of a single conversation, but rather an artificial composite of a number of broadly similar conversations that took place at some point before April 1853, some or all of which were conducted no later than October 1848. Indeed, Livingstone says as much: the journal version is introduced by the statement: “The following contains some of the arguments which I have heard used among the Bakwains”.⁸ The Bakwains were the Bakwena, one of the Setswana-speaking peoples comprising the larger group known as the Batswana or Tswana who have given their name to the modern nation of Botswana. Livingstone had worked among the Bakwena as a missionary of the London Missionary Society (LMS) since January 1846, though he first made contact with them as early as March 1842. When Livingstone says that he has heard these arguments used he can only be referring to his own experience. Although we know that his father-in-law, Robert Moffat, also engaged in lively verbal contests with Tswana rainmakers from 1821 onwards,⁹ Moffat spent no time among the Bakwena before 1853; for most of the time he remained firmly anchored to his mission station on the southern fringe of Tswana territory, at Kuruman. The version published in *Missionary Travels and Researches in South Africa* identifies the two parties to

⁷ Fragments of Kolobeng Journal 1848-9, in Schapera (ed.), *Livingstone's Private Journals*, pp. 300-1; Livingstone to Arthur Tidman, 1 November 1848, in Isaac Schapera (ed.), *Livingstone's Missionary Correspondence 1841-1856* London: Chatto & Windus, 1961, pp. 120-1.

⁸ Schapera (ed.), *Livingstone's Private Journals*, p. 239.

⁹ Cecil Northcott, *Robert Moffat. Pioneer in Africa, 1817-1879*, London: Lutterworth Press, 1961, pp. 76-7; Richard Grove, “Scottish Missionaries, Evangelical Discourses and the Origins of Conservation Thinking in Southern Africa 1820-1900”, *Journal of Southern African Studies*, Vol. 15 (2), January 1989, pp. 163-87, at 166-7.

the conversation as two doctors – the “Medical Doctor” and the “Rain Doctor”. There was no other European medical doctor present among the Bakwena in this period. Livingstone virtually admits the autobiographical nature of the account when he adds at the end of this version of the dialogue:

The above is only a specimen of their way of reasoning, in which, when the language is well understood, they are perceived to be remarkably acute. These arguments are generally known, and I have never succeeded in convincing a single individual of their fallacy, though I tried to do so in every way I could think of.¹⁰

If the missionary or medical doctor must be identified as Livingstone himself, who is the rain doctor? The obvious – though not entirely unproblematic – answer is that he is Sechele, the chief of a large proportion of the Bakwena people.¹¹ Rainmaking was one of the primary ritual functions of the chief in Tswana societies, an essential restorative and fertilizing activity whereby the ruler of his people inseminated the land, making it possible for the fields to bear fruit and the crops to grow.¹² Sechele, however, is generally described as Livingstone’s one and only convert. Having welcomed Livingstone’s preaching from the beginning, he was eventually baptised on the first Sunday of October 1848. He had for long agonized over Livingstone’s puritanical insistence that he should first put away his surplus wives (he had five in all). His final reluctant agreement to do so greatly unsettled his people. Sechele found Livingstone’s insistence that Christians must practise monogamy an exacting and ultimately unattainable demand. Within a few months of his baptism, in April 1849, Sechele admitted that he had resumed sexual relations with Mokokon, one of his additional wives, and a dismayed Livingstone felt obliged to debar him from partaking of the elements at the communion table. Livingstone never fully recovered his confidence in Sechele. Despite his excommunication, Sechele did not renounce his Christian faith, asserting that,

¹⁰ Livingstone, *Missionary Travels and Researches*, p. 25.

¹¹ Sechele ruled over one half of the Bakwena; the other half owed allegiance to Khake; see Tim Jeal, *Livingstone*, revised edition, New Haven and London, Yale University Press, 2013, pp. 69-70.

¹² Jean and John Comaroff, *Of Revelation and Revolution*, pp. 157-8, 207-8.

in spite of what had happened, he would never “give up Jesus”.¹³ In fact, Sechele went on to lead his people to conversion to Christianity, a remarkable outcome given the severe short-term crisis to his chiefly authority provoked by his conversion, baptism, and temporary repudiation of polygamy.

Sechele’s baptism implied not simply that the Bakwena chief had turned his back on customary marriage ties and the political alliances they had helped to forge; it also signalled that he was willing to renounce his traditional ritual functions as the rainmaker for his people. He often told Livingstone that he found it more difficult to give up his faith in rainmaking “than in anything else required by Christianity” – including, we may deduce, polygamy, which he found hard enough.¹⁴ At the beginning of 1847, when Livingstone had asked him whether he was intending to make rain this year, he had replied, “You will never see me at that work again”.¹⁵ It seems likely that he kept his promise, although later, in the 1870s, Sechele combined asking LMS missionaries to pray for rain with employment of traditional rainmaking specialists – what we might term a ‘belt and braces’ approach.¹⁶ However, there is no firm evidence to suggest that he pursued this dual strategy as early as 1853.¹⁷ Even if Sechele had resumed some rainmaking activity by 1853, it seems likely that his activity would have been framed by his new-found and continuing Christian faith – it would surely have exhibited at least some of the characteristics of Christian prayer. The dialogue that Livingstone inserted in his journal for October 1853, on the other hand, depicts the rainmaker as being wholly traditional in his religious perspectives and surrounded by the panoply of “bulbs, roots, plants,

¹³ Isaac Schapera (ed.), *David Livingstone Family Letters 1841-1856. Volume Two 1849-1856*, London: Chatto & Windus, 1959, p. 42.

¹⁴ MS draft of *Missionary Travels and Researches in South Africa*, Part I, fol. 40, John Murray archives, NLS MS 42428; Livingstone, *Missionary Travels and Researches*, p. 20.

¹⁵ George Seaver, *David Livingstone. His Life and Letters*, New York: Harper & Bros, 1957, p. 97.

¹⁶ I. Schapera, *Rainmaking Rites of Tswana Tribes*, Leiden: Afrika-Studiecentrum; and Cambridge: African Studies Centre, 1971, p. 139.

¹⁷ Anthony Sillery, *Sechele. The Story of an African Chief*, Oxford: G. Ronald, 1954, pp. 123, 209, is wrong to assert that Sechele never abandoned rainmaking, but the assertion is indirect evidence that he continued to place some trust in it.

and pots & powders”, the medicines of a specialist traditional practitioner.¹⁸ At best, the rain doctor is portrayed in the dialogue as being no more than politely respectful towards Christian beliefs – certainly not someone who is trying to square rainmaking with his new Christian faith.

If, therefore, the rain doctor is to be identified with Sechele, Livingstone’s various accounts of the conversation(s) must be taken to be a retrospective reconstruction of the arguments that Sechele had originally deployed in his early encounters with Livingstone at a stage when he had not yet made Christian faith his own. If so, the question arises of why Livingstone’s earliest record of the conversation(s) should date from October–November 1848, that is, just after, rather than before, Sechele’s baptism and over a year after Sechele had professed his determination never to practise rainmaking again. The references in *Missionary Travels and Researches* to the dialogue as providing “a specimen of their way of reasoning”, and to Livingstone’s failure to convince “a single individual of their fallacy”,¹⁹ point to the composite nature of the text and potentially to the involvement in the encounters with Livingstone of other parties than Sechele. An alternative explanation is that the narrative could be based, at least in part, on more recent dialogues with substitute rainmaking authorities who stepped forward to fill the ritual vacuum created by Sechele’s conversion.²⁰ After his baptism, Sechele’s leading half-brother Kgosidintsi assumed primary responsibility for organizing rainmaking among the Bakwena.²¹ There is also evidence from Livingstone’s private journal that at least one visiting practitioner from a neighbouring people was recruited to fill the breach, even though Sechele promptly but politely sent

¹⁸ Schapera (ed.), *Livingstone’s Private Journals*, p. 239.

¹⁹ Livingstone, *Missionary Travels and Researches*, p. 25.

²⁰ For detailed guidance on the question of the identity of the rain doctor I am indebted to Dr Gary W. Clendennen of Poughkeepsie, NY, who is firmly of the view that the rain doctor is indeed Sechele.

²¹ Schapera, *Rainmaking Rites of Tswana Tribes*, pp. 134, 138–9; Janet Wagner Parsons, *The Livingstones at Kolobeng 1847–1852*, Gaborone: The Botswana Society and Pula Press, 1997, pp. 78, 80, 84.

him packing, recognizing that his chiefly authority was being undermined by the presence of a rival ritual specialist.²²

Drought as a Problem of Theodicy

Whilst there may be room for argument over the identity of the rain doctor, there is no doubt that rain was in desperately short supply among the Bakwena in 1848-9; indeed, it had been so ever since Livingstone first settled among them in 1845. The years 1821-3, 1845-7, and 1862-3 were characterised by serious drought throughout southern Africa. The Bakwena were unusual in that the drought of 1845-7 was extended into 1848.²³ The ominous significance of this fact was not lost on the Bakwena. For a strong believer in providence such as Livingstone, this posed a sharp dilemma of Christian theodicy: he noted in his journal in November 1848 that Mosielele, chief of the neighbouring Kgatla people who had shown no regard whatsoever for Christianity, had gleefully pointed out that the Bakgatla now had abundant rain. “Yet we”, mused Livingstone, “who have our chief at our head in attachment to the Word receive not a drop. Has Satan power over the course of the winds and clouds?”²⁴ His theological discomfiture was made more acute by the fact that he was taking the blame for having induced the Bakwena’s rainmaker to abdicate his traditional and indispensable leadership role: he records how old Bakwena men came begging him “to allow the chief to make rain” and promised that if only he would do so, they would all turn up at church.²⁵ Worse still, Livingstone’s presence and Christian prayers were regarded as having offended the ancestors, who had indicated their displeasure by withholding the rain. The result of such dialogues as those he had recorded, reports Livingstone, is simply to reinforce the conviction of the Bakwena that “we do not want them

²² “A rain doctor brought from Bamapela dismissed with an advice and reproof from Sechele. He rewarded him too and sent him off.” Schapera (ed.), *Livingstone’s Private Journals*, 300.

²³ Grove, “Scottish Missionaries”, p. 164.

²⁴ Schapera (ed.), *Livingstone’s Private Journals*, p. 301; cf. Livingstone, *Missionary Travels*, p. 20;

²⁵ Schapera (ed.), *Livingstone’s Private Journals*, p. 300.

to have rain”. In other words, Livingstone, in the minds of many Bakwena, was not simply an enemy of rainmaking: he must be a drought-maker, a malevolent wizard who “had bound Sechele with some magic spell” and whose perverse European medicines had disturbed the elements and dried up the clouds.²⁶

The dialogue thus represents far more than a dilettante conversation on a matter of merely theoretical or intellectual interest. Rather it reveals the deep concerns of the Bakwena about the stark disruption of the natural order apparently occasioned by the arrival, teachings, and practice of this white man. Their anxiety was subsequently aggravated by Sechele’s shocking decision to abandon his surplus wives and submit to the white man’s sinister ritual of baptism – the baptismal water was widely reputed among the Bakwena to be the product of liquidising dead men’s brains.²⁷

Rainmaking as “too ridiculous for sober argument”?

The encounter also reveals Livingstone’s own serious – even if ultimately fruitless – attempt to understand the world-view of the Bakwena. At times he can write dismissively of rainmaking as “superstition” or “fooleries”,²⁸ which is exactly what one would expect from a Scotsman who is not naturally accustomed to see much need for making rain, and especially from a Scotsman who shares the Scottish Enlightenment’s confidence in rational scientific method and empirical observation. Yet the very fact that Livingstone had evidently made detailed field notes of his conversations with rainmakers and their supporters, and then taken the time to edit them at least twice into a composite model dialogue,²⁹ indicates the same intense intellectual curiosity

²⁶ *Ibid.*, p. 243; MS draft of *Missionary Travels and Researches in South Africa*, Part I, fol. 43, John Murray archives, NLS MS 42428; Livingstone, *Missionary Travels and Researches*, p. 19.

²⁷ Schapera (ed.), *Livingstone’s Private Journals*, p. 300.

²⁸ Schapera (ed.), *Livingstone’s Missionary Correspondence*, p. 118; Schapera (ed.), *Livingstone’s Private Journals*, p. 300.

²⁹ The fact that the dialogue in its original version is quite similar to the two later versions suggests that the original, and not simply the two subsequent versions, was a composite of different conversations.

that we find throughout Livingstone's writings, whether he is describing the tsetse fly and its baneful effects, or calculating the running speed in miles per hour of an ostrich on the basis of its length and rate of stride.³⁰ "Rainmaking to Christians in England", writes Livingstone in one of his letters to Arthur Tidman, Foreign Secretary of the LMS, "may seem a simple absurdity too ridiculous for sober argument, but the people here having no graven images, that is the mode in which they most openly give that glory to the creature which belongs to the Creator & Lord of all."³¹ It was in his view the African version of that natural or idolatrous religion of which the apostle Paul wrote in the first chapter of his letter to the Romans.³² But if Livingstone regarded rainmaking rites as idolatrous "follies" (and he uses that word),³³ he did not regard them as wholly stupid. The version of the dialogue printed in *Missionary Travels and Researches* is followed, as we have seen, by the pointed comment that the reasoning of the Bakwena is "remarkably acute"; it is also preceded by a note to the reader that, in order to understand the force of the arguments advanced by the Bakwena, "we must place ourselves in their position, and believe, as they do, that all medicines act by a mysterious charm".³⁴ In the original manuscript of the book preserved in the John Murray archives in the National Library of Scotland Livingstone compares the Bakwena view of medicine to that of believers in homeopathy. He writes: "we must place ourselves in their position, and believe, as they and homeopaths do, that all medicines act by a mysterious

³⁰ The tsetse fly is famously described in *Missionary Travels and Researches*, pp. 80-1; on the ostrich see Schapera (ed.), *Livingstone's Private Journals*, p. 311. For a recent essay on Livingstone as natural scientist see Lawrence Dritsas, "Livingstone: Natural Science and Exploration" in Sarah Worden (ed.), *David Livingstone: Man, Myth and Legacy* (Edinburgh: NMS Enterprises Limited – Publishing, 2012), pp. 53-67.

³¹ Livingstone to Arthur Tidman, 1 November 1848, in Schapera (ed.), *Livingstone's Missionary Correspondence*, p. 120.

³² Romans 1:18-32. For the frequency with which nineteenth-century Protestant missionaries employed Romans 1 as a lens through which to interpret indigenous religion see Andrew F. Walls, "Romans One and the Modern Missionary Movement", in his *The Missionary Movement in Christian History. Studies in the Transmission of Faith*, New York and Edinburgh: Orbis Books and T. & T. Clark, 1996), pp. 55-67.

³³ Livingstone to Arthur Tidman, 1 November 1848, in I. Schapera (ed.), *Livingstone's Missionary Correspondence*, p. 121.

³⁴ D. Livingstone, *Missionary Travels and Researches*, p. 23.

charm”.³⁵ Livingstone was in fact one of the first European observers to apply scientific method to the observation of African religious rituals and beliefs – phenomena that very few before him had deemed worthy of serious study; his methods anticipate the later science of the anthropology of religion that developed later in the nineteenth century. “What distinguishes him from all others who went into the interior about the same time”, observed Isaac Schapera, “is the nature of the scientific observations that he ... made and recorded ... for his own period he is by far the most comprehensive source of information on South-Central Africa.”³⁶

Highlighting the correspondences between the parties to the dialogue

The underlying seriousness with which Livingstone took the arguments of the rainmaker is suggested by the way in which the dialogue highlights the correspondences between the respective parties and between their arguments. Jean and John Comaroff have rightly commented that the labelling of the participants in the final version in *Missionary Travels and Researches* as “Medical Doctor” and “Rain Doctor” implies an intention to convey a certain symmetry or equivalence of professional status.³⁷ Both parties recognise the need of the crops for rain. The rain doctor thinks it better to “apply rain to the whole plant”, and accuses the medical doctor, with his European confidence in irrigation techniques, of believing that “a little river water” should be applied only to the roots. But the medical doctor is quick to agree that a good dose of rain is actually preferable; irrigation is second best. There is also a striking degree of theological convergence. It was characteristic of southern African peoples (the Xhosa, Zulu and Thembu are other examples) that one of the few

³⁵ MS draft of *Missionary Travels and Researches in South Africa*, Part I, fol. 47, John Murray archives, NLS MS 42428.

³⁶ Schapera (ed.), *Livingstone's Private Journals*, pp. xvi-xvii.

³⁷ Jean and John Comaroff, *Of Revelation and Revolution*, pp. 210-11.

critical occasions on which the supreme being was directly approached in collective ceremonies of ritual supplication was during times of drought.³⁸ This helps to explain the rain doctor's ready admission that only God can supply the rain and the extent of his agreement with Livingstone's monotheism. Yet both parties also see an important place for humans in petitioning the supreme being to grant the rain. Furthermore, both appeal to a source of inherited wisdom for guidance: the rain doctor draws on his traditional knowledge "of certain trees and plants that we use to make rain"; the missionary appeals to what he memorably terms "the book that never forgets" in which God has revealed "to our common ancestors" his appointment of seed time and harvest, summer and winter, and his power to give rain from heaven to the just and the unjust alike.³⁹ Both parties also balance their recognition of the sovereignty of God with an acknowledgment of the limited but still substantial power of medicine. When the missionary points out that the medicines employed by the rain doctor frequently fail to achieve the desired objective, the rain doctor legitimately retorts that so do the remedies employed by European medicine; it is in the nature of medicine, he reasonably contends, that sometimes it works and sometimes it doesn't, for ultimately the outcome depends not on the medicine but on the will of God, who can bring rain or heal bodies even without the use of medicine. The missionary implicitly concedes that the same is true of Christian prayer: sometimes it 'works' and sometimes it doesn't, because, again, the outcome depends on God's sovereign pleasure.

The dialogue is likely to have shocked its Victorian readers by acknowledging that the African's confidence in medicine was in one sense much wider in scope than the European's, for the African applies medicine to "everything" – to the natural environment as a whole – whereas the European

³⁸ Janet Hodgson, *Ntsikana's Great Hymn: A Xhosa Expression of Christianity in the Early 19th Century Eastern Cape*, Cape Town: University of Cape Town, Centre for African Studies, 1980, pp. 27-34.

³⁹ I. Schapera (ed.), *Livingstone's Private Journals*, pp. 240-1.

applies it only to living beings (humans and animals).⁴⁰ Thus Livingstone remarked to Arthur Tidman, Foreign Secretary of the LMS,

It is of little use to point out the difference which exists between the application of medicines, having known effects, to living beings and inanimate objects, for they apply medicine to their houses, hoes, gardens, shoes, indeed to everything. They never relinquish their follies until they feel the love of Christ constraining them, and preaching His unsearchable riches has always more effect than argument, and I believe it will be found so all over the world.⁴¹

Livingstone thus appears to face both ways on the rationality of rainmaking: on the one hand, it is a folly that only the knowledge of Christian truth can dispel; on the other, he highlights the telling parallels between making rain and praying for rain, or between African medicine and European medicine. The inclusion of the dialogue in *Missionary Travels and Researches* suggests that Livingstone intends it to provoke reflection. He wants his readers to take African medicine both critically and seriously; he was one of the first Europeans to urge that traditional African remedies for human disease should not be dismissed as fraudulent and worthless.⁴² And yet, the later stages of the dialogue repeatedly suggest that the contest between the missionary and the rain doctor could be decisively settled if only the latter would agree to “make a trial”, which, of course, he refuses to do. The missionary invites the rain doctor to participate in a public trial of strength that would be both a European scientific experiment and a biblical power encounter, rather like the ritual contest between Elijah and the prophets of Baal on Mount Carmel that succeeded in ending the drought in Samaria.⁴³ If the rain doctor will agree to try to make rain in the dry season, or to make the rain fall on his gardens and not on the missionary’s, the missionary will gladly try out his medicine on any person or animal, and will

⁴⁰ *Ibid*, pp. 241-3.

⁴¹ Livingstone to Arthur Tidman, 1 November 1848, in I. Schapera (ed.), *Livingstone’s Missionary Correspondence*, p. 121.

⁴² See Debbie Harrison, “A Pioneer Working on the Frontiers of Western and Tropical Medicine”, in Worden (ed.), *David Livingstone*, pp. 69-81.

⁴³ See 1 Kings 18: 1-46.

confidently predict the outcome. In the final analysis, Livingstone is in no doubt that the Bakwena world view can be shown to be inferior. That demonstration of European Christian superiority will come about, not by theological persuasion or insistence on biblical authority, but by simple empirical experiment. Admittedly European medicines do not always work, but Livingstone is in no doubt that their success rate can be demonstrated to be far in excess of what can be achieved by the rainmaker's dubious techniques.

Livingstone, Thomas Dick, and the World View of Post-Enlightenment Scotland

The extent of the missionary doctor's confidence in empirical scientific method as displayed in the dialogue can only be understood by reference to the philosophical environment of early nineteenth-century Scotland. As was the case with most of the Scottish Protestant missionaries of the early and mid-nineteenth centuries, the mind of David Livingstone was shaped, not simply by evangelical Christianity, but also by the intellectual milieu of the later Scottish Enlightenment – a milieu that combined Christian orthodoxy of a broadly Calvinistic kind with an unequivocal commitment to empirical science.⁴⁴ His unshakeable faith in the God whom he believed had called him to Africa was equalled by his faith in the methods of modern European science. The same scientific methodology that impelled him to analyse the suppositions undergirding rainmaking with as much objectivity as he could muster also dictated the conclusion that ultimately it was a delusion, a superstition rather than a reasonable belief that could claim proper empirical warrant. Livingstone as a young man had been deeply influenced by the writings of the Presbyterian schoolmaster, astronomer, and populariser of science, Dr Thomas Dick (1774-

⁴⁴ On the general Enlightenment context of the Protestant missionary movement see Brian Stanley (ed.), *Christian Missions and the Enlightenment*, Grand Rapids, MI, Cambridge, and Richmond, Surrey: Eerdmans, 2001.

1857) of Broughty Ferry near Dundee, which he read in the library of the Old Relief Church in Hamilton and possibly purchased for himself.⁴⁵ Livingstone even attributed his original call to missionary service to Dick, claiming that his reading of Dick's *The Philosophy of a Future State* (1828) prompted his original decision to devote himself to the cause of spreading "the blessings of the gospel throughout the world".⁴⁶ He also found that Dick's writings "fully proved and enforced" his own ideas "that religion and science are not hostile but friendly to each other".⁴⁷ In Dick's words, "For the word and the works of God must always harmonize, and reflect a mutual lustre on each other."⁴⁸ Furthermore, both Dick's *The Philosophy of a Future State* and his earlier book, *The Philosophy of Religion* (1826), argued that there was a strange and theologically troubling dissonance between the material and moral or social worlds. The investigations of science supported the witness of scripture to the supreme benevolence and intelligence of the Creator, for they revealed the material world to be one "of exquisite mechanism and design". Yet the study of human society, even in supposedly civilised Europe, where, according to Dick, "the light of science and of Revelation is converged to a focus", uncovered "a scene of moral disorder and anarchy". Africa, according to Dick (as also to countless other European commentators of his day), displayed "human nature sunk into a state of the deepest degradation".⁴⁹ For Dick, such pronounced dissonance between the rest of the created order and human society was turned into a clinching argument that there must be another and better world to come,

⁴⁵ On Dick see Hector Macpherson, "Thomas Dick: 'The Christian Philosopher'", *Records of the Scottish Church History Society* Vol. 11, 1955, pp. 41-62; William J. Astore, *Observing God. Thomas Dick, Evangelicalism, and Popular Science in Victorian Britain and America*, Aldershot: Ashgate, 2001.

⁴⁶ Livingstone to Thomas Dick, 7 July 1843, NLS MS 20314, ff. 22-3, cited in Astore, *Observing God*, p. 152.

⁴⁷ MS draft of *Missionary Travels and Researches in South Africa*, Part I, fol. 10, John Murray archives, NLS MS 42428.

⁴⁸ Thomas Dick, *The Philosophy of a Future State*, Glasgow: William Collins, 1828, p. 355.

⁴⁹ *Ibid*, p. 112.

for how could the wisdom and goodness of the Creator be vindicated if such marked disorder in the social sphere of his creation were to be permanent?⁵⁰

Dick's writings gave Livingstone supreme confidence in the providential harmony of reason and revelation. Livingstone studied the flora and fauna of southern Africa with minute and inexhaustible fascination, confident that they would display the signs of a wise and benevolent creation as clearly as did the flora and fauna of Scotland. He concluded that they did, although his generally serene confidence in natural theology was subjected to some strain when it came to the vagaries of the weather. In a context in which the honour of the Christian God had become dangerously linked to his capacity to produce rain in answer to prayer, the protracted and catastrophic shortage of rain among the Bakwena tempted Livingstone at times to speculate that somehow the weather might have been subjected to the renegade dominion of "the Prince of the power of the air", as if the skies themselves had become caught up in the spiritual battle in which he was engaged.⁵¹ With this qualification, Livingstone's natural theology remained intact in southern Africa. Yet so also did his conviction, derived from a combination of the apostle Paul's theology and Thomas Dick's moral philosophy, that the social and moral life of humanity displayed, not divine design, but a profound moral disorder that only dissemination and acceptance of the Christian gospel could rectify. The rainmaker's perverse obstinacy in maintaining that *he*, rather than God, manufactured the rain by his own potions and sacrifices provided Livingstone with vivid confirmation of the darkness of the unregenerate human mind, prone as it was to deny the evidence of natural revelation and to transfer veneration from the Creator to the object of his creation.⁵²

⁵⁰ *Ibid*, pp. 105-6, 113-17; *idem*, *The Philosophy of Religion. Or, an Illustration of the Moral Laws of the Universe*, Glasgow: Chalmers and Collins, 1826, p. 204.

⁵¹ Schapera (ed.), *Livingstone's Private Journals*, p. 301; Livingstone, *Missionary Travels and Researches*, p. 23.

⁵² Romans 1:25.

However, unlike many other European observers of African society in his time, Livingstone did not derive conclusions of a racist character from his observations of the “follies” of human idolatry. One of Dick’s most insistent emphases was on the unity of all mankind and the universal nature of the Christian moral imperative to love your neighbour as yourself:

every one, whether he be near or far off, whether he be rich or poor, whether he be learned or unlearned, whether he belong to this or the other civil or religious society, whether his colour be black or white, whether he be blind, or deaf, or lame, whether he be an inhabitant of Greenland, Iceland, Barbary, Germany, France, or Spain, whatever may be his language, manners or customs, should be recognized, wherever he may be found, as a friend and brother; and a cordial interest be felt in every thing that concerns his welfare and comfort.⁵³

In his egalitarian relationships with Africans, Livingstone exemplified that Christian Enlightenment doctrine perhaps more clearly and consistently than any other missionary of his day. Africans might be idolaters, but they remained “friends and brothers”.

The Symbolism of the Watered Garden

Missionaries in mid-nineteenth century southern Africa were often enamoured of their irrigated gardens, walled off from the surrounding parched lands. As the American anthropologists Jean and John Comaroff have pointed out, missionary devotion to irrigation was not merely a practical strategy for survival and sustainability: it also carried a deeper symbolic meaning, reflecting the missionary desire to see the apparent spiritual desert of Africa blossom like the rose.⁵⁴ That symbolic meaning was firmly grounded in biblical metaphor. The imagery found in many parts of the Hebrew Bible that juxtaposed lush watered gardens and the enveloping arid wilderness was readily translated into the physical ordering of mission stations. Such a juxtaposition was even

⁵³ Dick, *Philosophy of Religion*, pp. 132-46, quotation at p. 146.

⁵⁴ Comaroff and Comaroff, *Of Revelation and Revolution*, pp. 206-7.

embodied within the hymnology of Livingstone's own Independent (or Congregational) church tradition. The most celebrated hymn writer of the Independent tradition, Isaac Watts (1674-1748), famously expressed the dissenting idea of the true church as a gathered congregation in these very terms:

We are a Garden wall'd around,
Chosen and made peculiar Ground,
A little Spot inclos'd by Grace
Out of the World's wide Wilderness.

Like Trees of Myrrh and Spice we stand,
Planted by God the Father's Hand;
And all his Springs in Sion flow,
To make the young Plantation grow.⁵⁵

That early eighteenth-century English dissenting picture of the church as an enclosed watered garden set in the wilderness produced by the spiritual barrenness of the established Church of England doubtless appealed strongly to Robert Moffat, who was both a gardener by original profession and a firm believer in the static institution of the mission station, as illustrated by his work at Kuruman.⁵⁶ Livingstone, however, was never one for being walled in from the wide open spaces of Africa, and had a much more expansive concept of missionary strategy. For him, rivers were not simply sources of water – they were potential highways opening up the African interior to Christianity, commerce and civilisation – hence his later fatal enthusiasm for the Zambezi as the divinely appointed route into east central Africa. Yet Livingstone, no less than his father-in-law, was an enthusiastic gardener and irrigator, constructing

⁵⁵ Isaac Watts, first two stanzas of "The Church the Garden of Christ", cited in Donald Davie, *A Gathered Church. The Literature of the English Dissenting Tradition, 1700-1930*, London and Henley: Routledge & Kegan Paul, 1978, pp. 28-9.

⁵⁶ Moffat's professional background as a gardener inspired the title of the biography by a later and almost equally famous British missionary to southern Africa: Edwin W. Smith, *Robert Moffat. One of God's Gardeners*, London: Edinburgh House Press, 1925.

watered fruit and vegetable gardens in each of his successive places of residence as he migrated further north from Kuruman.⁵⁷ It is possible, therefore, as Jean and John Comaroff suggest, that behind his model dialogue with the rainmaker lay some sharp conflicts with indigenous authorities over the appropriate use of water. Missionary schemes to divert rivers to irrigate their garden vegetables from the roots up often attracted vehement opposition from Africans convinced that such an unnatural artifice would offend the ancestors and hence actually diminish the chances of a good soaking of everyone's crops from the top down.⁵⁸ Yet the account in *Missionary Travels and Researches* gives no hint of the fundamental conflicts over irrigation itself that figure prominently in the Comaroffs' account of the encounter between nineteenth-century missionaries and Tswana peoples. On the contrary, Livingstone says that his suggestion to Sechele of making an irrigation canal from "a good never-failing river" was "immediately adopted". The Bakwena accordingly moved forty miles to a site on the Kolobeng River that Sechele himself recommended,⁵⁹ and supplied labour in constructing the dam and canal in return for Livingstone's assistance in building Sechele a square house on a European pattern. The irrigation experiment "succeeded admirably" in the first year, but the lack of rain continued. By the third year the Kolobeng River had run completely dry, and the irrigation canal with it. Scottish water engineering was thus exposed as powerless in the face of four years of drought, and as a result the attention of the Bakwena became focused on why the heavens had so signally failed, and they concluded that Livingstone's "magic spell" on Sechele must be to blame.⁶⁰

⁵⁷ John MacKenzie, "Missionaries, Science, and the Environment in Nineteenth-Century Africa", in Andrew Porter (ed.), *The Imperial Horizons of British Protestant Missions, 1880-1914*, Grand Rapids and Cambridge: Eerdmans, 2003, pp. 109-10; for the irrigated gardens of both Moffat and Livingstone see Northcott, *Robert Moffat*, pp. 83-4, 112-13, 179-80.

⁵⁸ Comaroff and Comaroff, *Of Revelation and Revolution*, p. 208.

⁵⁹ Parsons, *The Livingstones at Kolobeng*, p. 44.

⁶⁰ Livingstone, *Missionary Travels and Researches*, pp. 20-22; Schapera (ed.), *Livingstone's Missionary Correspondence*, p. 112.

Conclusion

In the testing circumstances facing the Bakwena people in the late 1840s, Livingstone's challenge to Sechele's traditional rain-making functions, and his own apparent responsibility for the protracted failure of the rains, became crucial points of tension in the painful negotiation between African and European cosmologies provoked by Livingstone's presence, teaching and commendation of Western methods of water management. In the twenty-first century, rainmaking has generally ceased to be a site of spiritual contestation, and the role of irrigation and water engineering projects in international development is in principle now generally unquestioned. It is no longer a clear boundary marker between European and African cosmologies. To that extent, it might be concluded that Livingstone's and Enlightenment Scotland's rational confidence in engineering techniques of water management has triumphed over the rain doctor's view, in which the role of human technique was limited to the production of the rain in the first place – it was a matter of environmental medicine, not of human engineering. However, in an ecologically conscious age such as our own the rain doctor's observation – faithfully transmitted to his readers by Livingstone – that Africans apply medicines to *everything*, and not simply to humans and animals, no longer looks quite so irrational. To talk of healing the land and its produce through the application of medicine is no longer regarded as primitive superstition. Trees and plants do in fact have more to do with the making of rain than even such a perceptive observer as Livingstone realised. In Zimbabwe African instituted churches have in recent years been at the forefront of tree-planting programmes that have practical ecological objectives, yet are also invested with quasi-sacramental significance.⁶¹ In coming to accept that human activity forms an inescapable part of the fabric and equilibrium of the natural world, the West has had to do its own environmental learning from Africa. One suspects that David

⁶¹ See M. L. Daneel, *African Earthkeepers*, 2 Vols., Pretoria: University of South Africa, 1998-9.

Livingstone, for all of his conviction of the “follies” of rainmaking, would be rather pleased if he knew.