

ON THE SIRIUS MYSTERY: AN OPEN LETTER TO CARL SAGAN FROM ROBERT K.G. TEMPLE

Dear Dr. Sagan:

I am highly flattered that you have wished to enter the debate about the astronomical knowledge of the Dogon tribe of Africa, first brought to public attention by my book The Sirius Mystery in 1976. Your contribution to this subject first appeared in the magazine Omni for August 1979, and was followed by assorted letters from readers in the issues of Omni for the following October, November, and December, and then this year (1981) by an article in Omni by myself. Your article also formed a chapter in your book Broca's Brain.

I try to reply to critics of The Sirius Mystery when there is an obvious forum in which to do so. It is not always easy to arrange this. A friend of yours, James Oberg, wrote a lengthy critique of The Sirius Mystery in Fate Magazine for November 1978, which I answered fully, completely refuting all points of criticism, in the issue of Fate for October 1980. Many months of illness prevented me earlier from making several replies such as I would have wished, or as early as I would have wished. A lengthy critique by A.C. Grayling in Issue Six of the British magazine Ad Astra was fully answered by me in Issue Eight of the same magazine. But I have experienced some difficulty in persuading certain magazines to grant me the right of reply. After a year of my insisting, Omni finally agreed to let me write an article about The Sirius Mystery as long as it did not consist of a reply to your points raised earlier in their pages. They repeatedly told me they did not wish to publish responses to your points because they did not wish to "offend" you. The Editor of Nature has also refused to allow me proper right of reply to a critic.

You can therefore appreciate some of the difficulties I have encountered in attempting to discuss these matters and respond to criticisms. Just for the record, you might be interested to know that I have yet to encounter a single criticism of The Sirius Mystery to which there was not a satisfactory reply. You can imagine, therefore, how grateful I am to the Zetetic Scholar for allowing me to respond to your own points in their pages, a discussion I feel sure you will not find in any way the slightest degree offensive, but will rather welcome in the true spirit of scientific enquiry.

1 There are various points you made in your article/chapter which I should like to correct, and which are of considerable importance. Let me first say that although you obviously thought I was British when we met in London, I am in fact an American. This is the least important of the 15 points I wish to make. But as you did describe me in your article as British, I thought it best to take this opportunity to correct you.

2 The Dogon tribe of Mali in Africa possess highly advanced astronomical information, much of it concerning the system of the star Sirius, and this is what has come to be referred to as "the Sirius Mystery." You have raised the suggestion that this information came to the Dogon from modern Western sources. Dr. Germaine Dieterlen, the Secretary General of the Société des Africainistes at the Musée de l'Homme in Paris, is the anthropologist who together with the late Dr. Marcel Griaule first published an account of the Sirius traditions of the Dogon. As she has

spent most of her life living with the Dogon and knows them and their traditions more intimately than anyone else alive, her opinion on a possible Western origin for the Sirius traditions of the Dogon is of the highest importance. She answers such suggestions with a single word: "Absurd!" The BBC-TV Horizon Program which was shown three times nationally as a Nova Program in America, "The Case for the Ancient Astronauts," featured a fascinating interview with Dr. Dieterlen in which she made this remark very strongly and held up in front of the cameras a Dogon artefact representing the three stars which the Dogon claim are at the Sirius system, and which she said was four hundred years old. I have this on video-tape at home, but was often puzzled why friends in America who saw the TV program never seemed to have "registered" Dr. Dieterlen's forceful remarks. Eventually I came to realize that this section of the program was apparently edited-out for American television! So that would explain why you also appear to be unaware of the opinion expressed on this subject by the world's leading authority.

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My third point relates to Western missionaries. Long ago I wrote to the head of the White Fathers in Mali, Father Dubreul at Mopti, who replied saying that none of their missionaries had had any contact with the Dogon before 1949. But as you know, the information of the Dogon Sirius traditions had by that time already been gathered by the anthropologists. So therefore these missionaries are ruled out as a source. Please allow me to send you sometime a photocopy of this letter from Father Dubreul. I did send a copy of it to another person whom we both know, who shall be nameless, who went right ahead anyway and published a quite false and contrary story in a book in which he discussed the matter. The falsification to which I refer would probably have led you unwittingly into error on this subject.

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My fourth point relates to a suggestion made by you, which originated with an earlier writer whom you consulted, that Dogon were conscripted by the French to fight in the trenches in World War I. These Dogon soldiers, it is claimed, would have had access to modern Western scientific traditions about Sirius. First of all, I do not believe it is true that any Dogon tribesmen fought in any trenches in Europe in the First World War. But let us assume that they did: it is physically impossible that this could explain the "Sirius Mystery" for the simple fact that the Dogon tradition of the superdensity of the star Sirius B could not have been obtained that early in the West. Eddington revealed the superdensity of Sirius B about 1926, long after the First World War had ended, and as you yourself mention, in 1928 he published this in his popular book *The Nature of the Physical World*, of which I have a first edition in my library which states that the work is a publication of his Gifford Lectures of 1927. You mention that this book was widely popular and translated into French. But alas, by 1931 the anthropologists were already with the the Dogon and would have known if some group of Western amateur astronomers had rushed out to the desolate hinterland of Mali to implant this knowledge in the presumably pliant minds of the Dogon priests in that narrow period of two or three years before their own arrival. How all of this was then supposed to have filtered down through the entire Dogon and surrounding cultures of over two million people and been embodied in the hundreds or thousands of objects, symbols, woven blankets, carved statues, etc., etc., which exist in those cultures relating to the "Sirius Mystery" in only two or three years baffles me. And how these hundreds or thousands of objects are meant to have been expertly fabricated fakes purporting to be centuries old, fooling all dating experts, baffles me even more. It is considerations like these and many more (such as the tribal sacredness of the tradition making it unlikely that it could have come from Western intruders who would not have been highly regarded or in the confidence of the meticulous and traditional priests) which lead Dr. Dieterlen to reject the suggestion of Western origins as "absurd."

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Hence my fifth point: the 1928-1931 gap is too narrow and too late. (I also asked Father Dubreul whether any of the admittedly too late White Fathers were knowledgeable about astronomy and he said no.)

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And as regards Dr. Dieterlen, my sixth point is that you nowhere even mention her, despite her being the co-author with Dr. Griaule of the original anthropological report. And yet she is still very much alive and actually rejected your thesis on television years before your book advocating it was published.

- 7 My seventh and eighth points are highly important. You say "Temple says" the Dogon maintain the star Sirius B orbits around Sirius A in an ellipse, and you also say that "there is some evidence that the Dogon like to frame pictures with an ellipse, and that Temple may be mistaken about the claim that in Dogon mythology the planets and Sirius B move in elliptical orbits." First of all, it is not Temple who says this, but the Dogon themselves, and secondly, I am not mistaken about it because there is more explicit evidence than you noticed. If you look at p.45 of my book, where I publish an English translation (vetted for accuracy by Dr. Dieterlen) of the original anthropological report by Griaule and Dieterlen, it is not Temple who says anything at all! This part of my book is not written by me, but by the anthropologists. It is they who say explicitly that the system of the three stars at Sirius "is represented by a pattern...consisting of an oval [ellipsoid] in which one of the centers is Sirius." (italics mine). On p.40 of my book there is another diagram of the orbit to which you do not refer. There the anthropologists make quite explicit the elliptical nature of the orbit by reproducing the stationary position of Sirius A and the two extreme positions of Sirius B with the ellipse showing the movement between the two extremes and which they specifically say "gives an idea of this trajectory." On p.26 also you may see Figure 8, taken from the book Le Renard Pale by Griaule and Dieterlen. Here we see a specifically astronomical diagram: it shows the star Sirius C going around Sirius A in an elliptical orbit and a planet going around the star Sirius C also in a highly elongated elliptical orbit of its own, of a much smaller scale. You have neglected all of this evidence, I regret to say.
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- 10 You briefly mention that in the Dogon mythology "twins play a central role," which is certainly true. But when you suggest that this might explain why the Dogon gave Sirius a companion star (an argument advocated at great length by some others), you have drawn a too hasty conclusion. For if looked at with sufficient attentiveness, the "twin" argument actually is seen to be evidence against, not for, the Dogon Sirius traditions being as they are. The reason for this (which some others appear to have obscured on purpose because it did not suit their arguments) is that the Dogon insist that there are not two but three stars in the Sirius system. If they had fabricated a tradition of the stars to accord with the sacredness of twins, they would never have insisted on a third star's existence. Thus my tenth point: three stars do not make twins!
- 11 My next point is an astronomical one, something which evidently slipped your mind when discussing (before rightly rejecting) the idea that the tiny Sirius B, which evolved from an earlier massive star, might have been visible to the naked eye in the historical past. Although you reject this theory, you remark that if it were true, "The relative motions of the two stars about each other could be discerned with the eye." This might lead others who do not agree with you in rejecting the theory into error. For you neglected to realize that even at that earlier stage in its evolution millions of years ago when it was a large star, Sirius B, which is invisible now to the naked eye (one of the reasons for "the Sirius Mystery" being a mystery), would still have been indistinguishable from its companion star as a separate object because of the minute parallax. This effectively destroys all arguments for the visibility of Sirius B in the past without need for further discussion.
- 12 But my further points would be to agree with you that it is astrophysically impossible for Sirius B to have been such a large "red giant" star anyway within the past one or two million years at least, and also to comment on your interesting quotation from Horace about "The red dog star." There are a number of ancient quotations which either refer to Sirius as red, or are said to do so. "The redness of Sirius in antiquity" problem has been a major controversy in astronomy since the 18th century, in which leading figures such as Herschel, Schiaparelli, and Eddington have taken part. I have nearly finished the most complete historical review of this controversy ever undertaken, including translating the entire texts of the many German articles on the subject. It is my intention to publish the results and a full bibliography when time permits. I dare to hope that the two hundred-year controversy will then be settled in the negative: No, Sirius was not actually red in antiquity. It was red during the early Dog Days each year in the Mediterranean area because it was at

13 the horizon and was reddened just as the rising and setting Sun is reddened. But some ancient Greek sources describing Sirius as *poikilos* are said to describe it as being red. Such reports are simple mistranslations and show only that astronomers are not always good classical scholars. The Greek word *poikilos* never at any time had the meaning "red" as some astronomers wrongly supposed. It meant "mottled," and referred to the high degree of scintillation for which Sirius is well noted. These few remarks, then, should go some way towards clarifying the information which you found in Horace. A full account of the matter will be published in my complete survey of that particular subject in the future.

14 I should like to remark in passing that, although you are correct in saying that the heliacal rising of Sirius was used in ancient Egypt to signal the inundation by the Nile, this was true only for a relatively brief period and was not the primary significance of the heliacal rising. The reason why this was a transitory aspect of the matter is that the day of the heliacal rising continually shifted, due to the precession of the equinoxes.

15 My fifteenth and final point is where I rush to the defence of the Dogon when you mention their tradition of the Creator and the plaited basket, which you find tempting to regard as an inferior or primitive myth. Actually, this basket may be a survival of the basket invariably carried by the Babylonian Oannes/Dagon, as clearly seen in Plates 6,7,8, and 9 in my book. And this may also be the source of the sacred basket of Demeter from the ancient Greek mysteries. In the Introduction to *Le Renard Pale*, Dr. Germaine Dieterlen speaks of the basket: "For the Dogon as well as for the other societies of West Africa, the smallest common object reveals by its shape and its decorations, the voluntary expression of a complicated cosmogony...Thus...a basket used for carrying represents, when it is upside down, the ark on which human beings descended from heaven to the earth, the square bottom represents space and the four cardinal points." Your account of this sacred basket is misleading. In fact, the tazi basket of which you speak represents the second ark of Ogo, and the third ark of Ogo is represented by another basket called nugoro, while the first is represented by the nkuro basket. The two latter ones are associated to rites related to the four major moons of Jupiter (which are also invisible to the naked eye). All three baskets are meant to portray what we Westerners would call space ships. It is to be regretted that you chose the example of the basket as an intended illustration of their backwardness. Space ships are really rather forward. And knowledge of the invisible moons of Jupiter is hardly primitive.

But there is more to the matter than that. I would hope that when one day you have the time, you might study the Dogon cosmogony more thoroughly. In my personal opinion, it is one of the richest, most profound systems of thought in the entire world. A superficial glance at it could offer any number of disconnected subjects of ridicule and derision, just as in the same way one could take the cross of Christianity, the candlestick of Judaism, the tetractys of the Pythagoreans, the rites of Shinto, the belly of the Buddha, or the Mohammedan's bowing towards Mecca and journeying there in order to walk in circles around a meteorite as examples - in the disjointed sense, out of context, - of barbaric primitivism amongst all those peoples, and prove them morons. And yet in those more familiar cases we know full well that the apparently ridiculous details form part of larger and deeply meaningful philosophies and religions. The same is true of the Dogon. I assure you, from the years I have studied them through reports, and the conversations I have had with the anthropologists who have lived with them over decades, the Dogon, are, in the sense of the intrinsic value of their thought, one of the leading cultures of the world. They may be indifferent to modern Western technology, but their moral fibre equals or surpasses our own, their philosophy and religion are as a whole not a whit inferior to any other in existence on this planet; they are happy, contented, fulfilled people with rich and meaningful lives. And, frankly, if I were a Dogon I would be very proud of it and look at the materialistic West with some degree of pity. But they are too magnanimous to pity us. Their thoughts are, after all, often amongst the stars.