The Dogon People Revisited

The 1970s claim that the Dogon tribespeople of Africa had extraordinary astronomical knowledge has been revived, amplified, and widely disseminated in recent years. Here is a new examination and evaluation.

BERNARD R. ORTIZ de MONTELLANO

In 1976 Robert Temple published *The Sirius Mystery,* claiming that the extraordinary astronomical knowledge of the ancient Egyptians and the Dogon tribespeople of Mali[1] was due to visitations five thousand or more years ago from inhabitants of the Sirius star system. These claims were addressed then in an article in SKEPTICAL INQUIRER (Ridpath 1978). Since that time, however, the Afrocentrist movement has revived and expanded claims about the Dogon's astronomical knowledge (Adams 1983a, 1983b, 1990; Van Sertima 1983; see also Ortiz de Montellano 1991), and they have been naively parroted in more mainline publications (Gebre-Egziabher 1993/1994; Harding 1991). Adams (1990, 60) briefly presents the more recent claims about the Dogon:

> They knew of the rings of Saturn, and the moons of Jupiter, the spiral structure of the Milky Way, where our star system lies. They claimed that billions of stars spiral in space like the circulation of blood in the human body. . . . Perhaps the most remarkable facet of their knowledge is their knowing intricate details of the Sirius star system, which presently can only be detected with powerful telescopes. The Dogon knew of the white

dwarf companion star of Sirius, the brightest star in the sky. They knew its approximate mass ("it is composed of 'sagala,' an extremely heavy, dense metal such that all the earthly beings combined cannot lift it"), its orbital period (50 years), and its axial rotation period (one year). Furthermore, they knew of a third star that orbits Sirius and its planet [*sic*]. The X ray telescope aboard the Einstein Orbiting Observatory recently confirmed the existence of the third star.[2] The Dogon with no apparent instrument at their disposal, appear to have known these facts for at least 500 years.

Claims that the Dogon have known these things for at least seven hundred years (not five hundred) and that the ancient Egyptians also possessed this knowledge have been made by Adams (1983a) and endorsed by Van Sertima (1983). The sole source of this information about Dogon astronomical knowledge is the research of two French anthropologists, Marcel Griaule and Germaine Dieterlen (1950, 1965), and more directly the book by Temple (1976).

Griaule and Dieterlen, who studied the Dogon from 1931 to 1952, describe a world renovation ceremony called *sigui.* This ceremony is associated with the bright star Sirius A (*sigu tolo* or "star of Sigui")[3] and is held by the Dogon every sixty years. According to Griaule and Dieterlen, the Dogon also name a companion star, *po tolo* or "Digitaria star" (allegedly Sirius B), and describe its density and rotational characteristics. Griaule and Dieterlen do not attempt to explain how the Dogon could know this about a star that cannot be seen without a telescope, and they make no claims about the antiquity of this information or of a connection with ancient Egypt. It was Temple (1976, 203–227) who argued that the Dogon learned all this from amphibious beings from a superior civilization in the Sirius system.[4]

Stars are rated on a visibility scale that differs by a factor of 2.5 brightness per unit. The higher the positive number on the scale, the dimmer the star. Adams (1983b) claims, without any reference, in regard to viewing stars with the naked eye, that under optimum conditions people with blue-green eyes can see stars of 6.5 magnitude, but that dark-eyed, dark-skinned people can see stars of up to 8.1. The very bright Sirius A has a magnitude of –1.47, while Sirius B has a magnitude of 8.7 (Allen 1973, 235). The canonical limit of visibility is 6, although a few exceptional people, with lifelong training, can achieve 7.8 from high mountains (Schaefer 1995). This maximum human performance is still 2.26 times less than would be needed for naked-eye observation of Sirius B. Even if Sirius B were bright enough to be seen, it could not be distinguished by a naked eye because it is too close to Sirius A. The average separation between Sirius A and B is 9.5 seconds of arc (Allen 1973, 240) with a maximum separation of 11 seconds. However, a person with 20/20 vision can only distinguish two points of light that are at least 42 seconds apart, in other words, four times the separation of Sirius A and B (Schaefer 1995).

Bernard R. Ortiz de Montellano is in the Anthropology Department, Wayne State University, Detroit, Michigan 48202.

Adams (1983a), based on Temple, argues that the ancient Egyptians had telescopes that enabled them to see Sirius B: "The Russians have recently discovered a crystal lens, perfectly spherical and of great precision, used in ancient Egypt.[5] It is a short and simple step to place one lens in front of another to make a basic telescope, and chances are that it could have happened and many times." This is an example of a type of reasoning described by Mary Lefkowitz (1993), referring to Martin Bernal's claims of massive Egyptian influence on Greece in *Black Athena* (Bernal 1987): "Because something is possible, it can be considered probable, or even actual *si potest esse, est.*" Adams (1983a, 1983b) and Van Sertima (1983) are even less cautious and use the following chain of reasoning: If it is conceivable, it is possible, it is probable—it is true. In fact, what they claim is impossible. Even if the Egyptian telescope existed, it would not suffice. The glare due to Sirius A requires the use of at least a 5-inch telescope to see Sirius B at its maximum separation; at its closest approach, about half the time, a minimum of a 100-inch telescope is needed (Schaefer 1991, 1995). The first sighting of Sirius B in 1844 required an 18-inch refractor telescope, the largest in the world at the time (Krupp 1991, 223).

Adams's repeated claims that the Dogon's supposed knowledge of Sirius B goes back seven hundred years are equally devoid of evidence. Adams's (1983a, 38) sole proof is the following statement given without attribution or citation: "A wooden mask called the *kanaga,* used by the Dogon to celebrate the Sirius-related Sigui ceremony, is among the archaeological finds that indicate their preoccupation with this star for at least 700 years." Adams's source is actually Griaule and Dieterlen (1950; Temple 1976, 37–38). The *kanaga* mask represents a cranelike bird, the bustard, and is connected to the Dogon creator-god Amma (Griaule 1938, 470). The dating of the *sigui* ceremony actually involves a *different* set of enormous wooden masks that are not worn but kept in protected shelters. These masks have not been carbon-dated, and their true age is not known. Griaule (1938) extrapolated the age of the masks by counting the number of masks in shelters and multiplying by sixty years per mask because a new mask was made for each sixty-year *sigui* ceremony. Most shelters had three or four masks, taking the ceremony back to A.D. 1720–1760 (Griaule 1938, 242–244; Temple 1976, 38). A single location had eight masks, the remains of another, and three piles of dust, which Griaule (1938, 245) interpreted as possibly three additional masks. This shaky hypothetical extrapolation is the sole evidence dating the *sigui* ceremony to A.D. 1300. Furthermore, it tells us nothing concerning knowledge of Sirius B, the invisible dwarf star, for the *sigui* ceremony is associated with Sirius A.

In fact, the entire Dogon question may be futile to theorize because Griaule's original data, on which this whole edifice is built, is very questionable. His methodology, with its declared intent to redeem African thought, its formal interviews with a single informant through an interpreter, and the absence of texts in the Dogon language, has been criticized for years (Goody 1967; Douglas 1968; Lettens 1971; Clifford 1983).

Even a sympathetic reviewer (Roberts 1987/1988), who believes that Sirius and its two companions are important components of Dogon thought, feels that the actual existence of Sirius B is purely coincidental: "It is equally clear that the first companion of Sirius (Po Tolo) as recognized by the Dogon is *not* the companion (Sirius B) recognized by Western astronomers. . . . The two companion stars that the Dogon recognize are elements of a particular cosmology that would exist even if Sirius B did not. That Sirius has a second companion for Dogon, which has never been discovered or presumed to exist by Western astronomers, should make this *point obvious.*"

Recently, a Belgian anthropologist, Walter van Beek (1991), who has spent eleven years among the Dogon, pointed out that Griaule's data is unique:

> Is Sirius a double star? The ethnographic facts are quite straightforward. The Dogon of course, know Sirius as a star (it is after all the brightest star in the sky). . . . Knowledge of the stars is not important either in daily life or in ritual. The position of the sun and the phases of the moon are more pertinent for Dogon reckoning. No Dogon outside of the circle of Griaule's informants had ever heard of *sigu tolo* or *po tolo*. . . . Most important, no one, even within the circle of Griaule informants, had ever heard or understood that Sirius was a double star (or according to *Renard Pâle,*[6] even a triple one, with B and C orbiting A). Consequently, the purported knowledge of the mass of Sirius B or the orbiting time was absent.

Van Beek points out that Griaule's data was developed in long, intense sessions with one primary informant, Ambara. In this process, Van Beek argues, Griaule probably reinterpreted *statements from his informant in the light of his own knowledge* about Sirius and its heavy companion, which had been much in the news at the time he began his field work. In turn, the Dogon would have accepted his analysis as if it were theirs because Griaule was extremely respected and liked, and because the Dogon culture places enormous importance on consensus and on avoiding contradictions (Van Beek 1991, 152–155). As an example of the process, Van Beek points out a Dogon tale that explains the differences between white people and the Dogon, but which, in fact, is taken from the Bible. "Thus *the story of the drunken Noah [Genesis 9, 21–27]* has found its way into the stories of these Dogon, who emphatically denied that this was a 'white' story." Traditionalists and Christians unanimously declared it to be Dogon: it belonged to the *tem* (collective knowledge). In many other instances the process was discernible: foreign elements were adopted and in a single generation became "traditional."

It might be argued that the knowledge given to Griaule was secret and known only to a few, including Ambara. Van Beek (1991) points out that "neither the myths nor the song texts—*though they are sacred—are secret. In fact, the tem is public* knowledge." Van Beek argues, given the fact that he cannot find traces of Griaule's data that, "The question is then, how secret secrets can be and yet be part and parcel of a culture. As shared meaning is a crucial aspect of any definition of culture,

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a secret not shared is not cultural, while one shared by very few is by definition marginal. . . . Thus, if the secrets revealed to Griaule are part of Dogon culture, one should be able to retrace them to some extent."

Jacky Boujou (1991), an anthropologist with ten years of experience with the Dogon, is in complete agreement with Van Beek: "I am struck by the degree to which Van Beek's analyses coincide with those I have gradually arrived at. . . . The third period [of Griaule and Dieterlen's research] is represented by the *Renard Pâle,*[7] which remains altogether strange and entirely unverifiable in the field, whatever Dogon region investigated. . . . I would underline the obvious desire of the Dogon for collective harmony and consensus that is striking to the participant observer."

Paul Lane (1991), another anthropologist with fieldwork among the Dogon, agrees: "Many of van Beek's substantive claims come to me as no surprise. Thus, for instance, although the objectives of my research in the Sanga region in the early 1980s were quite different, along with van Beek I found little evidence for the complex but nonetheless allegedly unified symbolic ordering of daily life described by Griaule."

Sagan (1980, 81–87) and Brecher (1979, 110) have proposed that the information about the discovery of Sirius B and its characteristics was told to the Dogon by another European prior to Griaule's fieldwork. Although derided by Van Sertima (1983, 13) and Adams (1983a, 37) this explanation, as the one given by Van Beek, is plausible and does not require extraterrestrials or mythical telescopes.

Adams, unlike Temple, does not provide any explanation for Dogon knowledge, although one is current in the Afrocentric circles in which he runs.[8] Frances Welsing (1987, 1991) and Adams (1987, 1988) argue that melanin has the ability to pick up all kinds of energy frequencies. Welsing (1987) further claims that the Dogon, by virtue of their melanin, are able to pick up vibrations from Sirius B as if they possessed infrared telescopes.[9] Welsing also claims that melanin gives ancient Egyptians and other blacks extrasensory perception, psi, and the ability to foretell the future. This explanation of an extraordinary claim is also not supported by any evidence (Ortiz de Montellano 1993).

Notes

1. The Dogon live near Bandiagara, about 300 kilometers south of Timbuktu, Mali, in western Africa (Ridpath 1978).

2. The paper cited as evidence for this (Chlebowski, Halpern, and Steiner 1981) does not claim that the X-ray-emitting dwarf 9' south of Sirius is a third companion. This star is, actually, 37 times farther from the Earth (325 light years) than is Sirius (8.7 light years). Lindenblad (1973) deliberately searched for a third component in the Sirius system and found none.

3. The bright star Sirius is also referred to as "Sirius A," with its dense companion being "Sirius B." The *sigui* ceremony deals with Sirius A, which everyone agrees is known to the Dogon. It is, after all, the brightest star in the sky. It is also known as the "Dog Star."

4. These space travelers were very ill-informed; Jupiter has fourteen moons, not four, as they supposedly told the Dogon (Brecher 1979).

5. A sphere would be useless as a lens because the focal length would be extremely short, and because the image produced would be greatly distorted by spherical and chromatic aberration (Muirden 1969, 6–7). In order to focus light adequately, the lens should be either concave or convex. The sole evidence given for this Russian discovery is a citation to a journalist, Peter Tompkins (1978, 219). The academic credibility and accuracy of Tompkins can be judged by his coauthorship with Christopher Bird (Tompkins and Bird 1973) of a book that claims plants can speak to people. In turn, Tompkins's sole evidence for the Russian discovery is a reference to an obscure Italian publication ("Peter Kolosimo in *Terra Senza Tempo* published in Milan in 1969") that is not listed in the bibliography of Tompkins's book. The claim can be found in the translated version (Kolosimo 1973, 95). In the book, Kolosimo, who is even less critical than Erich von Däniken, claims that both Atlantis and Lemuria existed and were the possible sources for this advanced Egyptian technology. He also postulates that visitors from outer space have visited Earth. The Egyptian telescopes turn out to be quite evanescent.

6. See Griaule and Dieterlen 1965.

7. This book (Griaule and Dieterlen 1965) represents the third and final period of Griaule and Dieterlen's writing on the Sirius myth among the Dogon.

8. A number of Afrocentrists, whom I have labeled as melanists, propose that melanin has extraordinary properties, which, in turn, make black people biologically superior in intellect, morals, and spirituality to white people (Ortiz de Montellano 1993).

9. Even this far-fetched claim is not applicable to Sirius B. Sirius B is too hot (22,000°K). Most of its radiation is emitted in the far ultraviolet, and little is emitted in the infrared (Seeds 1988, 137, 195).

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