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AN ETHNOLINGUISTIC ANALYSIS OF FOLKZOOLOGY IN HEALTH AND ILLNESS CONSTRUCTIONS AMONG THE KASENA OF GHANA

Deborah Atobrah[1]
datobrah@ug.edu.gh

Albert Kanlisi Awedoba
akawedoba@ug.edu.gh
and
Benjamin Kobina Kwansa
bkkwansa@ug.edu.gh
University of Ghana, Legon

Abstract
Palpable associations can be established between language, environmental features, and community socio-cultural profiles that show mutual influences between language, environment, health beliefs, and health-seeking behaviour. Illness terms, descriptions and local diagnoses provide clues not only to perceptions but also to preventive and therapeutic practices. The importance of indigenous knowledge cannot be gainsaid, hence the call for its incorporation into the SDGs. This paper explores Kasena illnesses domains pertaining to lexemes and phrases about illnesses as clues and perceptions of causation, symptomatology, and implied treatment options in rural society that are still upheld in some twenty-first-century communities. Techniques used in the study included a free listing of names of illness followed by in-depth interviews on illness causation and treatment. The study reveals the continued relevance of indigenous and traditional knowledge shared by local youth, thmiddle-aged and by the elderly. While plant and vegetable species are central to indigenous Kasena approaches to healing and therapy, a surprisingly large number of Kasena illness terms encoding references to fauna suggests a high significance of fauna in illness diagnosis, causal theories, and therapeutic interventions.

Keywords: Fauna, Folkzoology, Illness Kasena, Kasem

Larayam kukuanu[2]
Taana yam debam nabinbia na ŋɔɔna to, dedaane tegabaŋa wonnu – teeini dedaane vara ba tento, dedaane nabiina wo-keiru dedaane te wadɛ tɔge daane mo; konto ŋwaane mo yeizura de jaweero seina de jaweero teibim tɔge daane to. Jaweero botarebia, naa jaweero yera beeiri tento, bere jaweero seina de te teibim. Konto to, dé ná zamse jaweero boterebia seina – ba kura, de ba wo-popɔre - ko wola se dé wae dé lɔra jaweero seina de kasembu na wó ke tei de tei se o teibi otete, o ná weela.
Tɔnɔ konto poponem baŋa ne, dé bwei bwei Kasena mo – kaana, baara, nawarena de nɔn-donno – banto na yei botarebia balo se ba ye jaweero botarebia Kasem taane wone to. Dé yei we twio and gaao dwi (herbs), dedaane vara de zuna dwoa (fauna), jege totoŋe jaweero teibim seeini, ye kuni dedɛ balo na zamse feila liri nyea to yeini ba pa se ko ye twio de gaao ba dwoa (herbs) mo ye faenn; se chega na ba chuli taane to, vara de zuna dwoa kasena tei ne de totoŋe daga jaweero teibim laŋa ne. Tɔnɔ konto bere konto.

1. Introduction

There is an anthropological dictum that saying and doing do not always synchronise; nevertheless, experience shows that utterances and actions can present mutual influences [3]. This view arguably accounts for the place of language and utterance in cultural and cognitive studies. What is said, how it is said, when and where, are critical in qualitative studies where linguistic clues, such as emphasis, tone, voice modulation, among others, have to be taken seriously. In the health sciences diagnosis, naming and describing remain critical as they provide clues to actual and perceived malady, therapy, and the outcomes of therapy. Nichter (1979) confirms this when he remarked that:

[1] All three authors are from the same institution.
[2] The Kasem translation was done by AK Awedoba, the second author. The orthography used follows the convention prescribed in the *Kasem Language Guide* of the Bureau of Ghana Languages. *Faenn* is a rendition of an ideophone in Kasem. It is not directly translatable into English.
[3] See Beattie's (2014) *Other Culture* for the dictum that what people say they do is not the same as what they may say they ought to do, which again differs from actual observed behaviour.

> … the language used to describe illness in a given cultural context yields valuable insights into indigenous notions of etiology. It also reveals man in relationship to his environment.'

Bamber makes a similar argument in his study of metaphor and illness classification in Thai medicine and health practice. He remarks, citing Kleinman's argument about illness classification, that in traditional Thai medicine, classification is buttressed by 'the seemingly strange use of metaphor in the naming of illnesses', Bamber (1987:178). Language has been established as a rich resource for studying societies and cultures, reflecting normative behaviours of society, as well as carrying, reinforcing, perpetuating and transmitting norms, values, beliefs and sanctions (Brempong, 1992; Awedoba, 2000; Agyekum 2002; Atobrah and Awedoba 2017). The significance of language in knowledge transmission and preservation is reiterated in the argument that '… the death of a language wipes out centuries of know-how in preserving ecosystems - leading to grave consequences for biodiversity' [4]. In Awedoba (2000), a study of aspects of Kasena society and culture through their proverbs and proverbial utterances, samples of common proverbs were analysed to show how literal meanings relate to actual experiences in the first place, which then become the basis ultimately for general extensions in figurative and non-literal applications in society. Kasena illness terms mostly relate to affected body parts, but we also find terms that are synonymous, homonymous, or homophonous with the terms by which some zoological species are known.

A surprisingly large number of the illness terms elicited in the Navrongo area of the Upper East Region of Ghana had coded in them references to animals and birds [5]. From a total of 163 Kasem illness terms solicited from 30 respondents, 20 or 12.4% of these were associated wholly or partially with animals. The most salient of these, with a salience score of 0.143, was *Weyuu zunga* (bird of the sky), a children's illness that induces convulsion [6]. A study of these suggests cultural perceptions about illnesses especially ideas about illness causation, symptoms, and treatment options not only in the past but also to some extent in current practices. By contrast, there was very little reference to flora – species of plants and vegetables. This may seem surprising, given the popular sobriquet 'herbal medicine' and the prevalent application of plant and vegetable species in the local society since time immemorial.

The illness terms that will be discussed were collected between September and November 2018, as part of investigations on an ethnolinguistic study of intergenerational constructions of health and ill-health among the Ga, Asante and Kasena. Among other things the main project aimed at gathering expressions, proverbs, coinages, euphemisms and terminologies to assist in establishing ways in which health and ill-health are conceptualized in the study communities. The interviews with respondents began with requests for free lists of illnesses that each respondent can recollect. Following immediately after the free lists, respondents were interviewed on cultural ideas about illness and wellness pertaining to their communities and their knowledge of specific illnesses.

[4] See https://www.enn.com/articles/1101-knowledge-fades-as-africa-languages-die.

[5] The people of the area are the Kasena-Nankana who speak (Kasem, a Grusi language and Nankane, an Oti-Volta language of the Mabia group); the lists are in Kasem. The Kasena are also in southern Burkina Faso.

[6] The salience score is generated by the Anthropac software and is based on the frequency of mention, and average order of an item in the listing. The most salient item was *paa* (no exact biomedical equivalent, but potentially malaria) mentioned by 21 or 70% of respondents with a salience score of 0.506.

Table 1: Zoological-based Illness Terms: Excerpt of Anthropac Free list Output

ITEM	FREQ	RESP PCT	AVG RANK	Smith's S	Translation
16 **Wɛyuu Zuŋa**	8	27	10.750	0.143	Convulsions
28 **Pɔnɔ**	6	20	13.500	0.087	Spinal deformity
36 **Kanfarema**	6	20	12.500	0.088	Sore feet
38 **Gavara yuu**	6	20	12.833	0.104	Migraine
42 **Feafeanaao**	5	17	15.600	0.055	Scalp scabies?
43 **Benagafea**	5	17	6.600	0.125	Yellow fever

Note: Freq: Frequency; Resp Pct: Percentage of respondents; Avg: Average; Smith's S= Smith's Salience score

The free listing procedure has been amply discussed in Bernard (1989, and 2006) and Weller and Romney (1988). It is a technique that has been employed alongside others (e.g., pile sorts, paired comparisons, multidimensional scaling) in the establishment of cultural domains. Its use in ethnobotany has been proven, as the work of Hopson and Stepp (2012) illustrates. In line with the conventional recommendation for conducting free listing, respondents were interviewed on one-on-one basis. Each person was asked to list at random as many illness terms as he or she could recall. The listing ends when the respondent had exhausted his or her list. This lasted for up to six minutes, depending on the individual. There were, all in all, sixty lists collected from a comparable number of respondents randomly selected but in such a way that males and females would be equally distributed to reflect the representation of youth (aged 20-30), middle-age (31-50) and the elderly (respondents aged 51 and above). The order in which individual respondents listed items was not interfered with, however, the lists needed to be cleaned to ensure that there was uniformity in spellings and the same items were not spelt differently [7]. For example, the raw data had *kongwaswaano* and *kongwaswanno* (a type of rash) as spellings for what is the same illness condition [8]. In such cases, one spelling was adopted, since Anthropac would otherwise have treated the two as different illnesses, with implications for the frequency, ranking and salience scores. Similarly, *Kagovara yuu* and *Gavara yuu* are variant pronunciations and spellings of the same condition and for that reason, only one form should be used. At the same time, *kalia* (literally 'monkey') and *kali-kwaga* (lit. monkey back) are not identical conditions although they both have the term for 'monkey' – *kalia* or its truncated form *kali-* included in the illness label. However, some terms which can be said to have two or more morphemes and seem to be based on compounding may be written differently as one word, or as two separate words, or with a hyphen inserted between the components. Issues like these necessitate data cleaning prior to input into Anthropac.

2. Preliminary Analysis of the Data

Illness terms discovered via free listing reveal items that are classifiable into *ad hoc* categories, for example, neologisms derived from phonologization of a foreign term introduced by health workers; some of such terms found in the lists received, not surprisingly, only one mention—a confirmation that they fall outside the Kasena illness domain. This applies to illness conditions previously unknown to the local people. However, there are those examples where a local term exists alright, but nevertheless, the equivalent introduced by health workers has gained ground and popularity and

[7] The two researchers who wrote down the lists had degrees in the teaching of the Kasem language, but they differed in their spellings of some terms; this is a function of a lack of orthographical standardisation, despite efforts to standardize the orthography.

[8] Some of the respondents were literate although many were illiterate. The differences are due to slight differences in dialects. Both 'kongwaswanno' and 'kongwaswaano' are dialectal variants dependent on the respondent's dialect.

become a synonym [9]. Some terms that educated people introduced may be classified as neologisms because they lack any etymology rooted in Kasem. Within this group are terms like '*Kwaleera*' for 'Cholera' (known locally as *nicheɔ* – literally, 'bitter mouth'), *Setoroke* for 'Stroke' - myocardial infarction (a condition which seemed to have been unknown, until recently), *Asoma* for 'Asthma', and *Eesi* for HIV-AIDS, also known as *Agotee* (I-will-kill-at all costs). Diabetes mellitus was unknown, and no local term exists for it; however, because biomedical health personnel associated the disease with blood sugar/glucose and insulin deficiencies, it became known locally as *Sikili Jaweo* (literally, 'Sugar illness'). Tetanus, also unknown as such, becomes *Titanwose* in the lists [10]. Body parts terms constitute an *ad hoc* category. These include illnesses that refer to a part of the human body as the locale of the malady, such as the head (*yuu*), the stomach (*wo*), the leg or part thereof (*naga*), mouth (*ni*), eye (*yi*), neck (*ba*), etc. Body fluids such as the blood (*jana*), faeces (*beinnu*), breast milk (*yela*), urine (*fea*), saliva (*lileeiru*), pus (*mɔra*), etc. would also belong to a category of illnesses when used with an epithet or qualifier.

Some of the illness terms collected through free lists, which are related in some way to fauna and/or incorporate a lexeme that refers to some item of fauna include the following:

Avian creatures:

Weyuu zunga – literally 'sky bird' – form of infant convulsions.
Chworo tekeiri – literally chicken thigh.
Kongwaswanna – big bird found in the wilderness (one lexeme).

Reptilian creatures:

Balei sanga – literally lizard ribs.
De (Python).

Amphibia:

Mantoresiu – literally toad breath.

Domesticated livestock:

Benafea – literally donkey urine;
feafea naao – literally feafea cow [11];
Kukuri yum – literally dog head or dog headache.

Wild livestock:

Ganaao takeiri – literally buffalo thigh;
kalia (as in kalia jaweo – literally monkey illness) and in kali-kwaga – lit. back of the monkey;
pɔnɔ – name for a tiny antelope;
chilachiu – species of wild canine;
gavara yuu /kagovara yum – literally wild beasts' head;
wiiru ba – literally hyena neck.

Vermin:

Kamfarema [Kamfara] – tiny brownish worms found mostly at the height of the wet season;
Kanzwɛ - Worm; Fish:
Ywon-kua – literally fishbone.

[9] A local term is often not equivalent in all respect to its perceived biomedical equivalent. While this may be so, some illiterate Kasena find it status-enhancing to opt for English idioms in lieu of the local expression.

[10] The concept of 'recent' cannot be pinned to any particular timeframe. The era of modern biomedicine in the Kasena communities can be dated to about the time of the establishment of a hospital in Navrongo (the War Memorial Hospital) at the end of World War II. As would be expected, it had some impact on communities close the Navrongo town, but that impact was not immediate, and it took some time to make the hospital's effect felt in more rural communities lying a few kilometers outside the town. A Health Research Centre was established in the vicinity of the hospital in 1988, initially as a site to study the impact of Vitamin A Supplementation on child survival.

[11] Literally, it refers to a cow with patchy skin resulting perhaps from loss of hair or fur.

3. Discussion of Fauna Illness Terms

As the above lists show, fauna-based illness terms take a couple of structural shapes. There are those that are uni-lexemic or comprise a single lexeme or word, namely the term for a specified species of fauna. Examples include *kanzwɛ* - 'worm'; *kamfarima* – species of brown worm; *pɔnɔ* - a species of antelope; *kongwaswanno* – a big bird found in the wilderness far from settlements; *chilachiu* – species of wild canine; [12] and *de* – python (or *de jaweo*) – 'python'. These lexical forms are perforce homophonous as they usually refer to some living species of fauna and it is only in health contexts that they refer to illnesses. There are a few items incorporating fauna terms which are compound constructions in which the initial noun has been prefixed to the following item, both of which are associated. Structurally, *Mantɔresiu [13]* is a combination of *Mantɔrɔ* - 'toad' + *siu* – 'breath'; *kalikwaga* (*kalia* 'monkey' + *kwaga* - 'back' or 'rib'); *benafea*: *benaga* – 'donkey' + *fea* – urine; and *balei-saŋa [14]* (*baleiga* – 'lizard' + *saŋa* – 'side/ribs'). Other examples include *gavara* 'wild beast' + *yum* 'heads': literally 'wild beasts' heads'; *ganaao* + *chwei*: literally 'buffalo thigh'; *chworo* + *chwei*: literally, 'hen thigh'; and *weyuu* + *zuŋa* literally 'sky bird'.

While as many as 20 fauna-based illness terms have been found in one set of free lists, as indicated above, very few illness terms have been found that derive from or are based on terms for plant and vegetable species. This is surprising given that herbal resources feature more prominently in the treatment of Kasena illness conditions than do fauna species. So far, the only plant or vegetable item in the free lists is *kanankula* the term for mumps. Ordinarily, *kanankula* is the fruit of detarium senegalensis, a tree that grows in the northern savannahs. As an illness term, *kanankula* does not stand alone but is juxtaposed with *Kayana* – a label that designates the Kasem-speaking people of the Kayaa chiefdom in southern Burkina Faso. The tree in question is common in the savannah woodlands of the Upper East. The fruit (*kanankula*) is slightly smaller than a chicken egg and each contains a nut encased in a moderately sweet edible pulp. The *kanankula* imagery is transparent, as the sufferer's swollen parotid glands suggest a *kanankula* fruit stuck in the mouth. In addition to this, there is a term in the list which contains *gaa* (grass); it compounds with *kalia* 'monkey' to yield *kali-gaa* (monkey grass), an illness term.

The prevalence of fauna over vegetable terms in the construction of illness terms may reside in the issue of anthropomorphism; animateness and agency can more easily be associated with fauna than with flora. It is the same reason which accounts for the preponderance of animals in Kasena folktales, where these serve as human surrogates playing human roles and interacting in anthropomorphic ways with themselves and *pare passu* with humans. Nevertheless, some of the localised Kasena deities and spirits are associated with large trees like the baobab, tamarind, and the kapok but the free spirits either dwell in animals or are known to assume occasionally human or animal guises to trick and sanction the unwary [15]. Traditionally, hunters were wary of killing large mammals like lions, buffalo, hyenas and elephants because of the ritual consequences (see Awedoba 2003). Slaughtering them imposed homicidal ritual demands on the hunter who could suffer from mental ill-health. The therapy involves setting up a *voro* - soothsaying agent of the transgressed deity. The archetypal case illustrating the man-animal complex is the concept of *giru* – a ware-cat that snatches people's souls: the handiwork of a witch. Indeed, witches are credited with the power to transform themselves into beasts and avian creatures to conduct nocturnal escapades.

[12] Not to be confused with *chilachiu* - a bird of prey [listed in the *Kassem lexique pro* as 'bateleur des savanne'].

[13] Buli spoken in Sandema and neighbouring districts has a comparable term - *buntorevoosum* with similar meaning and phonological composition. It stands for wheezing or noisy breathing: Information based on field investigation by Awedoba in 1995.

[14] The Dagare equivalents are *bandanya* and *talerinya*, terms for chest indrawing: Information based on field investigation by Awedoba in 1993.

[15] Kasena credit certain trees with divine powers enabling them to transform into humans to prosecute pseudo-human objectives unnoticed in society.

In this respect, it will be recalled that some illnesses are assigned anthropomorphic attributes such as hearing, seeing, feeling, and even being equipped with speech attributes [16]. This is abundantly reflected in idiomatic expressions relating to illness:

Jaweo ja .. Illness seizes [a person]
Paa mage .. Malarial illness beats/ hits [a person]
Jaweo lɔgesa Illness hops [from person to person]
Wo-duru Thing that runs (illness with no specific location in the body).
Wo-veilo Thing that walks (illness that seems to shift location in the affected person).

In the case of *wo-veilo*, a respondent explained that the condition seems to change location – now on your back, now on your arm, leg, etc., hence the term. He maintained that it has to do with the blood and could be caused by bad dietary habits – especially drinking unfermented millet beer and that it could lead to loss of feeling in the arms and legs: he suggested stroke as the biomedical equivalent for it.

Some parts of the body, especially the limbs are seen to have the capacity to act animatedly and independently. For example, arm or leg pain is expressed as the hand or leg 'not agreeing': *Jeŋa ba sea* 'the hand does not agree' and *Naga ba sea* 'the leg does not agree'.[17] Such statements are metaphoric expressions in which illness has agency and acts like an animate being. The point is further illustrated by the illness term *kagovara yum* a type of headache resembling migraine; the term translates literally, as explained above, as 'wild beasts' heads'' It is perceived to have a diurnal periodicity in its incidence that coincides with the grazing behaviour of wild herbivores. Thus, it occurs in late mornings (when herbivores graze), but it abates in the afternoon when the sun is hottest and wild animals must shelter in the shade. The headache is said to return in the late afternoon (as herbivores return to pasture) when the heat subsides [18] Thus, illness symptoms and animal/animate behaviour are compared and analogised. For Mitman (2005), it would seem only recent that '… health emerged as both a medical and environmental concern' in the West, but for Kasena, it has always been so; if anything at all, it is only in recent decades that a separation between the denizens of the environment – humans and non-humans, spirits and non-spirits, fauna and flora, has emerged.

It is to be expected that the community's critical observation of fauna behaviours would play a role in the derivation of illness names, and it does. The mechanism and strategies of illness term coinage utilise perceived symptoms of specific illnesses, and the comparison with animal behaviours seems understandable. Not only do illnesses bear uncanny resemblances to fauna, Kasena conceptions, some species of fauna by their behaviour are perceived to emit clues regarding human illness and wellness. A typical example is chameleon behaviours. Though we have not come across any illness term that relates to the chameleon, nevertheless the behaviour of this reptile forebodes evil or benevolence. If it walks towards a person on the footpath this is said to signal impending death of a close relative; if it crosses a person's path, news about the death of an acquaintance (*lu-gaara*) is to be expected. However, if it should lead the way as a person walks on a path then good fortune is in store. The hooting of the night owl signifies impending death.

[16] The anthropomorphism associated with illnesses is illustrated by the belief that at the height of the rainy season a broom left in the compound can disclose the whereabouts of inmates to any roving illness that visits in the night, thereby endangering occupants of the compound. Likewise, just as livestock can be driven off from crops by noise, a community rids itself of the potential incidence of infant diarrhoeal disease at harvest time when mothers publicly hoot at the disease in what is called *kanchala yeerim*. See Boni (2008) for an account of the *Memome* rites of the Akans, which are comparable.

[17] The question of disagreement here may have to do with perceived deviation from the normal state or function of those body parts. 'Disagreement' of a body part is perceived to result from injury, pain or temporary debilitation or reduced functionality. By contrast, a part of the body or a limb is not represented as 'agreeing' or being in agreement.

[18] Diurnal temperatures change with the seasons. In late March, afternoon temperatures can exceed 44^0C and although in late December-January the mercury can plunge as low as 15^0C it quickly rises to the 30s by noon.

Fauna bodies and human bodies are seen to be comparable. Just as human ill-health relates to the condition of some of the human body parts – the limbs, skin texture and colour, body weight, agility and mobility, etc., so also with fauna and fauna body parts, which can also be affected by disease and injury, and are amenable to physical and non-physical/spiritual management for benevolent or malevolent outcomes. The relationship between animals and humans can be so close that one may sometimes be substituted for the other. Among bonesetters, a person's broken limb may be treated by using a fowl as a proxy and administering treatment on the fowl limb. Thus, it goes further to say that fauna has advantages over flora in the symbolisation of wellness and illness [19].

The above comments do not, of course, address fully the question of the kinds of logic that apply in the coinage of illness terms based on fauna. Just as in the case of Kasem noun classifications where a variety of factors come into play, the same can be said to apply to the naming of illnesses. However, that there is a pattern and basis for the prediction cannot be denied, just as we cannot deny that patterns emerge that account for classifying most nouns in Kasem. For example, nouns designating humans belong in the wom~bam gender/class, augmentatives in the kom~tem gender/class, domesticates in the kom~dem gender/class, abstractions in the dem~yam gender/class and diminutives in the kam~sem gender/class, as Awedoba (2007) shows [20]. In fact, come to think of it, the term for illness – *jaweo~jaweero* belongs in the augmentative gender/class viz. kom~tem. Interestingly, the generic term for 'fauna' in Kasem – *varem~vara* belongs in the human gender/class (wom~bam). Fauna illness terms such as *wɛyuu zuŋa* (lit. sky bird), *kalia* (monkey), *kalikwaga* (monkey back), *baleisaŋa* (side of lizard), *ywonkua* (fishbone), *benafea* (donkey urine) are classifiable in the kam~sem gender (arguably the diminutive gender) [21] in which things that are deficient in or suffer negation of some desirable attributes are classified – no illness term is found in the human class, despite the anthropomorphism of illnesses. By contrast, *kongwaswanno* (avian species), *pɔnɔ* and *chilachiu* (animals), *mantoresiu* (toad breath), *didwonkwogo* (spider), etc. belong in the kom~tem gender/class, where the generic term for illness – *jaweo* belongs. However, *de* (python), *kanfarema/kanvarema*, (red worms), *kukura nagwoli* (dog's ankle) belong in the dem~yam gender/class of abstracts and non-sinister diminutives. In sum, there is no evidence that the nominal classifications of fauna illness terms exhibit a semantic pattern based on the coding of subtle meanings [22]. The classifications in these latter cases seem to be influenced more by the iconic shapes or canonical forms that do not refer to illnesses, and also by the phonetic ending of the word rather than by the cultural perception of the illness referred to by the term. Thus, for these items the basis of gender classification lies more in word morphology and phonology than in semantics. In sum, both transparent and not so translucent criteria are applicable in both illness term coinage and nominal classifications.

While for a non-literate language community no extant clues enable the researcher to determine the processes of traditional terminology coinages, since term-authorship is anonymous, the way newly borrowed terms are treated morphological provides a clue. In this respect, we could inspect the route by which new illness terms are arrived at. A productive case is HIV-AIDS terminology. Until 1986, HIV seemed unknown in the Kasem-speaking areas south of the Burkina Faso border [23]. When the disease began to be noticed, thanks to cross-border migration to and from the big city of

[19] Flora too can symbolize illness and wellness. In one riddle, the question is posed: 'why does the riverside reed sway', to which the answer is: 'why does the soothsayer's child die'; the swaying reed is compared to death. Also, consumption of certain flora species causes illness or brings wellness.
[20] Noun class and noun gender are terms used interchangeably, although Awedoba (1979) opted for gender in place of the term class applied in Callow (1965).
[21] On comparison, diminutive and sinister items belong there.
[22] The language lends itself to subtlety of expression by juggling the classification of items. For example, *sworo* – slimy broth, belongs in the augmentative class, but when a speaker decides to change the class to the kam-sem class the word acquires a slightly different meaning and denotes more desirable broth that is better tasting.
[23] The first HIV case in Ghana is believed to have been diagnosed in 1986 (see for instance Kwansa 2013; and Tuandike 2018).

Ouagadougou (a journey of about 178 kms), attempts were made to find a designation. Firstly, its symptoms were assimilated to those of *bayapwona*, a local illness, and it was known as '*bayapwona*', a curable illness for which the traditional morticians (the *bayɛ*) had a cure. Like HIV-AIDS, the perceived symptoms of *bayapwona* include weight loss and change of skin tone; it is the fatal condition perceived to result from being 'touched' by a zombie (*kwogo*) [24]. When it became known that HIV was not the same as *bayapwona*, the search for a better term led to its designation as 'nana' (the numeral for 8), simply because this is the Kasem translation equivalent for the numeral eight. AIDS sounded like 'eight' [eɪt] to illiterate Kasena or those with rudimentary primary school education. At the third stage, when the seriousness of the condition was accepted, the new term became *a-gotee* (I-shall-kill at-all-costs). Additionally, it counts as one of the women's diseases – *kaanajaweeo* because it is understood to be transmitted via sexual intercourse [25]. So, even without the benefit of historical documentation, it can be argued that illness term coinage goes through a dynamic process of change and revision over time in a community which was uncentralised and where standardisation took time.

In the case of HIV-AIDS, several processes have taken place towards the evolution of the Kasena term or terms for it. These include using resemblance with the familiar (based on symptoms), translation (substituting a Kasem word for an English concept), phonologization (pronouncing a foreign word like a local Kasem word), perceived severity, incidence, or perceived source, or causes, among others. Similar processes, and more, can be said to inform the terming of Kasena illnesses and diseases. Botanical and zoological species feature in the naming processes because of resemblances, perceived causation, prominence in a segment of the population, traditional curative and preventive practices, and others. Below we examine specific cases.

4. Implications of Fauna in Kasem illness terminology

Golden and Jean Comarrof (2015) were able to conclude from a study of Madagascar that local people there can be credited with '... a sophisticated traditional etiological knowledge, based in nuanced understandings of ecology and epidemiology, which likely protects local people from zoonotic disease, allergies, and toxins.' The same could be said of the Kasena, although zoonotic diseases are not necessarily diseases that have Kasena fauna words or labels.

Until as recently as the 1970s, Kasena society was predominantly rural. The indigenes lived in scattered compounds in clan-settlements, and that was true for even Navrongo, the biggest and most cosmopolitan chiefdom. Until recently, the people practised mixed agriculture centred on the cultivation of grain and legume on lands surrounding their homesteads. They kept livestock and poultry and were perforce specialists in folk zoology and animal health. This zoological knowledge was obtained from participant observation beginning from childhood. Boys and girls at an early age herded goats and sheep and, later cattle, as they grew older. Although some people cultivated crops like groundnuts in the surrounding bushlands, traditionally, most Kasena supplemented their dietary needs by hunting and collecting wild resources from the uncultivated bushlands. While they hunted and fished, they did so cautiously in the belief that the physical environment and everything therein was spiritually alive, as Awedoba (2003) has argued. Thus, it is to be expected that awareness and sensitivity and a keen observation of the human and physical environment would come into play in their naming and labelling of illnesses and diseases.

[24] The *kwogo* is believed to be the spirit of a dead witch which lives for a short period and is protected and used by evil people - its kin, to harm their enemies. It is visible only to witches. It can, however, be trapped by powerful medicine men and killed.
[25] The term segments into *kaana* (women) and *jaweeo* (disease/illness).

One of the livestock kept is the donkey, and by its observation, a term was found for jaundice, namely, *Benaga fea* – donkey urine. This could be because urine from a jaundice-infected person seems yellowish or brownish in colour [26].

Migraine-like headache is *Gavara /kagovara yuu* 'wild animals' headache because its incidence seems to be associated with the movement of the wild animals, as explained above. Although no information is currently available on what causes this headache, a master of the hunt, interviewed in the 1990s claimed he had the power to treat sufferers of *gavara yuu*, see Awedoba (2003) [27]. Related to it is *Yudeo* – etymology 'head that drops'. According to one informant, this headache comes about occasionally. It is said to be very worrying for the sufferer and induces giddiness. An informant did not however think this is the same as *Gavara yuu*, as *yudeo* can happen in the morning or evening or any time of day, unlike *gavara yuu*.

Rabies is known as *Kukuri yum*: dogs' head; it is understood to be caused by the bite of a rabid dog. Also related to the dog is *Kukura nagwoli* (dog's ankle). It is a joint condition that centres on the knee and femur; it refers to the stiffness of the joints. According to an informant, it affects the arm joint too. The affected joint becomes stiff and painful. The term is a simile – comparing the shape of the arm to the knee of the dog between the hock and the metatarsus. Outside the domain of illness, the expression occurs in the phrase '…*di kukura nagwoli*' – literally 'to eat dog's ankle', which denotes a capacity to stand on one's feet for long periods. Metaphorically, 'eating' here refers to the acquisition of ritual powers that enable a person to remain on his or her feet for prolonged periods [28].

The illness term *Baleiga sanga* – 'the side/ribs of a lizard' may possibly refer to chest in-drawing, one of the symptoms of pneumonia in children. The imagery derives from the panting of a lizard; a related term is *Baleisiu*: lizard breathing. A lizard seems to pant as its breathing appears to be hard, almost as though it were out of breath after a strenuous exercise. It refers to one of the acute respiratory conditions that can best be described as rapid breathing. It is not clear if the issue has anything to do with asthma or bronchitis.

Another related term is *Mantorsiu* 'toad breathing'. The condition may relate to wheezing or 'noisy breathing'. One respondent maintains that the term derives from the way the toad breathes and that '… even if you were to kill and dissect a toad you would observe its heart still beats.' It is remarked that the affected person coughs (*o-fe o kwea, ye o yaa ba lage kukweru* - even when the cough does not come spontaneously), his/her nose runs, and water issues from the eyes. One perceived cause is exposure to cold weather (*waaro*). Treatment suggested involves the use of toad body parts; it was explained that a toad would be killed, and its lungs extracted and baked over a fire made with grass from the roof of a hut and boiling parts of the acacia albida plant and mixing this with shea butter. The chest of the child would then be exposed to the smoke and the herbal residue would be used to smear the affected area.

Chworo chwei/*takeiri*, literally 'chicken thigh', is an illness condition that affects the human thigh. The affected thigh is said to be painful; it is not twisted but maintains its usual shape, yet it pains. Treatment involves exposing the affected thigh to smoke made from burning the thigh bone of a dead chicken. There is supposed to be a specialist for this, and he or she would have to be approached with the requisite fees in exchange for a cure [29].

Another thigh condition goes by the term *Ganaao takeiri*: literally, 'buffalo thigh'. This also affects the thigh but it is far more serious, with the possibility of developing into paralysis [30]. An informant identified it as a condition that defies hospital or biomedical treatment [31].

[26] Lager beer is jokingly referred to as *benaga fea*, 'donkey urine' because of the colour.
[27] The 'Master of the hunt' (*Peparatu*) conducts the communal annual hunt, a ritual requirement, which is more for community purification than a quest for game.
[28] It is uncertain whether the preparation of these medicines entails use of dog thigh bone.
[29] Settlement of the correct fees may be a prerequisite for satisfactory cure in the case of some ailments.
[30] An informant said he knew a healer in a village located about seven kilometres northwest of Navrongo.
[31] An informant identified a lineage in northwest Navrongo where the condition could be treated.

Kasena identifies a type of body rash as *Kongwasanno,* the name by which a certain local bird is known [32]. One respondent admitted to having the treatment for this condition. He was invited to discuss the condition and he went on to describe *kongwao* as a species of bird of the crane family found in the wilderness which frequents water pools. It was compared to the *chilachiu* bird and was said to make a loud sound [kʊŋwaaʊ] from which it took its name. There is an expression translatable as '… making a noise as loud as that of *kongwao'*. It is not clear if the bird has rough and bristly feathers to justify its name. In the case of the disease known by the term *kongwaswanno,* the affected person itches all over the body and has to scratch the affected parts to soothe the itch; it was said that affected people are compelled to use broken pottery to scratch the whole body. Skin coloration changes as a result; the skin darkens. The cause of the condition was unclear to respondents. Respondents said it begins with itching and as the affected person scratches it worsens and the itch can be so bad that the scratching ulcerates the body. It was said to be a bad disease [33].

The *Weyuu zunga* disease, lit, 'bird of the sky', is known to kill babies. When it 'hits' [*mage*] a child, that child faints and grows stiff. The mother should step aside and allow a male to carry the child and to send it straight to the compound of the healer. The belief is that a certain bird causes this illness and that it happens when the bird flies over the child. Respondents said that for this reason it is not advisable for mothers to expose tender babies at a night. On further probe, it turns out that the bird in question is a species of owl known in Kasem as *kunkwor-basia* [34]. It has round eyes and talons, and although these are not too long, they can pierce mammalian skin.

Ywon-kua (fishbone) is a disease of the wrists. It causes pain in the wrists, making them painful, such that those suffering from it '… cannot lift the hand to do anything'. The condition is treated by using a bone of the *ninigri* (a local species of eel) fish. The bone of an eel caught fresh is strung with a rope/string and attached to the affected wrist and this cures the condition or gives relief from the pain. The fish should not have been roasted.

Pono, a type of small bushbuck of the tragelaphus scriptus species, is believed to be ritually responsible for an illness condition manifested by a 'broken hump' resulting in a hunchback. The illness can also manifest in the chest area of the affected person. It is said that *pono* 'hits its victim' - breaks the body so to speak. It is widely believed that the killer of this buck and his kin will develop hunchbacks unless ritual precautions are taken. To prevent this tragedy, the necessary rites must be performed and the meat of the buck should be shared with everyone connected by blood to the killer. There is a belief by some informants that where the wounded animal drops dead there is bound to be a medicinal root and that the killer must dig that spot until he discovers the herbs and extracts them for use in medicinal preparations that would stem the disease. One respondent claimed to have killed more than ten of these bucks, and in each case, herbs were discovered upon digging up the location where the animal died. Respondents were aware of people who specialize in treating this problem thereby preventing its spread.

Kali kwaga, literally monkey back (skin), affects the jaws, and derives its name from the treatment regime. It is comparable to mumps, except that it affects only one side of the face - i.e., one jaw and cheek, which then become swollen. It is described as inducing a burning sensation and it feels like needle pricks and pepper in raw flesh. Treatment employs the hide of a monkey, which is burnt, and the residue smeared over the affected parts. A piece of the hide may be plastered to the face of the affected.

The *Chilachiu* illness derives its name from an animal which is reddish or brownish in colour and about the size of a dog. Respondents maintained that this animal, once present in the local bush lands, can now be located only on the Burkina Faso side

[32] The term segments into 'kongwao' [kʊŋwaʊ], which as a stand-alone, can refer to the avian species in question, and *swanno* [swannʊ] (husk that irritate the skin on contact). The study did not unearth any evidence that the bird in question in anyway causes the illness condition that bears the bird's name.

[33] It is tempting to associate the condition with rashes resulting from onchocercal skin diseases - chronic/acute papular onchodermatitis, lichenified onchodermatitis, etc., especially as the area is endemic for onchocerciasis.

[34] The Kasem term for owl is *kunkworo*.

of the border [35]. As pointed out above, in the *Kassem Lexique Pro* (Kasem-French Dictionary) the entry for the term also applies to a type of bird of prey. As the *chilachiu* seems to be forever in stupor, the illness bearing the term is one that resembles sleeping sickness '… the affected will be drowsy at work, even when walking or driving', a respondent remarked. The perceived causes of the ailment are, however, mystical. It affects anyone who dared to collect apparently unclaimed fuelwood in the bush lands, since such wood could have been deposited by the *chilachiu*, an animal notorious for gathering deadwood. The ailment could also result from 'stealing' things left unattended in the wilderness. The ailment, it is believed, responds to treatment which can be found from those who specialize in *teeni wonnu* [36].

Wiiru ba (hyena's neck) was explained as a type of cyst or lump (*kulu*) on the neck. It affects the neck in such a way that the neck becomes stiff and the affected has difficulty turning the neck. [37] It is also known by the term *Chuchur-kwaale*. Etymologically this comprises *chuchuru* – 'ogre', and *kwaale* – the hump, such as is found on the neck in certain species of bovine such as the Zebu and White Fulani cow. In Kasena folklore, the ogre (*chuchuru*) is an unusual being in the wild - half spirit and half human, [38] however, the illness has nothing to do with ogres; term alludes to the mystery surrounding it, a quality it shares with the ogre.

The ailment referred to as *tutwo-gaa* (lit. mouse grass) is a condition affecting the vocal tract where it would seem as if a needle were pricking the affected person's throat. It could extend to the alimentary tract and make drinking and consumption of solid foods painful. For treatment, a calabash spatula is used. Water could be fetched into a calabash, thrown onto the grass roof of a hut and the cascading water caught in the same calabash or scoop and drunk. [39] Its other name of *Nanjara* relates to the calabash spatula or scoop, a cooking utensil used in dishing out hot porridge before it solidifies.

'Python ailment', *De jaweo*, comes in two forms: skin manifestation in which the affected has patchy skin resembling the skin of the python, although this is no ordinary psoriasis (*kalaa*) or depigmentation. In the other case, the illness is supposedly inside the affected individual rather than on the outside and makes the affected experience stomachache which feels as though a live python were bestirring inside the stomach.

5. Conclusion

While plant and vegetable species are central to indigenous Kasena healing and health-seeking, the surprisingly large number of illness terms encoding references to local fauna suggests a high significance of fauna in illness diagnosis, causal theories, and disease treatment. The 'Herbal/Plant Medicine' cliché belies the significance of fauna in local health practices. Gene therapy and the use of animal parts directly or indirectly have come to stay in health engineering, but as the illness terms discussed above show, some local communities like the Kasena have always accorded value to the zoological aspects of curative medicine. Human beings and non-human mammals exhibit resemblances and continuities which Kasena exploited to enhance health. It can be argued that the existence of a considerable number of illness terms with zoological rather than botanical references is a clue to the perceived animateness of illnesses. Furthermore, with a few exceptions, labelling indicates therapeutic modes and strategies among Kasena and people like them. Labelling suggests culturally perceived symptoms. Illness terms illustrate the linkage between human and non-human health thereby necessitating close observations of nature and derivations of applicable knowledge therefrom. The evidence of synonyms in our corpus i.e., the coexistence of

[35] Burkinabe authorities are known to punish illegal hunting and the setting of bush fires severely.
[36] The term translates as ritual matters relating to plants.
[37] The hyena has an elongated neck. The illness term probably derives from the visual similarity of shapes. The hyena is not however deemed to cause the illness or to be associated with its therapy.
[38] See Awedoba and Denham's (2013) study of the classification of certain babies with congenital deformities.
[39] It is not clear that a local grass species known as *tutwei gaa* exists, neither do we have evidence that the mouse is associated with the therapy for this illness.

several terms for what is essentially the same condition is an indication of either intra-cultural variation in perspectives or of complex symptomatology not discounting changing perceptions. Health arguably will continue to be understood by Kasena in spiritual and physical terms which do not contradict but rather complement. There is, thus, a need for multidimensional approaches that combine the physical and the spiritual. It came as a surprise, midway through the investigations in 2018, to know that one of the research participants became incommunicado because his roving soul had detached and it had to be 'sought' and ritually reunited with his body for a functional life. For this, help had to be sought from outside the chiefdom [40].

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