

More thoughts on ‘thinking strings’: a comparative approach to concepts of soul and the notion of ‘thinking strings’ in southern African San cosmology

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ABSTRACT

I previously demonstrated the congruence of ‘blood’ and ‘thought’ in |Xam cosmology, and that the equivalence of blood and thought expressed by the notion of ‘thinking strings’ underpins their role in beliefs about the powers and work of !gi:ten. In this paper, I contend that thinking strings are equivalent to Naro and Ju|’hoan concepts of soul/heart. Naro ethnography situates ǀi (thought/soul) within the cardiovascular system. This explains the physiological equivalence of blood vessels and thinking strings in the |Xam worldview and the conceptual unity of ‘soul/heart’ with thought and feelings in Naro, Ju|’hoan and |Xam worldviews. I also determine here that Naro and Ju|’hoan beliefs about healers’ hearts/souls/thought travelling away from their bodies during trance are conveyed by a |Xam idiom: !gi:ten’s hearts ‘fall down’. I observe that |Xam !gi:ten’s falling hearts ‘resound’ and ‘rumble’ like the ‘low, rumbling groans’ of Ju|’hoan healers’ n||hara sounds during trance. I establish that for both Ju|’hoan and |Xam people, shooting stars, which also ‘resound’ and ‘rumble’ as they fall, embody the hearts/souls of !gi:ten or healers during extracorporeal travel and upon ‘death’. I conclude that whether thin red painted lines in the rock art of the Maloti-Drakensberg and the Cederberg of the Western Cape express the notion of ‘threads of light’ inspired by shooting stars, or alternatively thinking strings representing blood vessels, both of these metaphors allude to embodiment of thought or soul within the cardiovascular system.

KEY WORDS: ǀiǀin, heart, shooting stars, half-death, !kia, !aia, n||hara sounds, red lines, rock art, Khoisan, Khoesan, |Xam, !Kun, |Xū, !Xūū, Ju|’hoan, Naro

The San cosmological concepts I discuss in this paper derive from ethnographic and anthropological studies of four Khoisan groups. These are the 19th-century |Xam (Tuu language family) who inhabited large areas of what is now South Africa, as well as the 19th-century !Kun (Kxa language family), the 20th-century Ju|’hoansi (Kxa language family) and the 20th-century Naro (Khoekhoe language family), all of whom lived in the Kalahari desert in Namibia and Botswana (Fig. 1). The worldviews of these four groups are underpinned by a shared conceptual system (Lewis-Williams & Bieseke 1978: 130–1; Guenther 1989: 33–6, 2020a: 149; Low 2007: S72).

All of these groups have the concept of ‘potency’, a fundamental energy that resides in certain animals, plants and other phenomena. This energy or potential (or supernatural potency) is known to the |Xam as !gi:, the Naro as tsoo and the Jul’hoansi as n|um (n|om). Through the use of skilled embodied techniques, healers are able to harness and grow their potential/potency to achieve particular ends, such as in healing, rain-making and game control, among others. These ends are achieved by entering altered states of consciousness, including the experience of leaving the body and travelling to destinations in both the mundane and supernatural worlds. The healers are known respectively as !giten (full of !gi:) and n|um k”xausi (owners of n|um). The |Xam healers are sometimes referred to in the literature as ‘medicine men’, but mostly as ‘sorcerers’ in the Bleek and Lloyd texts (Lewis-Williams 2015: 64). These terms are glossed as shamans by David Lewis-Williams and others (Lewis-Williams 2015: 65). I use the terms shaman and sorcerer interchangeably.



Fig. 1. Linguistic groups and locations mentioned in the text. Image: Ghilraen Laue (2024).

CONCEPTUAL BELIEFS

Although the term 'thinking strings' doesn't appear in the 20th-century Ju|'hoan and Naro ethnographic accounts, similar ideas persist in related conceptual beliefs. Thought is an important component of the shared conceptual system, which encompasses beliefs about wind, breath, heart, soul, blood and potency (Low 2008a: 259–84). These shared beliefs are elements of Ju|'hoan and Naro concepts of 'soul', but the notion of soul is ostensibly lacking in the |Xam conceptual system. This deficiency is surprising, given the close correspondence of many of the fundamental beliefs that underpin the worldviews of |Xam, Ju|'hoan and Naro people. In this paper I resolve the issue by equating ideas of thinking strings with the notion of soul.

Thinking strings (||khouú ||khouǵen) are a |Xam idiom for thought used by the main 19th-century |Xam narrators, ||Kabbo, Dialkwāin and |Hán|kass'ō, in their accounts of the daily life and mythology of their people (*Digital Bleek & Lloyd*, DBL hereafter). ||Kabbo, whose name means 'dream' (Bleek 1956: 549; Lewis-Williams 1981: 27), was a !khwa-ka !gi:xa (rain shaman) (Lewis-Williams 1981: 27, 104, 1996: 138). Dialkwāin, too, probably had 'experience of weather altering practices' and his father was a rainmaker (Lewis-Williams 2015: 39).

Here I argue for the equivalence of the concept of thinking strings as given by the 19th-century |Xam and !Kun with ideas and beliefs about the soul/heart recorded from Khoisan living in Botswana and Namibia from the 1950s onwards, with a focus on Naro and Ju|'hoan people. I also compare the |Xam notion with the 19th-century !Kun account recorded by Lucy Lloyd that refers to thinking strings (DBL !Kun notebook L.XI & XII.4: 9306 rev. (January–February 1880)).

Wind

Chris Low's analysis of Khoisan anthropological and historical sources, as well as his own research among Damara, Nama, Hai||om, Ju|'hoan and Naro communities (Fig. 1), incorporates a comprehensive overview of conceptual beliefs. His understanding of how separate ideas and beliefs interconnect to form an integrated worldview is an important contribution towards our awareness of Khoisan cosmology. He proposes that wind and breath are equated with potency in the shared worldview: 'Wind is an organism's "essence" that equates to what an organism can do, or its potency' (Low 2014: 169). He correlates the essence of an organism with its identity: 'This wind holds the potency and, as a personal life force, the identity of an organism' (Low 2008a: 261). He observes that '[n]otions of wind overlap and underpin other means in which potency is thought to move between organisms and the wider environment, particularly including smell and sweat' (Low 2014: 169).

Scents that can be carried by wind—including the odour of sweat—were similarly important in understandings of personhood or identity among |Xam people (McGranaghan 2012: 134). Mark McGranaghan (2012: 138–9) cites passages from |Xam narratives to support his conclusion that 'odours were mobile (even motile), not confined to a single embodiment, and transferable. In particular ... they were

linked to bodily secretions, readily incorporated in other identities, and moved around on winds.’

All of these peoples’ beliefs about wind include the external winds that blow and breathe within the body (Low 2007: S77). Notions of soul overlap with notions of breath and wind among the Nama (Low 2007: S74) and among some Naro people (Guenther 1986: 234, 241, 243; Low 2007: S77). Low compares Mathias Guenther’s record of Naro beliefs to his own findings: ‘The Nharo association of thought, feeling, or soul with breath and wind was mirrored in beliefs current among all the Khoisan groups that I encountered’ (Low 2007: S78). The integration of Jul’hoan concepts of soul, spirit and breath is manifest in the word *||ge*, which is used for all three (Bleek 1956: 530).

Low proposes that ideas linking wind (*ǀa*) with thought or soul (*ǀi*) among the Naro may be similar for all Khoisan, including the *|Xam*. He notes that 19th-century *|Xam* people used the same word for thought (*ǀi*), and he suggests tentatively that this may indicate historical ideational continuity (Low 2007: S78).

Blood

An important component of the Khoisan conceptual system that has received less attention is blood. Further, the relationship between blood and thought/soul in the Khoisan worldview has not been fully explored. Low suggests that beliefs about blood and thought have continuities with the other elements of the shared conceptual system, particularly wind. He considers blood to be the means of distributing wind within the body (Low 2007: S78):

Many Khoisan recognize a role for blood as something that keeps the body alive and moving. Very often wind is tied to this understanding as something combined with blood or something that runs in blood vessels that enables physical movement (very few Khoisan whom I encountered differentiated between veins and arteries). The idea of bodily movement is accordingly tied to movement of wind.

‘Thinking strings’

My paper on thinking strings (Thorp 2018) demonstrates the congruence of thought and blood in 19th-century *|Xam* cosmology. It situates the notion within a conceptual system that equates ‘spirits’ to thinking strings and imbues thinking strings with the capacity to facilitate dreaming, extracorporeal travel and supernatural work. In the paper, I determine that thoughts generated by thinking strings are conceptually equivalent to the blood *ǀgi:ten* used to cure illness. I also show that both thought and blood are believed to be a means of ‘working magic’. I conclude that the unity of blood and thought expressed by the concept of thinking strings underpins their role in beliefs about the powers and work of *ǀgi:ten* (Thorp 2018: 89).

Thin red lines in rock art may express the notion of thinking strings (Thorp 2018: 89), particularly those that may be bleeding, according to Lewis-Williams and David Pearce (2009: 53). Alternatively, thin red lines have been seen as depictions of San beliefs about

threads of light (Lewis-Williams et al. 2000: 131). These long and often sinuous painted red lines occur in the rock art of the Maloti-Drakensberg and in the Cederberg of the Western Cape (Yates et al. 1985: 78; Lewis-Williams et al. 2000: 123) (Fig. 1).

Here I determine that thinking strings enable new insights into contemporary beliefs about thought, blood and soul. Contemporary beliefs, in turn, explain some obscure aspects of thinking strings and heart in the |Xam worldview, including the physiological basis of thought. The insights resulting from these comparisons have implications for interpretations of thin red lines in rock art.

'THOUGHT' IS 'SOUL'

||Kabbo is the source of much of the information about thinking strings in |Xam stories (kukummi). In a note alluding to his story about a supernatural bird called |kaken-|kaka-|k'aui, he explains that his thinking strings received and retained the story, which he heard from his mother, thus enabling him to recount it to Wilhelm Bleek, among others. This note identifies thinking strings (||kau ||káuuk̥en) as the location of memory, a vital component of the ability to think in the western worldview (Alderson-Day & Fernyhough 2015: 937). ||Kabbo says:

The tale entering the ear holes goes down ~~along~~ on each side of the throat into the thinking channels and remains there and grows up with the hearer. This tale (of |kaken-|kaka-|k'aui) doth from my mother's mother's mother own mother's [itau] mouth's tale [!kwá ka kkúmm] which she told [ē ha ꞑkák̥en] nicely [akke ꞑhī hī?] I did [ñ n'n] get [rki rki] it [hī hī], as it lay in [au hīg ꞑne ꞑēta] my thinking strings [ñ ||kau ||káuuk̥en].¹
(DBL B.XII: 1130 rev. (1872))

||Kabbo also explains that, for the |Xam, throat arteries (#keō #keō kággeñ) are thinking strings, the instruments of Bushman thought (DBL B.II: 422 rev.–423 (1871)). In addition to his definition of thinking strings as throat arteries, ||Kabbo equates the notion with the word ꞑíín, which is translated as 'thinking' in other contexts:

(both sides of his neck, it appears to be.) 'twa dink', J.T. (i.e. ||Kabbo) says, pointing to each side of his throat in front, not the middle. The back of throat is (they say) |khe(ó)w. ꞑíín is another name for #káu káuḡen (**thinking strings**), it appears.
(DBL |Xam notebook L.II.6: 689 rev. (23–27 October 1871))

The word ꞑíín is not translated in ||Kabbo's explanation, but when íí or íín are used singly they are translated as 'think' or 'thought' (Bleek 1956: 652, 763). When used together or reduplicated (e.g. íí íín or íí íí), they can express repeated or continuous action (Bleek 1929: 171). The ending 'ya' is also a participle expressing duration or repetition of action (Bleek 1929: 168–9). Orthography in the Bleek and Lloyd notebooks is variable, but Bleek translates ꞑééya (DBL B.X: 972 (1872)) and ííííya (DBL B.XIII: 1239 (1872)) as 'thinking'. Lloyd translates both íí íí (DBL |Xam notebook L.V.4: 4166 (January–February 1875)) and ꞑíín'ya as 'thinking'. For example, in |Hánꞑkass'ō's

story of ‘The Mantis and the Proteles (Aardwolf)’, the thinking process is indicated by the word $\mathfrak{f}\mathfrak{i}\mathfrak{i}\mathfrak{n}\mathfrak{y}\mathfrak{a}$. $\mathfrak{H}\mathfrak{a}\mathfrak{n}\mathfrak{k}\mathfrak{a}\mathfrak{s}\mathfrak{s}\mathfrak{o}$ says: ‘And the mother Proteles went in, she did not quick {at once/speedily(?) } come out, while she was thinking [$\mathfrak{f}\mathfrak{i}\mathfrak{i}\mathfrak{n}\mathfrak{y}\mathfrak{a}$] inside (her abode)’ (DBL |Xam notebook L.VIII.11: 6953 (May–June 1878)).

As well as defining thinking strings as throat arteries and equating the notion with thinking, ||Kabbo explains how thought (or thinking strings) work in ‘Jantje Tooren’s [||Kabbo’s] asking for thread to sew on his buttons that I gave him’ (DBL |Xam notebook L.II.12: 1171–1172). His explanation sets out the thought process that leads him to ask Lloyd for thread to sew buttons onto his jacket. $\mathfrak{f}\mathfrak{i}\mathfrak{i}\mathfrak{n}\mathfrak{y}\mathfrak{a}$ is translated as ‘thinking’ here:

(1171) My thoughts [$\mathfrak{k}\mathfrak{h}\mathfrak{e}\mathfrak{o}\mathfrak{u}\mathfrak{w}$ $\mathfrak{k}\mathfrak{h}\mathfrak{e}\mathfrak{o}\mathfrak{u}\mathfrak{w}$ $\mathfrak{k}\mathfrak{a}\mathfrak{k}\mathfrak{e}\mathfrak{n}$] said spoke to me, my thoughts [$\mathfrak{k}\mathfrak{h}\mathfrak{e}\mathfrak{o}\mathfrak{u}\mathfrak{w}$ $\mathfrak{k}\mathfrak{h}\mathfrak{e}\mathfrak{o}\mathfrak{u}\mathfrak{w}$ $\mathfrak{k}\mathfrak{a}\mathfrak{k}\mathfrak{e}\mathfrak{n}$] {in this manner thus were right,} they said spoke to me, therefore, my mouth spoke speaks to thee, my mouth thus is right, my mouth said says (?*) to the lady me (or nui?) [$\mathfrak{n}\mathfrak{u}\mathfrak{i}$], that which that (?), I {should (?*)} shall speak/say to {her (?*)}/thee,} I thus am right, I think thought [$\mathfrak{f}\mathfrak{i}$], in the night, while I lay as lie; I thinking [$\mathfrak{f}\mathfrak{i}\mathfrak{i}\mathfrak{n}\mathfrak{y}\mathfrak{a}$] lay lie, I on lie lay upon the bed, I {thought (?*)}/think [$\mathfrak{f}\mathfrak{i}$], that, I shall would (1172) say to thee, that thou shall shouldst give me thread [$\mathfrak{n}\mathfrak{u}\mathfrak{i}$], I shall should sew [$\mathfrak{f}\mathfrak{u}\mathfrak{m}\mathfrak{m}$], sewing [$\mathfrak{f}\mathfrak{u}\mathfrak{m}\mathfrak{m}$ $\mathfrak{f}\mathfrak{u}\mathfrak{m}\mathfrak{m}$] place on the buttons [$\mathfrak{k}\mathfrak{g}\mathfrak{o}\mathfrak{n}\mathfrak{-n}\mathfrak{o}$], on the jacket. The buttons [$\mathfrak{k}\mathfrak{g}\mathfrak{o}\mathfrak{n}\mathfrak{-n}\mathfrak{o}$] which, thou didst give me them to me, for they shall would be falling down [$\mathfrak{t}\mathfrak{a}\mathfrak{t}\mathfrak{t}\mathfrak{e}\mathfrak{n}$ $\mathfrak{t}\mathfrak{a}\mathfrak{t}\mathfrak{t}\mathfrak{e}\mathfrak{n}$] for me upon the ground; for, I not {a little/gently} think of them; for they (are) handsome.

(* page facing 1171) (? I have thought for some time that when they want to put a verb into the present of the infinitive they double it)

(DBL |Xam notebook L.II.12: page facing 1171–1172 (1 April 1872))

||Kabbo’s thoughts/thinking strings ($\mathfrak{k}\mathfrak{h}\mathfrak{e}\mathfrak{o}\mathfrak{u}\mathfrak{w}$ $\mathfrak{k}\mathfrak{h}\mathfrak{e}\mathfrak{o}\mathfrak{u}\mathfrak{w}$ $\mathfrak{k}\mathfrak{a}\mathfrak{k}\mathfrak{e}\mathfrak{n}$) ‘spoke’ to him. This type of inner experience is variously known as inner speech, verbal thinking, inner speaking, covert self-talk and an internal monologue (Alderson-Day & Fernyhough 2015: 931). It is the subject of developmental, cognitive, psycholinguistic and neuropsychological research and, in spite of difficulties in measuring its incidence, its importance ‘as a private activity at the core of experience’ for many individuals is recognised (Alderson-Day & Fernyhough 2015: 956). The internal conversations that often characterise verbal thinking are described in other |Xam accounts, too.

For example, in the story of ‘The Day’s Heart’, thinking takes the form of a silent conversation that the Jackal has with his thinking strings: ‘The Jackal thus intended he sat thinking [spelled $\mathfrak{f}\mathfrak{e}\mathfrak{i}\mathfrak{n}\mathfrak{y}\mathfrak{a}$]; he did not speak, for his thinking strings [||khaũ ||khaũkèn] talked to him, he sat thinking [spelled $\mathfrak{f}\mathfrak{e}\mathfrak{i}\mathfrak{n}\mathfrak{y}\mathfrak{a}$ ’ (DBL B.X.972 (1871–72)).

!Nanni² mentions the word $\mathfrak{r}\mathfrak{x}\mathfrak{o}\mathfrak{n}\mathfrak{g}\mathfrak{u}\mathfrak{s}\mathfrak{i}\mathfrak{n}$ (thinking strings) in his story about |Xue and his two wives. !Kun thinking strings work just like |Xam thinking strings: |Xue’s wife talks to herself just as people using their thinking strings do in |Xam narratives. |Xue is a supernatural being known by various names, including Huwe and $\mathfrak{f}\mathfrak{a}\mathfrak{o}$ N!a (DBL !Kun notebook L.XI & XII.11: 9893 (June–October 1881); Lebzelter & Neuse 1934: 103–8; Marshall 1962: 223–4).

There are significant resemblances between |Xue and the supernatural being known to the |Xam as |Kaggen (Hewitt 2008: 111; Lionnet 2014: 6). Like |Kaggen (Hewitt 2008: 122), |Xue is credited with creating animals that are eaten (DBL !Kun notebook L.XI & XII.8: 9626 rev. (August–September 1880)).

In !Nanni's story, |Xue transforms himself into various forms including a lizard, a python and a young |ou (DBL !Kun notebook L.XI & XII.4: 9300 rev. (January–February 1880); |ou': a very small kind of buck). |Xue 'dies' while he is in the form of an |ou and a bird starts to eat him, but his two wives intervene and take him home. His elder wife plans to cook him and eat him, so she makes a fire while she thinks about her plan. Her thoughts are recorded as a conversation with herself in quotation marks on the verso side of page 9306 of the notebook. The word ǁxǀonǁgúsin is written and translated into English above the conversation:

My thinking strings [me ǁxǀonǁgúsin]

She thought [ǁĩ] that thus:

'I will eat this kid [|ou];' and her husband was not dead, he heard his wife.

(DBL !Kun notebook L.XI & XII.4: 9306 rev. (10 January–12 February 1880))

Lloyd probably translated the word ǁxǀonǁgúsin as 'thinking strings' because !Nanni explained its meaning to her in the same way that ||Kabbo did when he described |Xam thinking strings. We know that |Xam people equate thinking strings with throat arteries and that ||Kabbo explained this by pointing to each side of his throat (DBL |Xam notebook L.II.6: 689 rev. (1871)). Although we do not know for certain how !Nanni conveyed his information, he too probably pointed to his throat arteries to indicate the meaning of ǁxǀonǁgúsin. Therefore, 19th-century !Kun and |Xam people likely shared a similar understanding of throat arteries as the instrument of thought.

!Nanni not only mentions thinking strings in this story, but also uses the word ǁĩ, which Lloyd translates as 'thought' (see quotation above). |Xam, !Kun (|Xǔ or |Xǔǔ) and Naro peoples speak languages from three distinct southern African Khoisan³ language families. They all share the word ǁĩ, together with various cognate forms. Dorothea Bleek (1956: 652) records ǁĩ meaning 'to think and thoughts' in |Xam (SI) (Tuu family) and (at the bottom of page 652) ǁĩŋ as 'to think' and ǁĩ as 'thought' in !Kun (NII) (Kx'a family). She translates ǁĩ as 'think' (Bleek 1956: 652) in Naro (CII) (Khoe family). When a word spans two or more language families, it is assumed to be the result of borrowing—i.e. the adoption of words from one group into another (Menán du Plessis, pers. comm. 24 September 2020).

In addition to Dorothea Bleek's (1956: 652) translation of ǁĩ as 'think' in Naro, Guenther (1986: 241–2) translates ǁĩ as 'soul'. Wilhelm Bleek and Lloyd do not use the English word 'soul' in their translations of |Xam texts and Dorothea Bleek does not record a |Xam word for soul in her 1956 dictionary—although she does use 'soul' to translate a Tshwa (east Kalahari Khoe) word (ǁgom) (Bleek 1956: 281) and three Ju words: ǁge: (also spelled ǁgaua) (Bleek 1956: 530), xʔaobe (or x'aobe) (Bleek 1956: 257) and !khunga (Bleek 1956: 430).

A review of the Naro concept of soul highlights its similarities with |Xam thinking strings and exposes differences in comparison with western ideas of soul. It is important to recognise that because anthropological accounts of indigenous concepts use English terms, including soul, heart and thought, they inevitably reflect the western worldview associated with these words. This may obscure aspects of the indigenous concepts the terms refer to (Low 2007: S72). In the contemporary western worldview, thought is located in the brain, and like the Naro, westerners associate thought with the idea of soul. The definition of ‘soul’ in the *Collins English Dictionary* (2024) summarises the western concept: ‘the part of you that consists of your mind, character, thoughts and feelings. Many people believe that your soul continues existing after your body is dead.’ In the western worldview, the heart—in addition to being an internal organ—overlaps with some attributes of the soul.

Naro people also associate the soul (ǀi) with thought and feeling (Guenther 1986: 242), but unlike westerners, they believe that thought is transmitted via blood in blood vessels. Guenther explains that for the Naro, thoughts and actions are instigated by ǀi and enacted by means of the circulatory system, which carries thoughts around the body in the blood. He says: ‘Soul is the integral part of the body and imparts the body with life, thought and feeling’; ǀi ‘causes a person to think, wish and act’ (Guenther 1986: 242).

THE PHYSIOLOGY OF SOUL/HEART IN THE KHOISAN WORLDVIEW

The Naro explanation of the physiology of the soul reveals the rationale behind this concept (Guenther 1986: 242–3). They think of the heart as the central organ that contains the strongest concentration of soul or ǀi. The brain is where the thinking functions of ǀi are carried out and the brain gives the power of thought to the heart. The heart is where thoughts originate in their germinal form and are then sent to the brain to be developed. The brain sends the developed thoughts back to the heart, which then pumps the thoughts around the body in the blood, thus enabling the body to enact thoughts (Guenther 1986: 243).

This integrated conceptualisation of the soul/thought with the vital organs, blood and the circulatory system is key to understanding ideas and beliefs recorded from other Khoisan peoples including the |Xam and Ju|’hoansi. The |Xam notion of throat arteries as thinking strings is unintelligible from the perspective of the western worldview, but it makes perfect sense in the light of Naro understanding of the physiology of thought/feeling. Thinking strings correspond with the Naro idea that thought is transported with blood in blood vessels.

Guenther (1986: 241) explains that the body

is perceived by the Nharo to be a balanced, integrated whole in which the key organs, the lungs (tssoe), liver (k”ei), kidneys (nǀei), and heart (ǀgau), are all pervaded, kept alive and integrated by soul (ǀi). The heart provides the key organs with blood (ǀao); blood also carries soul which is pumped along with the blood to all of the key organs. The heart is also believed to activate the lungs

and cause them to breathe. Breath (ǀa) is closely linked with ǀĩ and believed by some Naro to be the embodiment of soul, which is otherwise immaterial substance.

This account of the Naro understanding of soul reveals the accuracy of some anatomical observations that underpin it. There is good reason to suppose that similar knowledge of the circulatory system and vital organs underpins concepts of thought/soul for ǀXam and Juǀ'hoan people too. Viktor Lebzelter worked with Ju- speaking groups (Bleek 1956: 3rd page of Introduction; Güldemann 2014: 40). He noted that 'anatomical knowledge of the Bushmen is quite extensive as a result of their way of life as hunters' (Lebzelter & Neuse 1934: 79). By extrapolating Lebzelter's observation to the Naro, we can surmise that their physiological understanding of soul is likely based on their own experiences of butchering animal carcasses (Low 2008a: 255–6). No doubt, this activity offered similar opportunities for anatomical observation to all Khoisan, including the ǀXam.

This explanation of the source of anatomical knowledge resonates with information obtained by Silberbauer from Gǀui (Gǀwi) people (Gǀui is a Khoe language, as is Naro; Güldemann 2014: 27) and by Heinz from !Ko people (now known as Taa, but previously !Xóǀ or !Xoon; Güldemann 2014: 10); Taa is a Tuu language, as is ǀXam (Güldemann 2014: 27) (Fig. 1). Both Gǀui and Taa speakers' understandings of human anatomy, including terms and physiological processes, are based on observations of hunted and butchered animals (Heinz 1971: 43; Silberbauer 1981: 67–8). Both peoples link the main organs of the cardiovascular system together in a comparable way to the Naro (and western physiological observations). They recognise that the heart pumps blood around the body via blood vessels (Heinz 1971: 48; Silberbauer 1981: 68). Conversely, Elizabeth Marshall Thomas (1959: 72) observes that a Gǀui healer called Ukwane

did not know about the circulation of the blood, believing that blood ebbs and flows, nor did he recognize pulses in the body except the pulse at the V of the throat, noticeable in people who wear little clothing, which is known as 'the place of the heart'.

I will return to the ideas that underpin 'the place of the heart' later.

Like Ukwane, Low's Khoisan informants from various ethnic groups have less systematic ideas about the circulatory system, though they too think of the heart as a pump. He observes that few of them expressed clear ideas of arterial circulation and none distinguished between veins and arteries. Nevertheless, he accepts that 'In some respects Guenther's rather rationalised circuit of understanding can be taken to represent ideas of other Khoisan' and several of his informants associate blood with life, movement and energy (Low 2008a: 260).

The Naro do not link blood with the digestive system (Guenther 1986: 245), but Gǀui and Taa people recognise that blood colour varies within the vascular system and they link blood with nutrition (Heinz 1975: 48; Silberbauer 1981: 68). Taa people told Heinz (1971: 48) that 'the blood takes food from the stomach and intestines and

turns it into fat.’ I suggest that this may be a reference to the potency of blood,⁴ because fat is generally recognised as a potent substance by Khoisan people (Lewis-Williams 2015: 85–6).

Unlike the Naro, Taa people do not include the brain in the process of formulating thought. They say ‘In the head we have the brain which runs down into the spine. The function of the brain is to give us a headache’ (Heinz 1971: 49). !Kun people do not appear to associate the brain with thought either. Although Dorothea Bleek (1956: 365) translates the !Kun word |xəŋgúsiŋ as ‘brains’, as well as ‘thinking strings’, Lloyd originally simply translated the word as ‘thinking strings’ (DBL !Kun notebook L.XI & XII.4: 9306 rev. (10 January 1880–12 February 1880)). It is likely that Dorothea Bleek added the word ‘brains’ to her dictionary definition to clarify the meaning of the term.

We know that |Xam people locate thought in the throat where thinking strings are found. There is no evidence that they include the brain in the process of thinking. Wilhelm Bleek translates !kuññ as ‘brain’ in a note (DBL B.XII: 1130 rev. (1872)). Lloyd uses the English word ‘brain/brains’ in only one |Xam account, to translate the same word (spelled !kunh̄). In two separate but contiguous notes explaining the word ||górokən (dry), |Hán̄kass’ō makes an indirect comparison between an empty ostrich eggshell water container and a snuff user’s head:

(8266 rev.) dry [||górokən*†]

*The ostrich eggshell’s head is dry [||górokən], when water is not in the ostrich eggshell.

†The people say, a person who takes snuff tobacco eats up [hàbbái] his brains [!kunh̄]; his brains [!kunh̄] disappear [||gwíssiŋ], his head is dry [||górokən]; because in the place in which the brains [!kunh̄] **(8267 rev.)** were, the brains [!kunh̄] have disappeared [||gwíya].

(DBL |Xam notebook L.VIII.26: 8266 rev., 8267 rev. (February 1879))

Elsewhere, Lloyd translates !kunh̄ as ‘mucus’, not ‘brain’ (DBL |Xam notebook L.VIII.23: 8028 rev. (18 November–23 December 1878); Bleek 1956: 453). Dorothea Bleek (1956: 538) translates ||gwí as ‘to finish, be exhausted’, as well as ‘to disappear’. Mucus rather than brain makes sense in the context of |Hán̄kass’ō’s narrative about people who take snuff tobacco. He points out that an ostrich eggshell is dry when there is no water in it. He then compares dryness to the situation inside a snuff user’s head. Long-term snuff use can cause a chronic watery running nose (Sreedharan et al. 2005: 155; Hounkpatin et al. 2020: 44), which may explain why |Hán̄kass’ō concludes that there is no mucus (rather than brain) inside a snuff user’s head, because watery mucus is continually emptying out of it.

The concern about nasal mucus expressed in |Hán̄kass’ō’s note may stem from its significance in healing. Like other body fluids, including sweat, it is associated with healers who enter an altered state of consciousness (or trance) to cure people, and it was applied to burns by ‘hottentot’ healers in the past (Laidler 1928: 446; Schapera 1930: 413).

During Ju|'hoan healing dances, men may 'sink down groaning and gasping. They shudder; sweat pours from them; mucus runs from their noses' (Marshall 1969: 376). In John Marshall's (1973) film, *N|um tchai: the ceremonial dance of the !Kung Bushmen*, a healer in trance is supported by others as thick mucus hangs from his nostrils. In a |Xam account, a powerful !gi:xa's name, Houhoun, refers to 'thick mucus' (DBL |Xam notebook L.VIII.30: 8636 rev. (July–August 1879); Lewis-Williams 2018: 152).

SOUL, SPIRIT, THOUGHT AND HEALING

The concepts of soul, spirit and thinking strings are mentioned in accounts of Khoisan healing and the activation of supernatural powers. These English terms are employed to translate the indigenous words used by informants. In English, 'spirit' can be used as a synonym for soul. As we have already seen, westerners associate thought with the idea of soul.

Referring to Ju|'hoan healing, Lorna Marshall (1962: 242) says: 'The only word I know for spirit is ||gauwa.' She uses the English word 'spirits' to refer to the dead as well as to living 'medicine men'. Marshall (1962: 242; my insertion) explains that the

||gauwasi pull the spirit out through the head of the corpse. The head is, likewise, the egress of the spirits of the medicine men. When the medicine men are in trance, which the !Kung call half-death,⁵ their spirits go out temporarily from their bodies through their heads to encounter and combat ||Gauwa [the creator god] and the ||gauwasi, who lurk in the shadows around the dance fire, and it is through the heads that the spirits return.

In a later publication describing the experience of trance, Marshall (1969: 377–8) uses 'spirit' again to translate a different Ju|'hoan word, n|. She says that during the stage of trance called 'half-death', when a healer appears to be unconscious, his 'spirit' is thought to leave his body

through his head. Informants said that in half-death a man's 'life', †toa, remains in his body as before. What goes out through his head is his n|, 'spirit'. (The word n| also means 'sense', i.e., correct judgement, etc. A foolish person has kwara n|, 'no sense') ... The !Kung believe that when the medicine man's spirit leaves his body it goes to encounter ||Gauwa and the ||gauwasi. Many men claim to see these other-world beings. There were medicine men in the past, according to old tales, who had even met †Gao N!a. †Gao N!a's way of receiving them was to let down a cord from the sky and allow the medicine men to climb up.

In a note, Marshall (1969: note 1) adds: 'It is the n| that †Gao N!a converts into a ||gauwa, a "spirit of the dead."'

This explanation of the Ju|'hoan concept of spirit (n|) makes an intrinsic link between the notions of spirits of the dead, sense and correct judgement. Sense and correct judgement are both attributes of the western idea of 'thought'. Marshall's Ju|'hoan informants' definition of n| corresponds closely with Dorothea Bleek's (1956:

652; my insertions)⁶ example illustrating the meaning of the Ju word \mathfrak{fij} : ‘when a person’s thoughts [\mathfrak{fij}] are not absent, the person is intelligent, (when) a person’s thoughts [\mathfrak{fij}] [are] wanting, the person is stupid, is foolish.’ I therefore suggest that $n|$ and \mathfrak{fij} are different ways of spelling the same word, which can be translated as ‘thought’ in English. It is the healer’s $n|$ (thought/spirit) that leaves his head and ascends a ‘cord’ to encounter $\mathfrak{f}Gao N!a$. This imagery is evocative of the 19th-century !Kun notion of thinking strings ($\mathfrak{xonngúsin}$) from which it probably evolved. Like Ju!’hoan medicine men, Naro healers use thought/soul ($\mathfrak{f}i$) to contact $||Gāūwa$. Once a healer has reached the stage of ‘trance collapse’ during a healing dance, his $\mathfrak{f}i$ leaves his body to find $||Gāūwa$. The healer’s $\mathfrak{f}i$ requests $||Gāūwa$ to restore health or asks for his help with identifying an ailment. After his encounter with $||Gāūwa$, the healer’s $\mathfrak{f}i$ returns to his body, guided by the dance fire (Guenther 1986: 271).

Similarly, for the |Xam, thought (thinking strings) is synonymous with spirits of the dead (Thorp 2018: 85). Thinking strings were the only parts of a person that continued after death. $\mathfrak{f}Kásiñ$ explains that both of his parents said that people’s thoughts left their bodies when they died:

These things they are those which, we who (are) ill, we are finished, our thoughts [$||khoū ||khoūki$] ascending, leave us, while our bodies, our bodies are those $w^h(ich)$ are in (or lie in?) the earth. Therefore, our thoughts [$||khoū ||khoūki$] leave us(.)

(DBL |Xam notebook L.IV.1: 3445 (4 November 1873))

Thus, Ju!’hoan and Naro healers use thought to access the spirit world in order to heal. For the |Xam, thought enables healers to control game, and it also enables extracorporeal travel (Thorp 2018: 89). I will show later that thinking strings are used in healing. For all of these peoples, thought or spirit is the essence of a person that continues after death.

THE HEART/SOUL AND HEALING

Similar conceptual beliefs about the heart underpin both Naro and Ju!’hoan healing practice. This reflects a shared understanding of the heart as a locus of thought or soul. We have already seen that, for the Naro, the heart contains the strongest concentration of soul or $\mathfrak{f}i$. Both Naro (Guenther 1986: 243, 1992: 88) and Ju!’hoan people regard the heart and soul as equivalents. According to Lebzelter and Neuse (1934: 110), for the !Kung (Ju!’hoansi) ‘The life principle of human beings is the soul, cha. The same word also means heart.’ Dorothea Bleek translates this word, spelled !xa rather than cha, as ‘heart’ in the !Kun dialect of Ju (Bleek 1956: 496), whereas Marshall (1962: 237) translates the same Ju!’hoan word, spelled xa, as ‘soul’.

Like the Naro, Taa people situate thought (or soul) in the heart. They told Heinz that ‘We think with our heart, for when we know we are doing wrong we say, “ $n|n$ chue” (in the inside of my heart) I know that this is wrong’ (‘heart’, $n|$) (Heinz 1971: 48–9). A passage in the story of the Elephant Girl indicates that the Ju!’hoansi, too, locate thought in the heart. In the story (Biesele & Howell 1981: 77), the girl tells

her grandmother that after her death, a 'little wind' will deposit droplets of blood in her grandmother's groin:

It happened just as the girl had said. A little wind came back to her grandmother. The bit of blood came to lodge in her groin. The grandmother saw it and said 'Didn't the child tell me something like this would happen?' She didn't speak aloud, she just said this in her heart.

The heart as a location of thought is a vital element of the notion of kgaba, which is common to both Ju|'hoan and Naro people, although it manifests in slightly different ways. Low comments (2008a: 220): 'The ideas behind kgaba, involving the heart as a place of thought [are] ... central to all Khoisan I encountered. To treat an agitated mind the Khoi treat the heart.' Naro people believe that they can become ill through 'bad thoughts' directed at them by someone who feels angry or jealous towards them. Kgaba, in the form of an evil potency, is exuded in the saliva and breath of an angry person (Guenther 1992: 87). Guenther (1992: 88) says:

When the Nharo say that kgaba, and the 'bad thoughts' that are its essence and being are in the heart, they mean this quite literally, that is, physically or, rather, physiologically. It is here in the body's 'strongest organ' according to Naro physiology ... and the seat of ǀĩ (thought, feeling, soul), that kgaba is lodged.

Ju|'hoan people also locate emotions of all kinds in the heart, including anger and envy. According to Richard Katz et al. (1997: 141), they believe that envy causes

arrows of sickness or xabasi to pass from the envier into the envied. Xabasi can also cause the one who feels the envy to become ill. These arrows can cause foreboding, serious illness, and even death. The sicknesses caused by disquiet hearts are preeminently those that Ju|'hoan healers seek to cure.

Ju|'hoan healers 'ǁxabe or "open up" their own hearts' so that in turn they can 'open the hearts and bodies of the sick to accept healing' (Katz et al. 1997: 141). Katz (1982: 94) explains that the Kung 'feel that their hearts must "awaken" or "open" before they attempt to heal'. So, for both Naro and Ju|'hoan people, the heart has an important conceptual role in the generation of an individual's thoughts or feelings, which are in turn integral aspects of soul.

Like the Xam notion of thinking strings, the Ju|'hoan concept of the heart as a location of thought is intrinsically linked to spirits of the dead (ǁgauwasi). When a person dies, the Ju|'hoansi say that the great creator (ǀGao N!a) receives the spirit, heart and blood of the dead person and turns these elements into a ǁgauwa (Marshall 1962: 243).

The heart, imbued with ǀĩ, leaves the body during sickness, as well as at death. A Naro healer, ǁHaisa !Noodoeb, said: 'If you die your heart goes to heaven, if sick your heart goes there too, so the healers go there and bring it back' (Low 2008a: 89). According to Low (2007: S77):

To address serious illness Khoisan healers travel to God, who is thought in such instances to have stolen the sick person's heart and hence their life-wind and soul. They plead with God for its return. If the heart is given back to the victim, via the shaman, he or she will survive. If not, he or she will die. The idea of the heart moving and causing sickness has a wider context in Khoisan concepts of disease. Many illnesses are attributed to moving organs, although it is only the heart that is envisaged as being taken outside the body.

The heart can move internally, as well as externally; for example, !Xuma, a Ju|'hoan healer from Dobe said of a political meeting (Katz et al. 1997: 142, original parentheses):

The matters discussed [at this meeting] are matters of the heart. When we go to a meeting like this, we Ju|'hoansi should be represented by someone whose heart is *not* at peace. When people talk together this thing that is your heart hangs at your n||ao spot [the top of the spine where healers expel sickness with the kowhedili shriek]. We want people who really have heart to go to meetings, not just ordinary people who will sit and say nothing.

I suggest that the idea that the heart 'hangs at the n||ao spot' may explain why the pulse at the V of the throat is known as 'the place of the heart' or 'heart's stand place' (Marshall Thomas 1959: 72; Marshall 1999: 54).

A review of |Xam conceptual beliefs about the heart confirms that they are essentially the same as those of Naro and Ju|'hoan people. |Xam narratives express the same associations between the heart and emotions. For example, !Kwǎrrǎ-ǎń,⁷ 'a wise person or sorceress', discusses her feelings about receiving payment for healing her patients:

(4131 rev.) She [!Kwǎrrǎ-ǎń] said, when she talked with us: **(4196)** For then my [ń] heart [rǐ] is happy [ttwaĩ], for I feel that they have cooled [kkuérrě-kkuérrě] my [ń] heart [rǐ], and my [ń] heart [rǐ] is not [klyauki] angry [rkwaĩ]. For when they have **(4197)** made my [ń] heart [rǐ] happy [ttwaĩtɛn-ttwaĩtɛn], then I am happy [ttwaĩ].

(DBL |Xam notebook L.V.4: 4131 rev., 4196–4197 (25 January–24 February 1875))

The words she uses to express her heart's emotions, including happiness and anger, mirror those of Ju|'hoan people in the book *Healing makes our hearts happy* (Katz et al. 1997: 140–2). !Kwǎrrǎ-ǎń's heart's feelings about receiving payment for her curing work, recorded in the 1870s, are remarkably similar to those of the Ju|'hoan healer Kau Dwa. He told Katz (1982: 288) in the 1970s that

We healers help people, we help each other. That makes our hearts glad. When we make a sick person well, my heart is glad. And then when that person gives me a nice shirt or Western style jacket to put on, like this jacket here' – he fingers Western style jacket he is wearing, a payment for his curing – 'I feel good about having a shirt on my back, it covers my body. And then, that person who gives me something like this jacket, god will shoot arrows into that person. One arrow,

then another, and another and another. And then that person too will be able to kia.⁸ And I will be able to help by rubbing his gebesi.

There are many references to the heart feeling 'sweet' or 'comfortable' (tǒǎ ĭ ĭ) in |Xam narratives, corresponding with the Ju|'hoan idea of the heart feeling 'happy' or 'glad'. These accounts suggest that the wellbeing of the heart was equally important to |Xam people, and consequently acted as a focus of their healing activities. For example, in ||Kabbo's story about |Kaggen and !goe !kweintu (a supernatural being with eyes on his feet), |Kaggen's heart is not 'sweet' or 'comfortable' (tǒǎ ĭ ĭ) but rather 'goes round' or 'turns, burns' (Γkǔ kǎ), seemingly because his 'fight' with !goe !kweintu is not going well. Low (2008b: 238) points out that to 'be beaten up or to have a fight is an expression commonly used for an extra-natural potent phenomenon' and he notes: 'To be beaten up by spirits is therefore a very KhoeSan way of talking about spiritual transformation ultimately from God which equates strongly to the biting of the ||Gamabsnake and opening up to n|um.' Ju|'hoan healers allude to the strength of n|um (potency) as 'a fight' (Marshall 1969: 351–2; Katz 1982: 263; Lewis-Williams 2015: 92).

|Kaggen was the original !gi:xa (Lewis-Williams 1997: 201, 2015: 64) and his unsatisfactory 'fight' with !goe !kweintu is likely just such a supernatural encounter with a potent phenomenon. |Kaggen decides to 'dream the morrow' (DBL B.III: 465–466 (1871)) in order to 'fight' !goe !kweintu again. In other accounts, |Kaggen uses his 'thinking strings' to dream (DBL |Xam notebook L.II.6: 690 (1871); Thorp 2018: 82–4). Lewis-Williams (1987: 166–8) equates the dreams of |Xam !gi:ten with sensations experienced by Ju|'hoan shamans during the trance dance. |Kaggen says:

(466) I dream the morrow, I must quickly walk, the ichneumon 'complains/ talks' to me, for I was so that I do not sleep, because the scars burning [!kǔi] gets me, I can not keep still my head, because my head's scars burn [!kǔi] me by night, my head does not stand lying still **(467)** My [n] heart [Γǎn](?) is not [yǎuke] sweet [tǒǎ ĭ ĭ] My [n] heart [Γǎn] goes round [Γkǔ kǎ] **(same line, 466 rev.)** turns, burns, J.T. says.
(DBL B.III: 466–467 (1871))

Dorothea Bleek (1956: 324) translates Γkǔ kǎ (spelled |kūka) as 'to die, be dead, faint', rather than Bleek's translation as 'goes round' or 'turns, burns'. On the previous page (DBL B.III: 466 (1871)), Bleek translates a different word, !kǔi, as 'burn' or 'burning'.⁹ Lewis-Williams (1987: 172) points out that shamans are said to 'die' when they enter trance; thus all of these translations of Γkǔ kǎ (or |kūka) are probably indicative of |Kaggen's state of consciousness in this story. A sensation of dizziness often accompanies the experience of fainting (*Merriam-Webster Dictionary* 2023), so it is likely that Lloyd's translations of the word Γkǔ kǎ as 'goes round' and 'turns' both refer to |Kaggen's altered state of consciousness due to injuries from fighting or possibly indicating trance. In other narratives—including ||Kabbo's story about the widow of the man killed hunting springbok (DBL |Xam notebook L.II.12: 1224 rev.–1226 (1 April–1 May 1872))—when the heart 'falls down', dying or fainting is the result.

Like the Ju|'hoan healer !Xuma, the |Xam !gi:xa, ||Kabbo thinks of the heart as positioned in the throat during life. He explains this idea in his story about the widow of a man killed while hunting springbok:

(1225) and, I [ǃ] ~~do~~ think(?) [Γkú ttañ] I [ǃ] shall [ssáñ] die [Γkū Γkúkeñ], in the night. The people will cry here at night, on acct of/because my heart [Γí] ~~will~~ will have [yǎ kǔ] fallen [!kǒǎ*]. The folk will early cry here on the morrow; for, my [ǃ] heart [Γí] does not [k|yaúki] feels/wants? [ttañ] as if could smell the scent of dry springbok's flesh; for my [ǃ] heart [Γí] ~~does~~ feels? [Γkū ttañ] I [ǃ] (1226) as if I should die [Γkū Γkúkeñ] ~~on acct?~~ of the scent of flesh.

*(1224 rev.) J.T. explains that when a man dies his 'heart' falls from the throat (the hollow of the throat) to the middle of the body, where it remains (vide II–37: 3356 rev.–3362 rev.).

(DBL |Xam notebook L.II.12: 1224 rev.–1226 (1 April–1 May 1872))

The association of feelings with the heart is in keeping with western ideas, but the idiom 'my heart will have fallen' in |Xam accounts seems to puzzle Lloyd. She compares the |Xam notion that the 'heart falls down' to a Russian folk tale that she believed expressed a similar idea about externalisation of the heart (DBL |Xam notebook L.II.37: 3356 rev.–3362 rev. (15 October 1873)), but ||Kabbo appears to specify that the heart falls down 'in the body' rather than externally in his story about the widow of a man killed while hunting springbok (DBL |Xam notebook L.II.12: 1224 rev.), as well as in another narrative titled 'Illustrative of Ssho-|oa' (DBL |Xam notebook L.II.36: 3263 (6–27 September 1873)). In both cases, ||Kabbo's explanations are recorded in English only, and not translated from |Xam, so ||Kabbo may have used actions rather than words to demonstrate what he meant, raising the possibility that Lloyd may have misinterpreted his actions. Possibly he demonstrated his meaning by collapsing onto the ground imitating a dead faint or death.

This idiom is mentioned in ||Kabbo's, |Hánǃkass'ō's and Dialkwāin's narratives. Ostensibly, it is a metaphor for fainting, losing consciousness or dying, as in the case of ||Kabbo's story of the man killed while hunting springbok and in his narrative 'Illustrative of Ssho-|oa'. In the latter story, the heart of a 'sick man' heart falls down (!kǔñ) (in his body) (DBL |Xam notebook L.II.36: 3264 (6–27 September 1873)), but in this case, unlike the hunter shot while hunting springbok, the 'sick man' does not die, instead becoming 'insensible' [kú kěñ]. The patient's condition is comparable with that of Ju|'hoan healers in 'half-death' (Hollmann 2004: 306–7 note 5). Like his Ju|'hoan counterparts, the healer in ||Kabbo's story helps (hérribi or Γñě) the sick man's heart and brings it back.

The story begins with an English summary, reflecting Lloyd's understanding of the narrative: 'How a man fights another (having previously rubbed his hands with ssho-|oa), afterwards restoring him by means of it.' Although this translation implies that the story describes people engaging in a physical fight using their fists, the account is best understood in the context of healing (Hollmann 2004: 306–7 note 5).

There are two references to 'fighting' in this account. The first is a note written in English explaining that one participant in the 'fight' (presumably the healer) had rubbed his hands with ssho-|oa 'before fighting'. The second is the word !gwa ɪ,¹⁰ translated as 'fight with fists' by Lloyd, which Dorothea Bleek (1956: 390) gives the alternative translation as 'to strike, beat, hit':

(3262) When they [aũ hĩ*] [*(3261 rev.) Bushmen] are angry [!kwaĩnyǎ] with each other [hĩ ɾkǎgen], with their [aũ hĩ] thoughts [!khouú !khouǵèn], when they [aũ hĩ] are not [káúki] angry [!kwaĩnyǎ] with their [aũ hĩ] heart [ɾí], they fight each other [ɾkǎgen] with their fists [hiñ ɾkü!gwa ɪ]; the other [!ku kóǵèn] man dies*, (becomes insensible?) [hě kú kěn] hence he (the one man) quickly helps the other man's heart [ɾí], he assists (3263) the other one's heart [ɾí]; that he may helping [ɾné(**)] bring back [ɾúǎ ssě] the other one's heart [ɾí], that the other one may quickly open his eyes; **revive (?)** for the other one trembles [!khaúkěn], while he felt that, his heart [ɾí] fell down [!küñ] (in his body), on account of the other one's [sshö-|oa*(**)];

*(3261 rev.) 'nett so he dod, cannie banie dod, betje dod'¹¹

(**)(3261 rev.) ɾné is the Bushman word for help; 'hérribi' is white man's talk, J.T. says

*(**)(3262 rev.) w^h(ich) he had rubbed his hands with, before fighting.

(DBL |Xam notebook L.II.36: 3262–3263 (6–27 September 1873))

Indications that the story details an episode of healing include the use of sshö-|oa, which is a medicinal plant (Bleek 1956: 182; McGranaghan 2012: 399; Hollmann 2022: 378–9), and references to 'the sick man' (DBL |Xam notebook L.II.36: 3264 (6–27 September 1873)) and 'the patient' (DBL |Xam notebook L.II.36: 3265–3266 (6–27 September 1873)). The 'patient' 'trembles', a common occurrence when individuals are in a trance state¹² (Lebzelter & Neuse 1934: 89–90; Lee 1967: 32; Marshall 1969: 377; Katz 1982: 99). The healer also rubs the patient's face with his scent, or sweat (DBL |Xam notebook L.II.36: 3264 (6–27 September 1873)). Rubbing with sweat is a recognised healing treatment (Marshall 1969: 371; Hollmann 2004: 307 notes 27–8; Low 2008a: 88).

!Kabbo's reference to thinking strings in this account is a further clue to the nature of this 'fight'. Rather than engaging in a fist fight, I suggest that the healer in this story uses his thoughts or thinking strings (!khouú !khouǵèn) to 'strike' (!gwa ɪ) a patient with potency, enhanced by the sshö-|oa that he has rubbed his hands with. The healer's gesture with his 'fists' in this case causes the patient to 'die (become insensible)' just as hand gestures do when executed by Ju|'hoan healers. For example, Marshall (1969: 351–2) explains that 'A medicine man must not point his finger fixedly at anyone or snap his fingers at anyone, especially a child, we are told. "A fight" might go along his arm, leap into the child, and kill it.' Similarly, Richard Lee told Katz (1982: 263) about a Ju|'hoan healer called Toma Zho:

In the middle of a section of intense singing, while he is dancing with several other men, he stops, turns, and points his finger at a dancer across the dance

fire. The dancer falls over immediately. Through this pointing action, Toma Zho has caused his own *n|um* to become dangerous. It has become what the *!Kung* call a ‘fight’ or ‘a death thing.’ Those at the dance are shocked. Toma Zho does the same thing to the same person several minutes later, with the same outcome.

Alternatively, the healer in *||Kabbo’s* story may be striking malevolent spirits as Kau Dwa (a *Jul’hoan* healer) does during *kia*, after he has dreamed of spirits who are trying to kill people. He says (Katz 1982: 218):

‘So you fight them and you kill them. It’s just like picking up this club in my hand and bashing them over the head.’ Kau Dwa gestures vigorously with his right hand, as if he were beating something. ‘But you must *kia* first. You don’t kill the spirits in the dream. You wake up first, *kia*, and then you can kill them. The spirits try to kill you. They try to kill you so that you’re dead. And then you say to the spirits, “No, you can’t do that to me. Get out of here. Beat it. Don’t come back. You’re bringing bad words and I refuse. Get away from here.” So you take your club and beat them and kill them.’ Again Kau Dwa’s right arm moves fiercely through the air, up and down, many times.

Hán|kass’ō describes an attempt to heal a ‘handsome person’ by ‘snoring’,¹³ during which the patient’s heart ‘falls down’ (*!k’ũ*). In this case, the patient is shot and ‘killed’ by spirit sorcerers (*!gi:ten*). According to Lloyd’s translations, three different *|Xam* words—*!kōã*, *!kũn* and *!k’ũ*—express the idea of falling. She translates *!kōã* as ‘fallen’ and *!kũn* as ‘fell down’ in *||Kabbo’s* stories. Alternatively, Dorothea Bleek translates *!kũn* (Bleek 1956: 453) as ‘to go along, away, to fall, go backwards’ and *!kōã* as ‘to go away from, travel away’, as well as ‘fall’ (Bleek 1956: 436). In *|Hán|kass’ō’s* story, Lloyd translates the word *!k’ũ* as ‘falls or falls down’. *!k’ũ* and *!kũn* may be different spellings of the same word:

(7302) they shoot [*Γxǎ*] killing [*||kōro*]; they lay [*ttě*] the person [*!kũĩ*] dead [*Γku-g Γne kōĩ*]. That happens when people are snoring [*ssú*] the man [*!kũĩ*], although they are taking things out of him, he is very ill, (*) (7303) He does not look as if they had taken anything out of him, for the sorcerers shoot at him under the people’s noses*(*). Then his heart [*Γĩ*] falls [*Γku-g Γne !k’ũ*]; although they are snoring [*ssú*] him, his heart [*Γĩ*] falls down [*Γku-g Γne !k’ũ*].

(*) (7301 rev.) Then people do this when they are snoring a man, the man does so when they pouring sit with springbok’s things, the man is ill properly

() (7302 rev.) they shoot [*Γxǎ*] a man [*!kũĩ*] whom the people are snoring [*ssú*] (DBL *|Xam* notebook L.VIII.15: 7301 rev.–7303 (August 1878))

|Hán|kass’ō applies the same notion to thinking strings which, like the heart, also fall down (*!k’ũ!k’ũ*). Thus the heart and thinking strings, which are both loci of thought or feeling in the worldview of the *|Xam*, behave in the same way, falling down upon entry into an altered state of consciousness. They are therefore likely to serve similar functions. We know that *|Xam !gi:ten* use their thinking strings to do sorcery, including game control (Thorpe 2018: 81), and *|Kaggen*, the original *!gi:xa*

(Lewis-Williams 1997: 201, 2015: 64), uses his to enable extracorporeal travel and to precipitate and control supernatural events (Thorp 2018: 81–5).

|Hánʔkass'ō explains what happens when thinking strings fall down (|k'ũlk'ũ) in a narrative about !Kó-g!n̥uin-tára (the Lynx), who is the wife of the Dawn's Heart Star. In this story, the Hyena surreptitiously contaminates some of the Lynx's food with her own sweat. The contamination results in the Lynx shedding her clothes and jewellery and reverting to her Lynx state by transforming into 'a beast of prey' (DBL |Xam notebook L.VIII.27: 8397 rev. (8 April–3 May 1879); Bleek & Lloyd 1911: 87 note 8397 rev.; Thorp 2015: 170). The Hyena then disguises herself as the Lynx and tricks the Dawn's Heart Star into having sexual relations with her (DBL |Xam notebook L.VIII.27: 8420 rev. (8 April–3 May 1879); Bleek & Lloyd 1911: 93 note 8420 rev.; Thorp 2015: 170).

Hyenas have the undesirable qualities—including dubious morality and greediness—attributed to beasts of prey (McGranaghan 2012: 444). They are also nocturnal, and 'could learn things that ordinary Bushmen could not' (DBL |Xam notebook L.V.8: 4616 rev.–4617 rev. (5–12 April + 25 April 1875)), both characteristics they share with |gi:ten (McGranaghan 2012: 445). The Lynx is transformed into 'a beast of prey' as a direct result of contamination with the Hyena's sweat. Ju|'hoan healers apply their sweat, which contains their n̥um, to patients to dislodge sickness (Marshall 1969: 371; Low 2008a: 88). In this case, the Hyena's n̥um (contained in her sweat) transfers her undesirable qualities to the Lynx, thus transforming the Lynx into a beast of prey. While the Lynx hides in the reeds in her transformed state, her sister brings the Lynx's child to be suckled by her mother. The Lynx says to her sister:

(8401) 'Thou shalt (?) must be quickly bringing (again) the child, while [au] I [n̥] still [!nauńko] know [ʔeńna] (ye); and, thou shalt bring the child tomorrow morning.' (8406) 'Thou shalt quickly bring (again) the child, while [au] I [n̥] still [!nauńko] recognise [ʔeńna] (ye); for, I (8407) [n̥] feel [tań] as if my memory would leave me (lit. as if my [n̥] thinking-strings [|khou̯ |khou̯gɛn] would [sse] fall down [|k'ũlk'ũ].'

(DBL |Xam notebook L.VIII.27: 8401, 8406–8407 (8 April–3 May 1879))

In the published version of this account, Lloyd (Bleek & Lloyd 1911: 87) translates the sentence quoted above from page 8401 of the notebook as: 'Thou must be quickly bringing the child, while I am still *conscious*; and, thou shalt bring the child tomorrow morning.' She also translates the sentence from page 8406 of the notebook as 'Thou must quickly bring the child (again), while I am still *conscious*; for (8407) I feel as if my thinking strings would fall down.' Thus she uses the word '*conscious*' rather than her original translations 'know (ye)' and 'recognise (ye)'. The published transcription therefore implies that the Lynx expects to *lose consciousness* when her thinking strings (|khou̯ |khou̯gɛn) fall down (|k'ũlk'ũ).

In a previous analysis of this account, I have pointed out that a dance (|kù) closely comparable to the healing (or curing) dances performed by Kalahari Bushmen was conducted specifically to deal with the tensions resulting from the socially

unacceptable sexual relationship between the Hyena and the Dawn's Heart Star (Thorp 2015: 172).

During the !kù, the Lynx's sister alerts the Dawn's Heart Star to Hyena's deception. The Dawn's Heart Star then accompanies his sister-in-law to tempt his wife out of her hiding place with goats. They catch the Lynx and rub chyme from the goat's stomach into her skin, rubbing off the hair which is characteristic of a 'beast of prey' (McGranaghan 2012: 444), thus returning the Lynx to her normal human state. Among Bantu-speaking people, cleansing with chyme symbolises the ancestors or 'shades'¹⁴ (Berglund 1976: 129) and chyme is known for its 'cooling'¹⁵ properties (Krige & Krige 1968: 68):

(8427) The Dawn's Heart caught hold of (his) wife, when the wife caught hold of the goat, while his younger sister-in-law [xe-dde-k"oe, also took hold of (his) wife (8428). All the people {altogether/at once (?)} took hold of her. Other people caught hold of goats; they cut open the goats, they cutting open took out the contents of the stomachs [||ǃ],¹⁶ they anointed [!xumm] !ko-g !nuintara with the (8429) the contents of the stomachs [||ǃ]. They rubbed off the hair* (from her skin).

*(8428 rev.) The hair with which she had become a lynx.

(DBL |Xam notebook L.VIII.27: 8427–8429 (8 April–3 May 1879))

This description of restraining and treating the Lynx with chyme is evocative of the actions of Ju|'hoan healers, who restrain and care for each other whilst in trance. It seems that, had the Lynx's thinking strings fallen down, she would have entered the state of consciousness that Lee (1967: 31–2) and Marshall (1969: 377–8) call half-death (but see Guenther 2020b: 48–9 for a different interpretation).

'HALF-DEATH' AND 'THE DEATH OF FULL KIA'

Lee (1967: 31–2) describes half-death (or Kwi!l, 'like dead') as 'a comatose state'. He says that in this state

the [Ju|'hoan] trancer is stretched out on the ground outside the dance circle. While the others continue dancing, some men work on the trancer. They rub his body with their hands and with their heads so that the body is kept warm and made to shine with sweat. The trance performer is rigid, arms stiff at the sides or extended. His body may tremble, and he moans and utters short shrieks.

Ju|'hoan healers are seen in this apparently comatose state in John Marshall's (1973) film, *N|um tchai: the ceremonial dance of the !Kung Bushmen*. While in this state, they make low, gasping, rumbling grunts (reminiscent of the sound of roaring lions), interspersed with wailing sounds and high pitched yelping sounds (reminiscent of the alarm calls of jackals). In the film, John Marshall refers to these sounds as 'formalised gurgles, grunts and shrieks'.

Contrary to Lee, Katz (1982: 99) declares: 'Nor do I find evidence that the Kung call this dying a "half-death". For the Kung it is simply dying.' However, Katz's description

of 'full kia' closely resembles the states that Lee (1967: 31–2) and Marshall (1969: 377) call 'half-death'. Katz (1982: 99–100) says:

When established healers experience this death, it may signify their entrance to a very deep, full kia.

Often a particular form of dying marks the passage from beginning to full kia. Dancers usually fall to the ground. They may crash down suddenly after running around wildly, or they may slip to the ground, their feet becoming like soft rubber. Lying on the ground, their body is sweaty and clammy. It usually twitches and trembles, sometimes in violent spasms. There seems to be much physical tension in the body, and sometimes it is as rigid as a board. At other times the body is limp, almost lifeless. Either the eyes are closed tightly or, if open, the eyeballs are rolled up into the head, only the whites showing.

While in beginning kia, the healers' soul or spirit remains in their body. As Kinachau says 'The soul is inside, not travelling around. It's there. It's small, but it's there.' During the death of full kia the soul leaves the healers' body through their head. The soul goes to encounter god and the spirits of the dead ancestors. It pleads for protection for the Kung back at the dance. The Kung say the healers are in great danger at this time. Their souls might wander away or be taken by spirits. Then they, too, would die and become a 'spirit of the dead.'

Analogously, Marshall (1969: 377) says:

In the final stage, which I assume to be the deepest stage of trance,¹⁷ a man falls into apparent unconsciousness. He may fall into this state suddenly and crash down in the midst of a frenzy, or he may slip down more gently; but instead of leaping up in a moment, as in the entry to the first stage of trance, he remains prone. As I tried to observe men in this state, I noted that their bodies felt sweaty and clammy to the touch. Some tremble; others are taut and rigid—some so rigid that they can be lifted by the backs of their necks and come up like boards lifted at one end. Their arms may stand out stiffly from their bodies or be clutched to them with clenched fists. Their eyeballs may be rolled back so that only the whites show, or their eyes may be squeezed tightly shut, their eyelids trembling. Some lie limp and still. This state of apparent unconsciousness, whether the man is rigid, trembling, or relaxed, is what the |Kung call 'half-death'. In it, they believe, the man's spirit goes out from his body through his head.

In these accounts of trance, and particularly in Lorna Marshall's description of 'half-death' or 'full kia' and in John Marshall's film, sound is a significant aspect of the healing experience. Marshall (1969: 370) says that during the process of drawing out sickness,

The medicine man, singing one of the medicine songs, touches the person, usually placing one hand on the person's back and one on his chest. In a moment or two his singing changes to the formalized sounds called *n||hara*, the indescribable sounds of the rite. They are the sounds that come from a human being in agony. They are given their formalized character by being consistently repeated, and

by having the suggestion of a rhythmic pattern and sometimes ever so slight a singing quality. A medicine man begins with rapid, grasping grunts—*huh, huh, huh, huh, huh* which turn into long, intense, high wails, falling to low, short gasps—*aaaaaaaaa-uh, aaaaaaaaaa-uh*. The gasps may trail out into a very rapid expulsion of little coughs—*uh, uh, uh, uh, uh, uh*. Or a man may make low, rumbling groans [my italics] which also end in coughs. In one frequently heard variation, the man emits high, quavering screams, over and over—*waaaaaaaaaaaa, waaaaaaaaaaaa, waaaaaaaaaaaa*. Gasps, grunts, wails, and screams climax in short, high-pitched yelping shrieks—*kai kai kai*—which the medicine man utters as he throws his arms up. He may rub his hands together as though brushing something off; he may shake his head. He may stand where he is, shrieking and throwing his arms up for a moment or two, or he may run around the circle or out into the darkness, making violent gestures of throwing something away.

Both Katz (1982: 100) and Marshall (1969: 377) say that the soul leaves the body when healers are in the apparently unconscious state, respectively known to them as ‘the death of full *kia*’ or ‘half-death’. Nicholas England (1968: 431–2; original parentheses) describes this state as ‘syncope’, noting that it indicates that the healer’s

soul has departed him, emerging by way of his head to undertake a trip [thulu—the migration of the soul] to meet ||Gauwa (some say ꞑꞑ”ao ꞑꞑa) in the sky [ꞑꞑa]. The god has let down a cord to assist in the soul’s ascent.

In |Xam accounts, words used to refer to the heart’s trajectory when ‘falling’ include !kóǎ (Bleek 1956: 436), which means ‘to go away from, travel away’ as well as ‘fall’, and !kũñ (Bleek 1956: 453), which has similar meanings, including ‘to go along, away, go backwards’ as well as ‘to fall’. These terms are probably intended to express the notion that the heart travels away from the body at death and during trance experiences comparable with those described by Naro and Ju!’hoan healers. The idiom that the heart fell down is also probably a respect or avoidance term (Marshall 1962: 227) for a trance-like state of consciousness. This interpretation not only explains the significance of enigmatic accounts about falling hearts, but also elucidates narratives about shooting/falling stars and the sounds that both hearts and stars produce while falling.

THE ‘SOUND’ OF HEARTS AND STARS

Both John Marshall’s and Lorna Marshall’s records of Ju!’hoan healing indicate that n||hara sounds are an integral part of the altered state of consciousness experienced by healers. Sound is also a key element in |Xam accounts that allude to !gi:ten’s hearts falling down (Hollmann 2004: 248 notes 3–4, 254 notes 2–4). Dia!kwāin says:

(5506) Our mothers used to say to us about it, that, a sorcerer’s [!gi:xa] heart’s [rĩ] sound [!khũ !khũ]¹⁸ is that w^h(**ich**) makes a noise like rain(?) [!gǎũ] taking him away [rĩ ttaĩ], while it (the heart) feels that it dying [rĩkũkən] goes away

[ttaí]. Therefore [Hě tíkən é], his [hă] heart [rǐ] falls down [!kaítən]¹⁹ (5507) into the water pit.

(DBL |Xam notebook L.V.19: 5506–5507 (11 November 1875))

Lloyd is unsure of the meaning of !gǎũ, which she translates as 'rain which pours down', having crossed out 'hail'. Dorothea Bleek (1956: 378) translates !gǎũ as 'to resound, make a noise like rain, rumble'. Dorothea Bleek's translation of !gǎũ as 'resound' and 'rumble' brings to mind the 'low, rumbling groans' of Ju|'hoan healers' n||hara sounds (Marshall 1969: 370).

In another context, Dialkwāin describes the !gi:xa's heart's sound as 'thundering about' (!kuérritən ttaí):

(5486) That is why our mothers used to say (5487) when a star fell [kǔ-khǔ]; 'A sorcerer [!gǐǎ] seemed to have died [rǐkǔkən] there. You see how his heart's [rǐ] brows sound [!khǔ-!khǔ] has fallen [é !k'úǐ], they (5488) go thundering [!kuérritən] about [ttaí].(')

(DBL |Xam notebook L.V.19: 5486–5488 (3 November 1875))

Lloyd deletes the translation of !khǔ-!khǔ as 'brows' and replaces it with 'sound' in this context. Dorothea Bleek (1956: 447) translates !kǔ!kǔ, !kǔ!kǔ and !khǔ !khǔ as 'brows, eyebrows', but also (1956: 430) translates !khǔ !khǔ as 'sound', referring to Lloyd's translation (DBL |Xam notebook L.V.19: 5506 quoted above). Dorothea Bleek seems to have been puzzled by the expression [ǐ !khǔ!khǔ (spelled rǐ !khǔ-!khǔ by Lloyd), which she translates as 'heart strings (?)' in her transcription of Dialkwāin's account (Bleek 1935: 29). It is possible that this word, spelled variously, does refer to both eyebrows and sound, because both of these meanings may be metaphors for the trance state (Lewis-Williams 2015: 124–5). Nai tells Katz about helping healers experiencing fear as they enter kia (trance). She says: 'His face is blank; his eyebrows might be slightly raised, and his eyes might close and open' (Katz 1982: 99). Ju|'hoan healers can be seen in this state, staring ahead and blinking with raised eyebrows and furrowed brows, during John Marshall's (1973) film, *N|um tchai: the ceremonial dance of the !Kung Bushmen*.

In |Xam narratives, both falling stars²⁰ and falling hearts have a noise or sound. Dialkwāin compares the trajectory of the heart as it falls down with that of a shooting star. This comparison leaves us in no doubt that at 'death', which may mean physical death or loss of consciousness during trance, the heart travels away for some distance rather than simply falling down. In this context, he uses the word !kuérritən, which Lloyd translates as 'the star ('s noise)':

(5731 rev.) Our mothers told me that a star [rǐkǔǎttən] is that which shoots [rǐǎ]; for, a star [rǐkǔǎttən] is used to be like resembles [||kǎ-||kǎǎ] our heart [rǐ]. × The star, At the time at which we die [kǔ kǎn], that at which when our heart [rǐ] does not breathe [ttú]²¹ that (time?) when it seemed that our heart [rǐ] it stood [!khǎ] upright, when we were alive [!kaũwǎ], we, when we die [kǔ kǎn], our heart [rǐ] does not stand [!khǎ] like that which it did, when we were alive [!kaũwǎ]; for

our heart [ɾĩ] has been like a thing which we push [kʰérĩ] (**5732 rev.**) making it fall [tʰátten]. Our heart [ɾĩ] when [||náu] it falls down [tʰátten !k'óá], a/the star [ɾkʷáttakɿ] also [||xúm] 'is like/resembles' [||ké-||kéyǎ] our heart [ɾĩ]. It (the star) [Hañ] when [||náu] our heart [ɾĩ] falls down [tʰátten !k'úi], it (the star) also [||xúm] falls down [tʰátten !k'úi].

×Therefore [Hě tíkɿn é], the star's (noise) [!kuérɿɿɿɿ]²² dying away [ɾkĩ ttaĩ], takes away our heart [ɾĩ] with it; while it (the star) feels [tʰá] that it is not used (?) to come out [ɾhin] (from a place) near [opururru]²³ at hand. For, it comes out [ɾhin] of the sky [!gwǎxǔ], which is not [yauki] near [!hínǎ].²⁴ Therefore, the star went (**5733 rev.**) shooting [ɾxǎ] on acc¹ of it; while it felt that it goes went to a place where it did not usually live. Therefore [Hě tíkɿn é], it shoots [ɾxǎ], on account of it.

(DBL |Xam notebook L.V.22: 5731 rev., 5732 rev., 5733 rev. (1 January 1876))

Dorothea Bleek (1956: 194) translates tʰátten as 'to fall, drop, make fall, used as down'. She translates !k'úi as 'to fall down, back, away' (Bleek 1956: 449), !k'óá as 'to go away from, travel away, fall' (Bleek 1956: 436) and ttaĩ as 'to walk, go, also used as away' (Bleek 1956: 127). The heart therefore falls down and also travels away, because the star's noise takes the heart with it.

Dia!kwāin further observes that a falling star makes a noise like a quiver/cannon (||khwaĩ).²⁵ He notes that it 'sounds like rain which ~~hails~~ pours down [!gǎũ] when ... it pours [!gǎũ]', possibly implying the sound of thunder intimated by Dorothea Bleek's (1956: 378) translation of !gǎũ as 'to resound, make a noise like rain, rumble'. Both similes thus refer to booming or rumbling sounds, which I have suggested—in the case of a !gi:xa's falling heart—probably allude to 'low, rumbling groans' similar to n||hara sounds made by Ju|'hoan healers in trance (Marshall 1969: 370). Dia!kwāin says:

(**5478**) Our mothers used to say, that when a star [ɾkʷáttɿn] falls [tʰátten !k'óá] from the sky [!gwǎxǔ] it goes into the waterpit [!haúru]. When [Hǎ ||náu] it [há] is in [é] the waterpit [!haúru], it [há] becomes [ddĩ kũ] sounding like [!xwǒñ !xwǒñ] a quiver [||khwaĩ], ~~when~~ as it enters the waterpit [!haúru]. (**5479**) She said, we heard it ~~when~~ it sounding like rain which ~~hails~~ pours down [!gǎũ], ~~when the~~ ~~hails~~ gets it pours [!gǎũ] into the waterpit [!haúru], when it [||kǒě-ssín]²⁶ ~~breaks~~ divides ~~cuts~~ into/side the waterpit [!haúru].

(DBL |Xam notebook L.V.19: 5478–5479 (November 1875))

Dia!kwāin explains the equivalence of sorcerers' hearts and falling stars in a note about a sorcerer's (!gi:xa's) heart approaching or falling down into a waterpit (DBL |Xam notebook L.V.19: 5506 rev., 5507 rev. (11 November 1875)). The note indicates that when a !gi:xa's heart (or soul) leaves his physical body (because he has entered a trance state or has possibly died), it is embodied within a star so that his heart can continue to 'move about' as it did when embodied within his physical body. I suggest that this equivalence expresses the experience of 'out-of-body travel' during trance. Dia!kwāin says:

(**5506**) his [há] heart [ɾĩ] falls down [!kaítɿn]²⁷ † (see verso)

(5506 rev.) † By D. H. (in November 1875) (Note to preceeding recto line 20) His [hã] heart [ɾĩ] falls. Comes out of from [ɾkĩ é] the [ɾhĩn] sky [!gwáxũ]; and becomes [||kho] a star [ɾkũáttɛn]. His [hã] heart [ɾĩn] feels that [tã ||kã ti é] he is [hã] no longer [yauki] alive [!kaũwa], therefore [hẽ tíkɛn é] his [hã kã] body [!kaũũkɛn] yonder [ɾkẽ] in which he was alive [!kaũwã] yonder [ɾkẽ] becomes [ddi] a star [ɾkũáttɛn] because he (it feels that he)²⁸ [õ hã tá ||kã ti é] was a sorcerer [!gíxã].
 († cont.) (5507 rev.) Therefore [hẽ tíkɛn é] his [há kã] sorcery [!gí ddi] that because a star [ɾkũáttɛn], that which used it (?) may make [hé ssẽ kĩ] to walk about [ttã] in his body [!kaũũkɛn é], in which when he was [há ssẽ] alive [!kaũwa].
 (DBL |Xam notebook L.V.19: 5506–5506 rev., 5507 rev. (11 November 1875))

Dorothea Bleek (1935: 24) published this note without indicating that it refers to the preceding notebook page (DBL |Xam notebook L.V.19: 5506, see above), which describes a !gi:xa's heart's sound as it approaches or 'falls down' into a waterpit. Instead, she inserted the sentence 'When [||nau] a sorcerer [!gi:xa] dies [!ku:ka]' at the beginning of the note. Thus Lewis-Williams et al. (2000: 129) associate falling stars with 'death', which can either mean physical death or entry into the spirit world as a shaman does. Lewis-Williams et al. also point out that Jul'hoan people had a similar belief. They observe that England (1968: 432) found that Jul'hoan people said 'that shooting stars are the vehicles for the return of medicine men's souls to earth' (Lewis-Williams et al. 2000: 129).

THREADS OF LIGHT AND THINKING STRINGS

Jul'hoan healers travel to the spirit world by climbing 'threads' or 'cords' (Marshall 1962: 240, 1969: 378; Bieseke 1980: 56, 61; Katz et al. 1997: 80–1, 108; Lewis-Williams et al. 2000: 129–30). They say that 'We climb these invisible threads to God's village to rescue the souls of the sick ones, and bring them back to our village' (Katz et al. 1997: 108). Some healers have more recently described these threads as 'threads of light' (Keeney 1999: 109; Lewis-Williams et al. 2000: 130). Lewis-Williams et al. (2000: 129–30) suggest that streaks of light caused by shooting stars may have inspired the Jul'hoan concept of threads of light.

My interpretation of |Xam accounts about sorcerers' hearts falling down and about stars falling down agrees with Lewis-Williams's association of falling stars with trance and out-of-body-travel. Furthermore, it confirms that |Xam people have comparable beliefs to those of Jul'hoan people, who say that the heart travels away from the body during 'the death of full kia' or 'half-death' and that shooting stars return medicine men's souls to earth.

The concept of the embodiment of the heart/soul within a star is a metaphor for the embodiment of thought/heart/soul within the cardiovascular system. This concept is captured in the |Xam name for the 'star' Jupiter, known as the 'Day's Heart'²⁹ (!gáũĩ ɾĩ) (Bleek 1875: 11; DBL |Xam notebook L.VIII.27: 8402 rev. (8 April–3 May 1879)). The Day's Heart Star has a daughter, the 'Dawn's-Heart-child', whom he calls 'my heart'. He swallows her, encapsulating 'my heart' within his body, and walks alone until she is grown up, when he spits her out.

Thus, if the metaphor ‘threads of light’ is indeed an allusion to shooting stars, it also alludes to the notion of the embodiment of thought or soul within the cardiovascular system. It is one of several metaphors and idioms, including thinking strings and ‘his heart fell down’, that refer to the complex of ideas underpinned by this concept of embodiment. Because these idioms all express the notion of thought/soul, it may be more appropriate to use ‘thinking strings’ rather than ‘threads of light’ as a label for thin red lines that are believed to express these metaphors in rock art. It may also be more informative to consider the potential of the concept of embodiment of thought/soul within the cardiovascular system in formulating interpretations of painted red lines within their specific contexts.

CONCLUSION

Previous research (Thorp 2018) has demonstrated the congruence of blood and thought in |Xam cosmology and has also determined that the equivalence of blood and thought expressed by the notion of thinking strings (#kǎu kǎúǵěñ) underpins their role in beliefs about the power and work of !gi:ten. |Xam !gi:ten use thinking strings to do sorcery (!ǵǐ), while Naro and Ju|’hoan healers’ hearts/souls/thoughts travel away from their bodies on cords/strings to enter the spirit world and to ask for assistance to heal the sick (Thorp 2018).

Here I establish that the |Xam notion of thought (ǵǐ) or thinking strings (#kǎu kǎúǵěñ) is equivalent to Naro and Ju|’hoan concepts of soul and heart. Naro ethnography situating ǵǐ (thought/soul) within the cardiovascular system explains the physiological equivalence of blood vessels and thinking strings in the |Xam worldview and the conceptual unity of soul/heart with thought and feelings in Naro, Ju|’hoan and |Xam worldviews.

Naro people believe that the heart contains the strongest concentration of ǵǐ. In this paper, I contend that Naro and Ju|’hoan beliefs about healers’ hearts/souls travelling away from their bodies during half-death or full kia are expressed by an idiom in |Xam narratives: !gi:ten’s hearts fall down. I conclude that, for the |Xam, both thinking strings (or throat arteries) and the heart are the agents of extracorporeal travel.

In the |Xam worldview, thinking strings are equated with spirits of the dead (|nu |nú -kǵen-!k’ǵ) (Thorp 2018: 85–6). Here I observe that, like the |Xam notion of thinking strings, the Ju|’hoan concept of the heart as a location of thought is intrinsically linked to spirits of the dead (||gauwasi), which are themselves transmuted from the heart and blood of the person who has died. Finally, I conclude that both Ju|’hoan and |Xam accounts express the notion that shooting stars embody the hearts/souls of !gi:ten or healers during extracorporeal travel or upon ‘death’.

Low (2015: 53) proposes that the stimulation of mind and body inherent in Ju|’hoan and Naro trance dances ignites ‘an overwhelming bodily response, half death’ which releases ‘a flow of associated emotions and thoughts’. It is likely that these emotions and thoughts are the essence of the notions of thinking strings and soul.

For Guenther (2020b: 125), the notion of soul is vague in 'San' spirituality. This may be because beliefs constituting the elements of this concept have not previously all been identified and integrated into a coherent compendium. Once this is done, a clearer understanding of soul within the worldview of Naro, Ju|'hoan and !Xam people emerges. Inner speech or thought situated within the cardiovascular system is the essence or soul of a person for all of these peoples.

NOTES

¹ In quotations from the Bleek and Lloyd notebooks (DBL), square brackets identify the original !Xam words or phrases that appear elsewhere on the same or nearby page, which I place immediately after the English translations. Round and curly brackets are as they appear in the original texts, except for round brackets around my own editorial insertions, including page numbers, which are bolded to distinguish them from original text. I retain deleted text because it illustrates ambiguities and difficulties inherent in the translation. Forward slashes are either as per the original text or added to denote a change in line that seems to suggest an alternative term.

² !Nanni was a !Kun-speaking youth. !Kun is a dialect of Ju (Dickens 1996: 162; Güldemann 2014: 40; Lionnet 2014: 176). He spoke a dialect of Ju spoken nowadays in northern Namibia along the border with Angola, approximately around Mpungu (Fig. 1).

³ The term Khoisan refers collectively to three distinct southern African language families: Kxa, Tuu and Khoe (or Khoe-Kwadi) (Güldemann 2014: 7, 12, 25; Jones 2019: 56). !Xam belongs to the !Ui branch of Tuu, !Kun belongs to the Ju branch of Kxa, and Naro belongs to the Kalahari Khoe branch of Khoe (Güldemann 2014: 27).

⁴ Guenther (pers. comm. 8 January 2024) suggests that this statement about blood turning food from the stomach and intestines into fat may be the link in the Kalahari San worldview between blood and healing, as fat is linked conceptually and physiologically to tso and |num (potency). Although we do not know exactly how blood brings about healing, it evidently has |num and this is an essential characteristic of healing substances. Foods with very strong |num include blood and honey (Marshall 1999: 216). Honey is associated with San shamans because of its |num (Lewis-Williams 2015: 69). Fat is an important food that shares an unusual property with honey in the San worldview, as they may be both eaten and drunk. According to Megan Bieseke (1993: 86), these two substances can act as conceptual mediators, unifying oppositions such as wet and dry and hot and cold. Fat has |num and is a medium into which San medicinal plants and other medicinal substances attributed with |num are mixed, so that they can be applied to patients' bodies or burnt to produce smoke containing |num that can be breathed in by patients (Marshall 1999: 56–7). According to Ju|'hoan beliefs, blood has |num because †Gao N!a puts |num into it, as well as into honey and also into Ju|'hoan medicine men (among other things) (Marshall 1969: 351). The emphasis placed on the role of blood and blood vessels in accounts of !Xam !gi:ten's healing work indicates that their blood was a medium that contained and carried |num (Hewitt 2008: 216–17; Thorp 2018: 89). This probably explains why the smell of a !gi:xa's blood is effective in protecting patients from harm (Thorp 2018: 89). According to Low (2008a: 309),

Sweat, 'dirtiness', urine, smell and blood, are holders of potency in a healing context. Massage, incisions, exposure to smoke and odour, wearing necklaces,

breathing, sucking, snorting and shaking ones hands into the air, are all ways healers move potency around.

Marshall (1999: 60) explains that Ju|'hoan healers transmit |num into patients to dislodge sickness so that it is easier to remove.

⁵ Katz (1982: 99), on the other hand, writes:

The dynamic that moves one from an experience of beginning kia to full kia is being able to 'die'. This dying should not be reduced to the western concept of physiological death or ego-death. Nor do I find evidence that the Kung call this dying a 'half-death'. For the Kung it is simply dying. This dying and attendant re-birth are the central expressions of transcendence in Kung healing.

⁶ In the *Dictionary*, Dorothea Bleek (1956: 652) states:

†ij, v. to think, n. thoughts, s. †i. NII [!Kun (|Xū or |Xūū)]. (LI.) †in †in. ... dzu †ij ti |kúa kwonna, dzu ti kā; dzu †ij ti kwonna, dzu ti bərro, ta ti †a^hí ... when a person's thoughts are not absent, the person is intelligent, (when) a person's thoughts [are] wanting, the person is stupid, is foolish. (Wil.). ['(Wil.)' refers to Wilhelm (1921–22).]

⁷ !Kwǎrrǎ-ǎn's name is curiously similar to the Ju|'hoan words that Marshall translates as follows: 'kwara n|, 'no sense' (Marshall 1969: 377–8). Her name possibly refers to her ability to enter trance, when her 'sense' or thoughts would leave her body.

⁸ Katz (1982: 315) defines kia (!kia) as an enhanced state of consciousness, with associated behaviours, which result from the activation of num and is a prerequisite for healing. The word is both a verb and a noun. In Katz et al. (1997: 202), !aia (!kia) is 'an enhanced state of consciousness that makes healing possible; to enter a healing trance.'

⁹ In L.V.22: 5732 rev. (DBL), !kúū is translated as 'falls down'; see the section 'The "sound" of hearts and stars'.

¹⁰ |Hán†kass'ō describes a 'fight' between †Kágára, who was 'a little bird', and !Haúnu, who was a 'rain's sorcerer' (!khoa ka !gíxa). !Gi:ten are known to transform themselves into little birds (DBL |Xam notebook L.V.9: 4701 rev. (12 April–14 May 1875)), so †Kágára is also likely to have been a !gi:xa:. While 'fighting', †Kágára and !Haúnu 'stealthily lightened [|k'áúwi]' at each other, but elsewhere !k'áúwi is translated as 'lead, conduct' (Bleek 1956: 416). This conducting action causes the victim to ||khábbe(t): translated in the text as 'motioned/waved/fended/turned', but the verb ||khabbe: is translated as 'to kick' in Bleek's dictionary (1956: 572). |Hán†kass'ō explains the meaning of ||khábbe(t) in a note on page 8461 rev. He says:

(8642) [|Haúnu] stealthily lightened [|k'áúwi] at his brother-in-law. His brother-in-law {~~motioned/waved/fended/turned~~} [||khábbe(t)] him quickly off*

***(8641 rev.)** (He) turns/fends off [||xarra] (motioning with his arm) his brother-in-law, {turning/fending} off [||xarra ||xarra] (it) is, when other people are fighting their fellows [hĩ ɾkágɛn] with their fists [!gwa ǀ]. Fending (or turning) off [||xarra ||xarra] is that which they are wont (continued on p. 8643 rev.)

(8643 rev.) wont they to wave off with their arm, while they fend off the other one's arm. He (†Kágára) {fended off/turned off} the other; lightning.

(DBL |Xam notebook L.VIII.30: 8641 rev., 8462, 8643 rev. (10 July–8 August 1879))

Lloyd clarifies |Hán†kass'ō's note in the published version of the story (Bleek & Lloyd 1911: 115; original parentheses and italics):

(He) fend off his brother-in-law (by motioning with his arm). Fending off (it) is, when other people are fighting their fellows with their fists. Fending off is that which they are wont to do, () they wave off with the arm, while they fend off the other one's arm. He (*#kágára*) fended off the other one's lightning.

I suggest that fighting their fellows with their fists (*!gwa ǀ*), 'leading or conducting' action indicated by the word *!k'aúwi*, and 'motioning off with his arm' as indicated by the word *||khábbe(t)* are all references to gestures similar to those of Jul'hoan healers while manipulating *ǀum*.

¹¹ This note in Cape Dutch can be translated as 'just like that he dies, but not completely dead, a little/somewhat dead' (Hollmann 2022: 416 note 5).

¹² According to Lebzelter and Neuser (1934: 89–90), Jul'hoan healers:

[P]ut themselves into an autohypnotic state by means of crowing, by producing sounds similar to those of ventriloquists, and by certain muscle contractions. By pressing together the gluteal musculature of the buttocks and at the same time holding the knee joints as far apart as possible and pressing the legs together at the ankles, they eventually produced a tonic trembling cramp of the entire musculature of the lower extremity, in which they reeled back and forth. It is possible for anyone to put himself into an autohypnotic state in this way, as this author also learned from the doctors. Soon the rolled-up eyes indicated that the doctors were in a state of trance.

¹³ Healing is accomplished by sniffing the patient's body to draw out whatever is causing harm. This process is called *sū* in the Bleek and Lloyd texts, which translates as 'snore' (Lewis-Williams 1981: 78).

¹⁴ Berglund (1976: 129) says:

Ethnographic records and evidence shows how important it is to wash the hands in the chyme of the slaughtered animal at ritual celebrations. 'It must be this thing (the chyme) of the animal because it alone washes so that the hands become like the shades (i.e. the chyme makes the hands white). They appear like shades when they come out of the washing in the chyme. This thing is better than soap because it gives the colour of the shades, the colour inside the hands.' People agree that it is the whiteness which results from washing in chyme that is symbolic and hence of the greatest value.

¹⁵ Krige & Krige (1968: 68) say:

In all these cases the active reagent in the medicines is some substance having 'cooling' properties, such as the river stones guarding the entrance to villages or built into shrines of ancestors, the succulent bulbs used in the rite for the removal of the 'dirt' (*khitshila*) of death, the great overhanging fig-trees shading shrines, the green undigested chyme from a sheep or goat's alimentary canal that figures prominently in ritual.

¹⁶ Contents of stomach, *||a: §* (Bleek 1956: 706).

¹⁷ Marshall (1969: 374), describing trance, says:

The men go into what appear to be three main stages of trance: a light beginning, a middle stage of violent action, and a final stage in which they lose consciousness. One stage does not necessarily follow upon another. Not all men go through all the stages every time they enter trance. They differ in the degree

of depth of trance that they habitually achieve, and they arrive at and pass through the stages at different times. While some are helpless others are still in command of themselves, and are able to dance and care for those in deeper trance. Some never enter the final stage of unconsciousness.

- ¹⁸ I suggest that !khũ !khũ (meaning ‘sound’) may derive from !k’ũk’ũ (meaning ‘fall down’), used when referring to thinking strings (DBL |Xam notebook L.VIII.27: 8407 (8 April–3 May 1879)).
- ¹⁹ Dorothea Bleek (1956: 404) translates !k’ái as: to approach, come near.
- ²⁰ Meteors are able to create sound waves. As they tear their way through the atmosphere, they can create a sonic boom in the same way a fast-moving aeroplane does (Gunn 2014).
- ²¹ Low (2008a: 221–2) says that three Ju!’hoansi he encountered describe that the heart breathes. Lebzelter says that !Kung people believe that breath is connected with the heart and some healers, when sucking out disease, suck out a patient’s breath (Lebzelter & Neuse 1934: 79, 90).
- ²² Translated as ‘thundering’ elsewhere (DBL |Xam notebook L.V.19: 5488).
- ²³ Dorothea Bleek (1956: 684) translates opurru as ‘to be near’.
- ²⁴ Dorothea Bleek (1956: 397) translates !hínya as ‘near’.
- ²⁵ In the narrative, ‘About New Maidens’, Dia!kwāin uses the same word (||khwaí), but in this case Lloyd translates it as ‘cannon’: a noise like (|x|kwāñ |x|kwāñ) the (report of) a cannon (||khwaí) (DBL |Xam notebook L.V.2: 3864 (8 January 1874–8 January 1875)).
- ²⁶ Dorothea Bleek (1956: 576) translates ||khoe, ||khóé as ‘to be in, among, between, under’.
- ²⁷ Dorothea Bleek (1956: 404) translates !k’ái as ‘to approach, come near’.
- ²⁸ Dorothea Bleek translates this phrase as ‘because it feels that he’ (Hollmann 2004: 240).
- ²⁹ Bleek (1875: 11) translates this name as Dawn’s Heart rather than Day’s Heart.

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