Metaphorical extensions of 'eat' ⇒[overcome] and 'drink' ⇒ [undergo] in Hausa

Philip J. Jaggar & Malami Buba SOAS, University of London/Usmanu Danfodiyo University

The consumption verbs ci 'eat' and shaa 'drink' in Hausa are rich sources of metaphorical extensions into a variety of cognate semantic domains (Gouffé 1966; Williams 1991). Prototypical ci 'eat' metaphors encode overcoming/control of a patient or theme by an animate/human agent (and part experiencer) functioning as subject, e.g., mun cii sù 'we beat (ate) them'. Metaphorical transfers of shaa 'drink' usually have an undergo interpretation with a non-agential experiencer subject, e.g., sunàa shân wàhalàa 'they are suffering (drinking trouble)'. Thus, the metaphorical overcome and undergo outputs are often maximally distinct in meaning, and these correlations are directly inherited from their differing physical/ontological properties: the eat act entails a higher degree of subject agentivity/manipulation and object affectedness, and is higher in transitivity than the drink act.

1. Introduction¹

Hausa, an important SVO Chadic/Afroasiatic language spoken to the west of Lake Chad in West Africa, has two lexical verbs of ingestion/consumption – *ci* '*eat*' and shaa 'drink' (also used for consuming soft fruit). These verbs typically occur in monotransitive clauses where the grammatical subject is animate (human) and combines the semantic roles of both agent and experiencer of the action denoted by the verb, e.g.,²

^{1.} We would like to thank Mustapha Ahmed, Mustapha Gwadabe, Ibrahim Malumfashi, Bello Salihu, Jamilah Tangaza, and Ibrahim Maina Waziri, whose sharp intuitions and native-speaker knowledge were crucial in assembling and checking the data in our paper.

^{2.} Transcription: $\dot{a}(a) = \text{Low tone}$, $\hat{a}(a) = \text{Falling tone}$, High tone is unmarked; *aa*, *ii*, etc. = long, *a*, *i*, etc. = short;, *d* = laryngeal implosives, \hat{k} = ejective, \tilde{r} = apical tap/roll, *c* and *j* = palato-alveolar affricates. Abbreviations: F = feminine; FUT = future; IMPFV = imperfective; IO (m) = indirect object (marker); M = masculine; NEG = negative; PFV = perfective; PL = plural;

- naa ci àyàbà lsg.pfv eat banana 'I ate a banana.'
- 2. zân shaa ruwaa FUT.1SG drink water 'I'll drink (some) water.'

As in many languages, these bodily consumption verbs are also sources of metaphorical mappings into a variety of (sometimes overlapping) semantic domains with basic correlates rooted in real-world physical experiences. In this regard, studies such as Lakoff & Johnson (1980, 1999), Johnson (1987), Heine (1997), Gibbs & Steen (1999), and Talmy (2000) provide an explication of the link between human conceptualization, categorization, and the nature of the spatio-physical world we inhabit, and Lakoff & Johnson's (1980) study is especially relevant in documenting the function and pervasiveness of metaphor and metaphoric categories (in English). With specific regard to metaphorical extensions of 'eat' and 'drink', whose primary senses are physical, the key question to be answered is: do these two verbs have intrinsic properties which generally exclude each other in metaphorical expressions, and if so what are these properties?

Turning to Hausa, there are two previous studies on ci 'eat' and shaa 'drink'-Gouffé (1966) and Williams (1991) – and these works, in particular that of Williams, consider some of the same language facts as we do here, and so represent the startingpoint for our analysis. Gouffés (166: 99ff.) proposed features account has "physiological" ci 'eat' expressing an "exercised" role in metaphorical transfers, and shaa 'drink' has an 'undergone' interpretation, with all such functions subsumed under an umbrella concept he termed "appropriation". This division basically corresponds to our "agentive subject" vs. "affected subject" dichotomy respectively (as presented below). Williams (1991) argues that Gouffé's features provide an incomplete explanation of the various metaphorical extensions of the two verbs, and instead he proposes a "radial categories" model (after Lakoff 1987) which assumes that "the various meanings of these two verbs in idiomatic expressions need not have any particular, specific meaning in common" (p. 331), i.e., Williams is essentially a "splitter", Gouffé more of a "lumper". Our own semantic classification overlaps partially with Williams' (and Gouffe's) model, but differs by showing that a significant number of EAT/DRINK metaphors in Hausa do in fact correlate ontologically with the core meanings of these two bodily consumption verbs, and so have a non-arbitrary, real-world grounding. Although the metaphorical senses are diverse and the divergence increases along

sG = singular; sJNCTV = subjunctive; 1/2/3/4 = first/second/third/fourth person. # = semantically anomalous.

a continuum – cf. Gouffé's reference to "chaos des faits" (p. 106) and Abraham's (1962: 136–38, 793–94) more than 20 subheadings each for *ci* and *shaa* – we believe that Williams' account is unnecessarily complicated, and that valid semantic generalizations are possible, even at the cost of some oversimplification. Our account also represents a refinement of earlier approaches in that we present a more precise characterization of how the syntactic functions and semantic roles of core arguments line up in *ci* 'eat' and *shaa* 'drink' expressions in Hausa.

All the naturally-occurring data in this paper have been rigorously crosschecked for acceptability. Where we encountered inter- and intra-speaker variation and occasional uncertainty in usage – a common problem in metaphor analysis – we decided to go with the mutually supportive majority choices which were accepted by Malami Buba (the second author) (see also Williams 1991 for dialectal variation). Gouffé (1966), we note, relies heavily on data from two earlier dictionaries – Bargery (1934: 154–56, 918), essentially repeated in Abraham (1962: 136–39, 793–95) – but a number of the 'eat' and 'drink' metaphors they cite are neither used nor even recognized by the speakers we consulted. It is also significant that almost all the 'eat' and 'drink' Hausa metaphors have direct analogues in Bole, a closely related West Chadic language (Ibrahim Maina Waziri, p.c., 2008).

2. The hypothesis

Despite the fact that the (animate) subjects of both *ci* 'eat' and *shaa* 'drink' combine agential and experiencer roles, they align with different ontological perceptions, so when operating in metaphorical contexts they often select different complement (direct object) arguments, their syntactic subjects often fulfil different semantic roles, and they typically express different but still intuitively verifiable senses. We say 'often, typically' etc. because, as is often the case with semantic extensions, the base \Rightarrow metaphor target mapping is not a perfect one-to-one match, i.e., the two verbs are not always mutually exclusive in their distribution, and in some cases they can be interchangeable for some speakers (§5.1). In spite of this, from a cognitive viewpoint, the basic semantic cut which can be abstracted away in the metaphoric domain is formulated in our working hypothesis (3) as follows:

(3) ci 'eat' \Rightarrow OVERCOMING = [+CONTROL] shaa 'drink' \Rightarrow UNDERGOING = [-CONTROL]

Examples (4–5) illustrate canonical EAT- and DRINK-metaphors:

(4) mun cii sù
1PL.PFV eat 3PL
'We really beat (ate) them.' (e.g., in a game)

- (5) 'yan-wàasanmù sun ci kwâf players.of.1pl 3pl.pfv eat cup 'Our players won the cup.'
- (6) sunàa shân wàhalàa
 3PL.IMPFV drinking.of trouble
 'They are really suffering trouble/difficulty.'
- (7) mun shaa raanaa yâu
 1PL.PFV drink sun today
 'We've really suffered (have drunk) the sun today.'

Examples (4–5) and (6–7) differ sharply and obviously in their meanings. These distinct metaphoric elaborations are not accidental, but are deducible from the differing primary senses of the two verbs, reflecting differing conceptualizations of their physical properties (see also Wierzbicka 1982: 774ff., Newman 1997; Newman in this volume). The unifying principles, based on real-world knowledge and perception, also provide a plausible and coherent explanation for the various collocations (see also Yusuf 1984 for some collocational uses of *shaa*).

Both *ci* '*eat*' and *shaa* 'drink', in their central consumption usages, occur in single-participant clauses with animate (human) eater/drinker subjects which are at the same time agents and experiencers of the eat/drink act, i.e., both verbs take "affected subjects/agents". (As noted by Naess (this volume) the effect on the object/ theme (food/liquid) is of little or no importance in contrast to the impact on the agent/experiencer, i.e., satisfying hunger, quenching thirst, etc.) When extended metaphorically, the roles are still determined by the head verb meaning and the prototypical pattern is identical – single-participant clauses with human subjects and inanimate themes/objects (exx. 5–7), or two-participant expressions with a human patient who undergoes the action (ex. 4). However, the semantic properties of the verb and complement argument mean that the roles of the respective subjects now diverge. The subject referents retain their experiencer roles, and *ci* 'eat' (= metaphorical 'overcome, win, conquer', etc.) inherits its agential subject, but the subject of *shaa* 'drink' now takes on a *non*-agential (= 'undergo, suffer, endure' etc.) interpretation, i.e., the two outputs are maximally distinct in meaning.

To account for this agential/non-agential semantic opposition, we propose that the core extended meaning of *ci* 'eat' denotes: (*a*) OVERCOMING/CONTROL/ MANIPULATION etc. of an inanimate theme (ex. 5) or patient (ex. 4) by an animate (human) agential subject which is also an experiencer; and that (b) this is a natural reflex of the physiological properties of the eating action itself which entails maximal, high-impact manipulation of the object (solids), which undergoes a physical transformation, a perceptible change of state. The basic EAT construction therefore combines a relatively high degree of (subject) agential activity with a similarly strong degree of "object affectedness" (see Newman 1997; this volume, and §3 below). The default derivative sense of *shaa* 'drink', in contrast, is one of a non-volitional sentient (human) subject UNDERGOING/ENDURING etc. an experience or sensation (the thematic object/stimulus), i.e., NON-CONTROL, and again this sense is ultimately inherited from the physiological characteristics of the base verb activity – the act of drinking entails minimal impact on the object (liquid), combining a reduced level of agential input with a relatively low degree of object affectedness (see §4).

Since both verbs take "affected subjects/agents", as such they are both less than prototypically transitive (see also Naess in this volume).³ However, as noted above, 'eating' is more forceful than 'drinking' which is a more passive activity, so they are not symmetrical, and it is these distinctive features which motivate and explain the derivative metaphorical usages of EAT \Rightarrow OVERCOME and DRINK \Rightarrow UNDERGO in Hausa. Metaphorical *shaa* is especially common in adversative contexts, usually to the exclusion of *ci*, e.g., *mun shaa raanaa yâu* 'we've really suffered (drunk) the sun today' (1PL.PFV drink sun today) is felicitous, but not the semantically anomalous *#mun ci raanaa yâu*. In such expressions with *shaa* 'undergo', the experiencer role is aligned with the subject which has patient-like properties, and the theme ('sun') is the stimulus. Conversely, metaphorical *ci* regularly occurs in constructions where the subject is strongly and primarily agential, where the object has the

^{3.} Both verbs also exceptionally permit morphological causatives (so-called "Grade 5" verbs), which otherwise only apply to base intransitives. Thus: ci 'eat' $\Rightarrow ciya\tilde{r}/cii$ ($d\dot{a}$) 'feed (animals), support, subsidize', *shaa* 'drink' \Rightarrow *shaa*($ya\tilde{r}$) ($d\dot{a}$) 'water, give water to (animals)'. They share this restricted derivational patterning with a specifiable subset of transitive verbs expressing cognition, perception, communication etc., which can also be causativized, e.g., *sanii* 'know' \Rightarrow *sanaĩ* ($d\dot{a}$) 'inform', and the necessary generalization is that all of the above verbs behave like inactive-intransitive verbs in respect of causativization. Examples: *naa ci àbinci* 'I've eaten (food)' \Rightarrow causative $d\dot{a}$ mèe $z\hat{a}n$ cii $d\dot{a}$ *iyaaliinaa?* 'what can I support my family with?'; cf. (a) inactive-intransitive Audù yaa taashi 'Audu got/woke up' \Rightarrow causative *naa taa dà Audù* 'I got/ woke Audu up'; and (b) with the base cognition verb sanii 'know', *sarkii yaa san làabaaĩ ìn* 'I informed the chief of the news'.

This co-distribution is attributable to the fact that both verbs are semantically complex, i.e., the animate (human) agential subject of both 'eat' and 'drink' fulfils the dual role of an experiencer or affected subject, exactly as it does with inactive cognition verbs like 'know' \Rightarrow causative 'inform', 'understand' \Rightarrow 'explain', etc. (Amberber 2002 refers to this process as "coindexing" of the agent and goal arguments). The co-patterning of verbs of ingestion/consumption and cognition/perception in causative constructions is well-documented cross-linguistically, e.g., in related Afroasiatic languages like Amharic and Berber, and in south Asian languages (see Haspelmath 1994: 159–61, Dixon & Aikhenwald 2000: 64ff., Amberber 2002; Shibatani & Pardeshi 2002; Naess, this volume).

situational role of theme or a human patient, and where *shaa* would be inadmissible, e.g., *mun cii sù* 'we beat (ate) them' (1PL.PFV eat 3PL), but not *#mun shaa sù*.

These examples satisfy our working definitions as formulated in (3) and the correlations are direct and understandable (bearing in mind that the boundaries are not always clearcut).⁴ The correlations are also consistent with a number of the Hopper and Thompson (1980) diagnostics for transitivity. Since *ci* in its source 'eat' sense, entails both a higher degree of agential involvement and a greater measure of physical/kinetic activity directed at its object than does *shaa* 'drink', so *ci*-clauses rank higher than *shaa*-constructions on the transitivity scale. Neither verb is *maximally* transitive (as noted above), but *ci* 'eat' is *more* transitive than *shaa* 'drink'. Table 1 summarizes the salient semantic facts:

-							
Base meaning		$O affected \Rightarrow$	Metaphor	S = A	S = E	O = P/T	O = STIM
'eat'	yes A++	yes++	OVERCOME 'overcome' 'control' 'conquer' 'dominate'	yes	yes	yes	no
ʻdrink'	yes	yes	UNDERGO 'undergo' 'endure' 'suffer'	no	yes++	no	yes

Table 1. Hausa 'eat' and 'drink': Prototypical syntactic functions and semantic roles in
metaphorical extensions

Key: A = agent; E = experiencer; O = object; P = patient; S = subject; STIM = stimulus;

T = theme

++ = relatively high value for semantic role

^{4.} In the interests of completeness, we list several lexically-determined exceptions to the canonical usages. In *naa ci kurèe* 'I made a mistake' (1sG.pfv eat mistake), ci occurs even though the subject is clearly not volitional. Conversely, idiomatic *taa shânyee shi* 'she bewitched him' (3fsG.pfv drink up 3MsG), with a derivative form of *shaa*, has an agential subject, as it does in the collocational *taa shaa kân màtsalàĩ* 'she solved the problem' (lit. 'she drank head of problem'), in addition to *yaa shaa minì kâi* 'it irritated me/got on my nerves' (lit. 'it drank to/ for me head), where the subject is the causer or stimulus. In the context of our own explanatory model, such idiosyncratic variation, though marginal, remains unexplained. One of the limitations of metaphor methodology is that definitions rarely, if ever, provide necessary and sufficient conditions for category membership, and Hausa is no exception (see also §5.1).

3. PROTOTYPICAL CI = OVERCOME (CONTROL/DOMINATION): 'eat, consume, devour' ⇒ 'overcome, conquer, overpower, take over, destroy', etc.; SUBJECT = AGENT (+ EXPERIENCER) OR CAUSER, OBJECT = THEME OR PATIENT

In order to organize the corpus into approachable categories, we begin with the simplest and clearest cases – metaphorical contexts where only *ci* is admissible and so is in sharp contrast. There are several closely related metaphorical clusters in which only *ci* 'eat' is licensed, typically with 'overcoming', 'winning', 'conquering', 'taking (over)', 'acquiring', etc. semantic predicates, and we group these cognate CONTROL/DOMINATION functions under the cover-term OVERCOME (cf. Williams 1991: 332–33).⁵ The examples below illustrate canonical *ci*-based metaphors – single-participant clauses with human agents (also experiencers) as clausal subjects, and either inanimate themes (representing a material object or abstract entity) or human patients as object arguments. The representative examples we cite, some of them idiomatic, are based on the judgements of Malami Buba (the co-author) and our other Hausa-speaking consultants (allowing, as ever, for possible idiolectal and localized differences).

- zân ci kwalàr kà FUT.1SG eat collar.of.2MSG 'You'll regret it.' (lit. 'I'll eat (i.e., grab) your collar.')
- zaa tà ci jar r àbâawaa FUT 3FSG eat exam 'She will pass the exam.'
- 10. *naa ci caaca* 1sg.pfv eat gambling 'I won (at) gambling.'

^{5.} There is a parallel relationship in the formation of English binomials, where Benor and Levy (2006: 239ff.) show that the ordering in complementary pairings can be determined by, *inter alia*, a real-world "power" constraint which places the more central (powerful) element in first position, e.g., 'EATING AND DRINKING', 'cat and mouse', 'man and boy', etc. The fixed phrase *mun ci mun shaa mun yi bànƙas* 'we've eaten, drunk and are completely stuffed' (1PL.PFV eat 1PL.PFV drink 1PL.PFV do being stuffed) illustrates. The ordering of such conjoins in English is therefore governed by similar real-world constraints as the occurrence of EAT and DRINK metaphors in Hausa – eating requires a larger measure of potency, intensity and control and so typically expresses 'overcome, conquer' etc. in metaphors, and this relationship is analogous to the binomial sequencing requirement that the more powerful element normally occurs initially. The same (or similar) underlying extralinguistic constraint motivates distinct but related linguistic phenomena.

Example (11) adds a human patient to (10):

- 11. *naa cii shì caaca* lsg.pfv eat Змsg gambling 'I beat him (at) gambling.'
- *daalibii yaa ci littaafii* student 3MSG.PFV eat book
 'The student read the book thoroughly.'
- dan sarkii zâi ci sàrautàa son.of emir fut.3мsG eat kingship 'The emir's son will get/secure the kingship'.

Examples (14–15), *inter alia*, nicely illustrate the control/overpowering dimension (being overpowered by a river, human mastery over iron ore):

- 14. *kòogii yaa cii shì* river 3MSG.PFV eat 3MSG 'He drowned'. (lit. 'The river ate him.')
- 15. *yanàa* cîn tamaa Змsg.імрғv eating.of iron ore 'He's a blacksmith.' (lit. 'He is eating iron (ore).')
- wasu bàràayii sun ci kàasuwaa jiyà some thieves 3PL.PFV eat market yesterday 'Some thieves cleaned up (in) the market yesterday.'
- mun ci rabìn hanyàa
 lpl.pfv eat half.of way
 'We've completed half the journey'.
- 18. an cii mù tàarar nair~àa dubuu
 4PL.PFV eat 1PL fine.of naira thousand
 'We've been fined one thousand naira.' (lit. 'One has eaten us fine of ... ')
- 19. mazaa dà maataa duk zaa sù ci mòoriyar wannàn maagànii men and women all FUT 3PL eat benefit.of this medicine 'Men and women will all gain the benefit of this treatment.'
- 20. *'yan-wàasanmù sun ci kwâf* players.of.1PL 3PL.PFV eat cup 'Our players won the cup.'

(*cîi*, *the verbal noun of ci* 'eat', can also mean 'goal' in football)

21. *maayèe yaa ci kùrwaĩ yaaròo* sorcerer Змsg.pfv eat spirit.of boy 'The sorcerer has taken over the boy's spirit.'

- zaa mù ci nasaràa
 FUT 1PL eat success
 'We will succeed.'
- 23. Yaa ci naamàanaa
 3MSG.PFV eat meat.of.1SG
 'He talked about me behind my back.' (lit. 'He ate my meat.')
- 24. yaa cii mîn àlbasàa
 3MSG.PFV eat 1SG.IO onion
 'He queered my pitch.' (i.e., 'spoiled my chances')
 (lit. 'He ate my onion', i.e., He interfered by approaching someone with a matter before I could)
- 25. kaa ci laadan kuturuu
 2MSG.PFV eat money.of leper
 'You've taken on the task (so you should see it through).'
 (lit. 'you have eaten the money of the leper', i.e., you (the barber) have taken the leper's money so you must shave his head)
- 26. mun ci kwaakwàa
 1PL.PFV eat coconut
 'We've had a hard time.' (lit. 'We've eaten coconut.', which is hard and so difficult to eat)

Example (27) illustrates the related 'appropriation' sub-domain:

27. *yaa ci kuɗin jàma'àa* Змѕд.рғv eat money.of people 'He embezzled the people's money.'

Example (28) contains the complex verb *cim mà* (= *cii mà*) with the semantically analogous meaning 'accomplish, fulfil':

28. *naa cim mà buurìinaa* 1sg.PFV eat iom ambition.of.1sg 'I fulfilled my ambition.'

Ci can be used for (usually aggressive) sexual conquest:

29. Muusaa yaa ci yaarinyàr Musa 3MSG.PFV eat girl.the 'Musa had sex with the girl.'

The clausal subject can be the inanimate (non-agential) causer of an action or event, in which case the consequences are typically negative, e.g.,

30.	wannàn	shirìn	zâi	ci	kuɗii	dà	yawàa
	this	plan.the	fut.3msg	eat	money	with	much

'This plan will eat up/consume lots of money.'

- ruwaa sun ci gàrii water 3PL.PFV eat town 'Water has flooded the town.'
- 32. *taa ci gidaa* 3FSG.PFV eat home 'It (e.g., the plan) has backfired.' (lit. 'She has eaten home.')
- 33. ciiwòo/yunwàa nàa cîinaa illness/hunger імрът eating.of.1sg 'The illness/hunger is eating (at) me.'

In (34) the derived polysynthetic ("Grade 4") form *cînyee* 'destroy (eat up)' (*< ci*) is unusual in that *ci* (and *shaa*) normally only occur in their base monomorphemic form in metaphorical transfers (cf. also exx. 28, 84–85).

34.	wutaa	taa	cînyee	gidaa	kùrmus
	fire	3fsg.pfv	eat up	house	completely
	'The fir	re consum	ed/destr	oyed the	e house completely.

As proposed in §2, *ci* 'eat' has developed this metaphorical control reading because the extralinguistic physical activity itself involves: (1) the application of causal force and direct manipulation in the crushing, biting, chewing etc. (with teeth) of (2) heterogeneous atomic substances which (3) thereby undergo an observable physical transformation. Lakoff & Johnson (1980: 69ff.) characterize such actions, i.e., human agents consciously inducing a physical change of state on the part of the theme (or patient), as "prototypical" examples of "direct causation".

A sub-set of the overarching OVERCOME domain entails the use of *ci* with an abstract complement noun such as 'trust', 'honour' to indicate the destruction or degrading of a positive human attribute, e.g., where 'eat honour of X' = 'humiliate X'. Once again this abstract extended meaning is not arbitrary, but is motivated by the ontological fact that food is destroyed in the act of eating. The resulting expression therefore has a negative/malefactive interpretation, e.g.,

35.	ɗaalìbii	уаа	ci	ir ìlin	maalàminsà
	student	3msg.pfv	eat	honour.of	teacher.of.3MSG
	'The stuc	lent humilia	ated h	nis teacher.' (lit. 'ate the honour of his teacher.')

- 36. kaa ci àmaanàataa
 MSG.PFV eat trust.of.1sG
 'You have betrayed (eaten) my trust.'
- kâř kà cii mîn zařàfii NEG 2мsG.SJNCTVeat 1sG.io time 'Don't humiliate me'. (lit. 'Don't eat my time'.)

Cf. too the *ci*-headed metaphor with *fuskàa* 'face' as the complement noun in:

 Muusaa yaa ci fuskàř àbookinsà Musa Змяд.РFV eat face.of friend.of.Змяд 'Musa humiliated his friend.' (lit. '... ate the face of his friend.')

Notice that most of the *ci* (and *shaa*) metaphorical expressions exemplified so far occur with a (preceding) Perfective tense-aspect marker (INFL), and many of them are in fact illustrated with a Perfective form throughout this paper. This co-occurrence is especially common when the metaphor contains an (animate) experiencer, and probably relates to the fact that such constructions typically denote resultative change-of-state occurrences, where the Perfective aspect encompasses the transitional phases affecting the experiencer. Thus, suffering (lit. 'drinking') the sun induces a change-of-state to fatigue, exhaustion etc. on the part of the experiencer, and winning ('eating') a prize results in a transitional change of emotion, psychological state, etc. in the agent/experiencer.

There are, however, environments where *ci* can be used (in verbo-nominal *cîi* form) with an Imperfective aspect to express a stative meaning, usually denoting undesirable/aggressive human characteristics, e.g.,

39.	yanàa	cîn		mutuncìn	mutàanee
	3msg.impf	v eating	g.of	dignity.of	people
	'He offends	(eats) po	eople's	dignity?	
40.	sunàa	cîn	zı	alii	
	3pl.impfv	eating.	of op	opression	
	'They are o	ppressive	2.	-	
41.	yanàa	dà	cîi	dà	zuuci
	3msg.impf	v with	eatin	g within	heart
	'He is impa	tient.' (lit	:. 'He l	has eating	within heart.')
42.	sunàa	cîi	dà	gùmin	leebur̃ oor̃ insù
	3pl.impfv	eating	with	sweat.of	labourers.of.3pl
	'They are ex	cploiting	(and j	prospering	from) their labourers.
	(lit. 'They a	re eating	with s	sweat of th	eir labourers.')

There are also a number of common lexical compound NP's containing various derived forms of the base verb *ci* where, depending on the noun object, the extended meaning inherits either the ontological destructive or achievement construal of the act of eating/devouring (see also Ahmad 1994: 146, and McIntyre 1995, 2006: Chap.6). Examples:

cîn-àmaanàa 'betrayal' (eating.of-trust), *cîn-fuskàa* 'insult, humiliation' (eating.of-face), *cîn-hancìi* 'taking bribes' (eating.of-nose?), *cîn-mutuncìi* 'humiliation' (eating.of-dignity), *cîn-râi* 'boredom, agony' (eating.of-mind), *cîn-zaalii* 'bullying, oppression, unjust treatment' (eating.of-justice?); *cîi-dà-cèetoo* 'fraud by trusted person(s)' (eating-and-rescuing, referring to aid agency fraud); *cìi-dà-karfii* 'hard task' (eat-with-strength), *cìi-raani* 'dry-season work' (eat-dry season).

Derivative (short-form) agential nouns, formed with a *ma*- prefix + a long low tone vowel on the stem, e.g., *ma-cii*, can occasionally be used in metaphorical contexts, e.g., *macii àmaanàa* 'traitor' (eater trust), as can the related formation with agential *mài* 'doer of', e.g., *mài cîn àmaanàa* 'traitor' (doer of eating.of trust). (See §4 for similar formations with *shaa*.) The more productive (expanded) agential formation (also with the *ma*- prefix) can also be used, e.g., *maciyin àmaanàa* 'traitor' (eater.of trust). These usages are highly restricted however (see also Yusuf 1984: 345ff.).

Proper names (nicknames) can also instantiate the metaphorical meaning, e.g., *Cii-gàri* (conquer-town, given to a person with the Muslim name 'Ibrahim'). Another common extended usage is in the phrasal verb *ci gàba* 'continue, proceed', composed of *ci* and the locative adverbial form gàba 'in front' (lit. 'eat in front') – with alignment of subject and agent again. Note too *cîn-gashìn kâi* '(achiev-ing) independence' (eating of-roasting.of self, i.e., you are free to 'roast your own meat'), where the accomplishment semantics of the verbal noun are determined by the meaning of the following NP in the compound – 'independence' imposes this selectional restriction.

In metaphorical contexts, *ci* 'eat' (but not shaa 'drink') is labile and can also occur in one-argument intransitive constructions with inanimate non-agentive subjects, expressing either a successfully completed resultative action (= Perfective, ex. 43) or an ongoing dynamic process (= Imperfective, exx. 44–45, complement of agential *mài* 'doer of' in 46):

- 43. maagànii/baabaa yaa ci dà kyâu medicine/indigo dye Змѕд.рғv eat well
 'The medicine/indigo dye has worked (eaten) well.'
- 44. kàasuwaa tanàa cîi market Зғѕд.імрғv eating 'The market is in full swing.' (lit. '... is eating.')
- 45. *fitilàa tanàa cîi* lamp Зғѕд.імрғv eating 'The lamp is burning (eating).'
- 46. gwamnatì mài cîi government doing eating 'The government in power (eating).'

Although such examples are restricted, this ambitransitive property of *ci* is somewhat anomalous, and there is no transparently obvious connection with the literal

sense. One would expect shaa 'drink' to exhibit the same dual transitivity, especially as, in contrast to *ci* 'eat', it combines reduced agentivity with lesser impact on its theme/object in transitive clauses.

4. prototypical SHAA = undergoing: 'drink' ⇒ 'undergo, suffer, endure', etc; subject — experiencer, object — stimulus

When *shaa* 'drink' is extended metaphorically to mean 'undergo, suffer, endure', selectional restrictions require that the first argument (the surface subject) must be a sentient animate being (normally human) capable of carrying the experiencer role, and the second argument (formally the direct object) usually expresses a sensory experience which induces the state (the stimulus), e.g., 'trouble', 'difficulty', '(excessive) heat', etc. The complement stimulus in the *shaa*-predicate can be a sensory noun or a common (concrete) noun, and the experience/emotion is typically (though not exclusively) negative-oriented. We assume that this construal follows from the extralinguistic fact that the animate subject experiencer has little or no control over the situation or emotional/psychological state, a property ultimately motivated by the ontological nature of drinking, i.e., minimal physical manipulation of a homogeneous liquid substance. (Cf. though Hook & Pardeshi in this volume for examples of the converse – EAT verbs developing an UNDERGOING sense in some Indo-Aryan languages.) Compare these properties with maximally distinct 'overcome, control' etc. extensions of *ci* 'eat', where the subject is either an agent or an (inanimate) causer, e.g., 'river' in (14).

Stereotypical and unambiguous examples of *shaa*-metaphors with non-volitional subjects and object stimuli, some idiomatic, are provided in (47–55) (where appropriate, we have included the degree adverb 'really' to capture the intensification entailment):

47.	sunàa	shć	în	wàhalàa
	3pl.impe	v dri	nking.of	f trouble
	'They are	e really	suffering	g trouble/difficulty.
48.	уаа	shaa	kaasł	hii
	3MSG.PF	v drin	k shit	
	'He had a	a hard	time of it	t.' (lit. 'He suffered (drank) shit.')
49.	тип	shaa	raanaa	yâu
	1pl.pfv	drink	sun	today
	'We've su	uffered	the sun t	today.'
50.	тип	shaa	hàsaar à	ìa
	1pl.pfv	drink	serious	loss

'We've suffered a serious loss/blow.'

51.	dàalìbai sun shaa sùur̃ uutùn maalàminsù
	students 3PL.PFV drink telling off.of teacher.of.3pl
	'The students got a real telling off from their teacher.'
	(lit. ' they drank telling off')
52.	jàakii yaa shaa kaayaa yâu
	donkey 3MSG.PFV drink loads today
	'The donkey has suffered (carrying) loads today.'
53.	taa shaa banzaa
	3FSG.PFV drink uselessness
	'She got off scott-free.'
	(lit. 'she drank uselessness', i.e., there's nothing that can be done about it)
54.	sun shaa jinin jìkinsù
	3PL.PFV drink blood.of body.of.3PL

55. dan-kòokawàa yaa shaa ƙasaa wrestler 3MsG.PFV drink earth
'The wrestler hit the ground.' (i.e., has been defeated, lit. '... has drunk earth.')

'They were really terrified.' (lit. 'They drank the blood of their bodies.')

In (56) the subject 'Bala' is non-volitional (he is the accidental causer of the crash but also suffers the consequences), and the object is a concrete noun:

56. Bàlaa yaa shaa mootàr wani
Bala 3MSG.PFV drink car.of someone
'Bala (accidentally) hit (drank) someone's car.'

In (57) the external stimulus is *daadii* 'enjoyment, happiness', and the experience is positive: ⁶

57. yâaraa sun shaa daadii children 3PL.PFV drink happiness
'The children had a really good time/enjoyed themselves.' (lit. '... drank happiness.')

A cognate metaphorical function of *shaa* involves its extension to denote a process of taking in, incorporating or absorbing (Newman's term "internalization" probably covers this domain). In this alignment, *shaa* takes an inanimate subject theme, i.e., the entity which undergoes the change in state, and the object argument is

^{6.} The default experiential/sensory verb in Hausa is *ji*, which has a wide range of cognate meanings, e.g., 'feel, smell, perceive, hear, understand', and where the subject aligns with the experiencer role. It heads the central ENJOY verb *ji daadii* 'feel enjoyment/enjoy oneself'.

the activity or material entity which is the source/cause of the change (through unspecified agential action). Examples:

- 0

58.	mootàa	taa	shaa	guugàa	
	car	3fsg.pfv	drink	polishir	ıg
	'The car i	is bright ar	nd shiny	r.' (lit. '	. has drunk polishing.')
59.	trousers	<i>yaa</i> Змsg.pf isers look 1	v drin	k iron	
60.	gown.of.	wn looks r	SG.PFV		bulàa washing blue use 'It has drunk', i.e., you have washed it
	<i>c c</i> .		1		

61. *tufaafii sun shaa* jìkii clothes 3PL.PFV drink body 'The clothes have worn out.' (lit. 'have suffered (drunk) body.')

Hausa also uses shaa 'drink' to express inhaling air and smoking, e.g.,

62.	zân	fita	shân	iskàa
	fut.1sg	go out	drinking.of	air
	'I'm goin	g out fo	r some fresh a	air.' (lit. ' drinking of air.')
63.	kin	dainà	shân	taabàa?
	2fsg.pfv	stop	drinking.of	tobacco

'Have you stopped smoking?' (lit. '... drinking of tobacco?')

Cf. too the nominal compounds headed by some form of *shaa: shàa-gàari* 'wastrel' (drink-flour), *shàa-jìó*i 'type of undershirt' (drink-sweat), *shàa-kid*î 'guitar string' (drink-strumming), *shàa-sànda* 'ridge of plaited hair' (drink-stick), *shàa-taleetàlêe* 'roundabout route' (drink-roundabout), and the nicknames *Shàa-daarii* (drink-cold) = name given to a child born in the cold season, and *Shàa-yàbo* 'popular' (drink-praise) (Ahmad 1994: 157–58). *Shaa* can (like *ci*, §3), sometimes occur in agential formations with a metaphorical sense, e.g., *mashàa wàhalàa* 'sufferer of trouble' (drinker trouble), *mashàa ruwaa* 'rainbow' (drinker water), *mài shân iskàa* 'one who goes for a stroll (takes the air)' (doer of drinking.of air).

4.1 *Shaa* 'drink' \Rightarrow quantificational 'do X frequently, regularly'

Polyfunctional *shaa* 'drink' has become grammaticalized as a degree verb expressing the quantificational notion 'regularly, continuously, frequently, a lot'. Syntactically it is parallel to aspectual verbs, and takes a complement consisting of a subject-less nonfinite clause with a verb, verbal noun or activity noun. If there is syntactic

embedding then both the matrix and nonfinite embedded clauses have samesubject control (Jaggar 1977; Jaggar, 2001: 546ff., Williams 1991: 335). As a quantificational verb, shaa occurs in expressions indicating multiple/habitual occurrences of an event or situation, where the subject is a volitional agent. Depending on the pragmatics of the situation, the reading can be 'to excess'. Examples:

64.	yaa shaa zuwaa nân
	3MSG.PFV drink coming here
	'He comes here regularly.' (lit. 'He has drunk coming here.')
65.	mun shaa kallon talàbijìn
	1PL.PFV drink watching.of television
	'We've watched a lot of TV.
66.	naa shaa jîi
	1sg.pfv drink hearing
	'I've heard (it) so many times.'
67.	naa shaa gayàa makà
	1sg.pfv drink tell 2msg.i.o.
	'I've told you so many times.'
Cf. too t	he idiomatic usage with an adverbial complement:

68.	mun	shaa	bambam
	1pl.pfv	drink	different
	'We diffe	r substa	antially.' (e.g., in our views, lit. 'We have drunk different.')

When the complement contains an emotional stimulus, e.g., an involuntary bodily response, the subject assumes the role of non-controlling experiencer, e.g.,

69.	taa	shaa	dàariyaa/kuukaa		
	3fsg.pfv	drink	laughing/crying		
	'she laughed/cried a lot'				

70. *yâaraa sun shaa daadii* children 3PL.PFV drink happiness

'The children had a really good time.' (lit. '... drank happiness.') (more commonly *ji daadii* 'enjoy oneself', 'feel enjoyment')

Example (71) illustrates metaphorical extensions of both verbs:

71. Audù yaa shaa cîn baashìi Audu 3MSG.PFV drink eating.of debt 'Audu is always in debt.' (lit. 'Audu has drunk eating debt.')

This metaphorical mapping of 'drink (water)' onto a quantificational 'do X frequently' sub-domain is not random, but is plausibly motivated by a conceptualization which associates the common non-bounded features (Williams 1991: 333ff. uses the term "diffuse" to capture this feature). Specifically, the conceptual relationship links: (1a) the intrinsic non-bounded properties of a mass substance like water (any subdivision is still water), plus (1b) the experiential correlation with quantity and the unobstructed ingestion of the liquid, with (2) the equivalent non-bounded duration of a sequence of multiple frequency events (see also Wierzbicka 1982: 774ff., Huddleston & Pullum 2002: 118ff., and Newman in this volume). A semantically analogous quantitative construction uses the verbal noun *shâa as an additive in numerals* 11-19, e.g., goomà shâa shiddà '16' (lit. 'ten drinking six').

In some cases the *shaa*-construction seems to be on the boundary between a quantificational 'do X a lot, continually' and the metaphorical 'undergo, suffer X' reading detailed above, i.e., where the clausal subject could be construed either as the volitional agent of an activity or the non-volitional participant. In such cases, the role of the subject essentially depends upon the lexical semantics of the complement and/or the manner in which the event is conceptualized. With a dynamic process noun such as aikii 'work(ing)', for example, both construals are possible - thus, we can gloss naa shaa aikii yâu (1sg.pfv drink work today) as either 'I've worked a lot today' or 'I've suffered work today', where the undergoing sense is not clearly separable from the quantificational reading, and where the interpretation is heavily dependent on situational pragmatics. If we select a more negative experience noun, however, then an undergo/suffer reading becomes progressively more natural, e.g., with gwagwarmayaa 'struggle, struggling' as in mun shaa gwàgwàrmayàa dà mutàanee (1pl.pfv drink struggle/struggling with people), the salient reading would be 'we have suffered (in) struggling with people'.

5. IDENTICAL ENVIRONMENTS WHERE CI OVERCOME [PUNCTUAL] + X CONTRASTS WITH SHAA UNDERGO [DURATIVE] + X

For the most part, metaphorical *ci* and *shaa* are mutually exclusive. There are a few exceptions however, and where selectional restrictions allow, they can take the same predicate argument (= X above). In such cases, the two variants usually have contrasting interpretations which are inherited from the differing primary senses and so are consistent with the mappings we have proposed, i.e., *ci* [OVERCOME, + CONTROL] vs. *shaa* [UNDERGO, – CONTROL]. Thus, *ci* meaning 'overcome' is a punctual verb, and *ci*-predicates typically express bounded achievements; *shaa* in its derived 'undergo' sense, on the other hand, is a durative verb, and *shaa*-predicates basically denote unbounded processes, a meaning component which is also a

property of the quantificational function of *shaa* (see §4.1).⁷ Using the Hopper & Thompson (1980) parameters, *ci* 'eat' [+ PUNCTUAL] is prototypically higher in transitivity than *shaa* 'drink' [- PUNCTUAL], and this correlation lines up with the earlier observation that *ci* 'eat' is also more agentive, more kinetic and affects its object more radically (§3). Examples:

72. *sun ci yaakìi* 3PL.PFV eat war 'They won the war.'

73. sun shaa yaakii3PL.PFV drink war'They have endured the war (for some time).'

In (72) the subject of *ci* 'win (eat)' is a volitional agent, and the act of winning the war has a terminal point – it comes to an end when the war is won, so the war is itself bounded. Because (72) expresses a singular situation, it could not therefore take an unbounded duration adjunct such as 'for three years', i.e., *#sun ci yaakii har na tsawon shèekaràa ukkù #*'they won the war for three years'. In (73), on the other hand, the subject of *shaa* 'endure (drink)' is as much an experiencer as an agent, and the process of undergoing/enduring the war is perceived as durative and unbounded, reflected in the fact that *sun shaa yaakii har na tsawon shèekaràa ukkù* 'they have endured the war for three years' is perfectly acceptable. Because of its more robust agential/control properties, moreover, *ci* 'eat' (but not *shaa* 'drink') can freely combine with a preceding matrix clause in which the verb expresses the notion of 'intention, commitment', i.e., where the subject-referent is assumed to be in control, as in 74):

74. *sun kafèe sai sun ci yaakìi* 3PL.PFV be determined until 3PL.PFV eat war 'They were determined to win the war.'

Substituting *shaa* 'drink' in (74), however, would produce the semantically anomalous expression in (75):

75. #sun kafèe sai sun shaa yaakii 3PL.PFV be determined until 3PL.PFV drink war 'They were determined to endure the war (for some time).'

Further punctual/durative contrasts are illustrated in (76–79).

^{7.} Williams (1991: 330) does not propose an explicit semantic characterization of this function but some of his English glosses are at least suggestive.

76. yaa ci duuniyàa
3MSG.PFV eat world
'He'd seen and done it all (good and bad).'

In (76) the *ci*-metaphor expresses a strongly agential punctual occurrence with a terminal phase, implying that the experience has been a single distinguishable phase which is now terminated (one salient interpretation is that the subject referent has in fact died). In (77), on the other hand, we have a low-degree agent *shaa*-construction which is stative-like, entailing no distinct phases:

77. *yaa shaa duuniyàa* Змѕд.рғv drink world 'Se has had a long life'

Example (78) expresses a "singulary" punctual situation (Huddleston & Pullum 2002: 119), i.e., a one-off event with *ci*:

78. naa ci karòo dà suu
1sG.PFV eat encounter with 3PL
'bumped into them.'

In contrast, the corresponding *shaa* metaphor in (79) encodes multiple instances of the same event:

naa shaa karòo dà suu
 1sg.pfv drink encounter with 3pl
 'I bumped into them regularly.'

Example (79) with *shaa*, unlike the *ci*-version, could also co-occur with the Imperfective aspect, e.g., *inàa shân karòo dà suu* 'I bump into them regularly' (1sG.impfv drinking.of encounter with 3PL).

Finally in this section, the *ci-expression* in (81) is telic, implying, for example, that the subject has taken punishment which is now terminated:

- yaa shaa wùyaa/wàhalàa
 3sg.PFV drink trouble/difficulty
 'He suffered trouble/difficulty.'
- 81. yaa ci wùyaa/wàhalàa
 3sg.pfv eat trouble/difficulty
 'He suffered trouble/difficulty.' (but has paid his dues)

5.1 Possible neutralization: metaphorical ci + x = shaa + x

The last dimension of this finely-nuanced continuum shades into the preceding one, the principal difference being that the characteristic $[\pm CONTROL]$ correlations

are neutralized (at least for some speakers), leaving a non-canonical residue of metaphorical expressions which can take either verb without any effective meaning difference. In the first set the surface subject is a volitional-agential, so we would predict (wrongly!) that only *ci* should occur, but *shaa* is perfectly acceptable, and the two variants seem to be more or less interchangeable, e.g.,

82.	yaarinyàa	taa	ci/shaa	adoo
	girl	3fsg.pfv	eat/drink	decoration
'The girl got really dressed up.'				

Both verbs combine collocationally with the lexical noun *kâi* 'head' to express the agential notion of 'winning over (person)', or '(re)solving a problem', e.g.,

83.	ɗaalìbii	уаа	ci/shaa	kân	lìssaafii
	student	3msg.pfv	eat/drink	head.of	maths
	'The student solved the maths (problem).'				

Examples (84–85) include the semantically equivalent derivative ("Grade 6") forms *ci-woo* (*< ci*), and *shaa-woo* (*< shaa*) (cf. ex. 34):

84.	zaa mù	ciwoo/shaawoo	kân	wannàn	àl'amàr̃ în
	fut 1pl	eat/drink	head.of	this	matter.the
	'We will resolve this matter.'				

85. mun ciwoo/shaawoo kânsù
1PL.PFV eat/drink head.of.3PL
'We won them over.' (lit. 'We ate/drank their head.')

The second set, where both outputs are essentially NON-CONTROL/UNDERGO, is more idiosyncratic, but we note here for completeness. In this case, ci/shaa substitutability, though relatively uncommon (contra Abraham 1962: 793), seems to be admissible particularly when the complement contains a stimulus noun expressing an unpleasant or negative experience/emotion, i.e., adversative [subject = experiencer] contexts where the animate (human) subject has little or no control over the experience, and where we would predict that only the [shaa 'drink' \Rightarrow UNDERGO] pattern should occur. This is in fact the strongly preferred or indeed required construction for most speakers, but some can use ci 'eat' as a lexically-determined (secondary) alternative, and this variation indicates that there are different ways of conceptualizing situations in addition to variation in the lexical properties of these verbs. Substitutability does not appear to be total, however (contra Williams 1991: 330), since some speakers who do allow both verbs feel that in the shaa 'drink' versions the emphasis is on the durative ('continual') nature of the activity (as in §5), and/or that the use of ci 'eat' is more punctual/terminal and/or equates with a more casual and informal style of speech. If there are any systematic meaning differences

they are very subtle, however, and any attempted characterizations are vague and general at best, so we leave clarification of this variation for possible future investigation. For present purposes, therefore, we simply list some of the more common examples with just a single English equivalent for each pair.

86.	тип	ci/shaa	zamaa	yâu
	1pl.pfv	eat/drink	waiting	today
	'We've su	ffered a lon	g wait too	lay.'
87.	уаа	ci/shaa	duukàa	
	3msg.pfv	v eat/drink	beating	
	'He's take	n a beating		
88.	taa	ci/shaa	zaagìi	
	3fsg.pfv	eat/drink	abuse	
	'She suffe	red abuse?		

Finally, both verbs (with *shaa* again preferred by most/all speakers) can be used to express the process whereby materials take/absorb dyes (see also exx. 58–61 for similar 'absorb' metaphors):

89.	zanèe	уаа	ci/shaa	baabaa
	cloth	3msg.pfv	eat/drink	indigo dye
	'The clo	oth has take	n/absorbed	the indigo dye well.

6. Summary

EAT/DRINK-based metaphors in Hausa present a plethora of subtly distinguishable but relatable meanings. In this exploratory account we have organized the various metaphorical elaborations of *ci* 'eat' and *shaa* 'drink' into approachable categories and explained their distribution, showing that the extensions are not randomly assigned, but in general form reasonably coherent and principled sub-systems. The boundaries are sometimes fuzzy, however, and the residue of idiosyncratic and dialectal variation has forced us to regularly turn to "prototypical" instances, where we have demonstrated that the meaning transfers are directly and naturally grounded in physiological realities. Thus, in metaphorical contexts *ci* canonically expresses the notion of OVERCOMING (CONTROL AND MANIPULATION) because the real-world act of eating involves a strongly agential subject applying high-impact manipulation to a stronglyaffected object (food) – it is prototypically more transitive than 'drink'. UNDERGO *shaa*, in contrast, has a reduced degree of control/manipulation, because the act of drinking involves a lesser degree of both agential intervention/force and of impact on the object (liquid) – it has weaker transitivity. An interesting semantic consequence of the transfers is that, in canonical cases, the respective metaphorical OVERCOME vs. UNDERGO meanings are maximally distinct. We have also documented the quantificational ('do X frequently') function of *shaa*, alongside the basically durative sense of its metaphorical UNDERGO usage, two semantic extensions which are plausibly related and attributable to the fact that *shaa*-predicates often denote unbounded on-going processes, in contrast to metaphorical *ci* 'win, defeat, etc.' which is basically a punctual verb compatible with bounded achievements. These various correspondences are not accidental – humans utilize metaphorical concepts to understand and express abstraction through the medium of experiential concretes.

Abbreviations

Transcription: $\dot{a}(a) = Low \text{ tone, } \hat{a}(a) = \text{Falling tone, High tone is unmarked; } aa,$ $ii, etc. = long, a, i, etc. = short; b, d'= laryngeal implosives, <math>k = \text{ejective, } \tilde{r} = \text{apical tap/roll, } c$ and $j = \text{palato-alveolar affricates. Abbreviations: F = feminine; FUT = future; IMPFV = imperfective; IO (m) = indirect object (marker); M = masculine;$ NEG = negative; PFV = perfective; PL = plural; SG = singular; SJNCTV = subjunctive;<math>1/2/3/4 = first/second/third/fourth person. # = semantically anomalous.

References

- Abraham, Roy Clive. 1962. *Dictionary of the Hausa language*. London: University of London Press.
- Ahmad, Mustapha. 1994. Aspects of Hausa compounding. Ph.D. dissertation, Indiana University.
- Amberber, Mengistu. 2002. Quirky alternations of transitivity: The case of ingestive predicates. In *Language universals and variation*, Mengistu Amberber & Peter Collins (Eds), 1–19. Westport CT: Praeger.
- Bargery, George Percy. 1934. A Hausa-English dictionary and English-Hausa vocabulary. London: OUP.
- Benor, Sarah Bunin & Roger Levy. 2006. The chicken or the egg? A probabilistic analysis of English binomials. *Language* 82(2): 233–278.
- Dixon, R.M.W. & Alexandra Y. Aikhenwald (Eds), 2000. Changing valency. Cambridge: CUP.
- Gibbs, Raymond W. & Gerald J. Steen (Eds), 1999. *Metaphor in Cognitive Linguistics*. Amsterdam: John Benjamins.
- Gouffé, Claude. 1966. 'Manger' et 'boire' en haoussa. *Revue de l'École Nationale des Langues* Orientales 3: 77–111.
- Haspelmath, Martin. 1994. Passive participles across languages. Voice: Form and function [Typological Studies in Language 27], Barbara A. Fox & Paul J. Hopper (Eds), 151–77. Amsterdam: John Benjamins.
- Heine, Bernd. 1997. Cognitive foundations of grammar. Oxford: OUP.

- Hopper, Paul J. & Sandra A. Thompson. 1980. Transitivity in grammar and discourse. *Language* 56(2): 251–299.
- Huddleston, Rodney & Geoffrey K. Pullum. 2002. *The Cambridge grammar of the English language*. Cambridge: CUP.
- Jaggar, Philip J. 1977. The nature and function of auxiliary verbs in Hausa. In *Papers in Chadic Linguistics*, Paul Newman & Roxana Ma Newman (Eds), 57–87. Leiden: Afrika-Studiecentrum.
- Jaggar, Philip J. 2001. *Hausa* [London Oriental and African Language Library 7]. Amsterdam: John Benjamins.
- Johnson, Mark. 1987. *The body in the mind: The bodily basis of eaning, imagination, and reason.* Chicago IL: University of Chicago Press.
- Lakoff, George. 1987. Women, fire, and dangerous things. Chicago IL: University of Chicago Press.
- Lakoff, George & Mark Johnson. 1980. *Metaphors we live by*. Chicago IL: University of Chicago Press.
- Lakoff, George & Mark Johnson. 1999. *Philosophy in the flesh: The embodied mind and its challenge to western thought*. New York NY: Basic Books.
- McIntyre, Joseph A. 1995. It's still NAg-ging: compounds in Hausa. Afrika und Übersee 78: 239–259.
- McIntyre, Joseph A. 2006. Hausa verbal compounds. Köln: Rüdige Köppe Verlag.
- Newman, John. 1997. Eating and drinking as sources of metaphor in English. *Cuardernos de Filología Inglesa* (special issue on Cognitive Linguistics) 6(2): 213–231.
- Shibatani, Masayoshi & P. Pardeshi. 2002. The causative continuum. In *The grammar of causation and interpersonal manipulation*, Masayoshi Shibatani (Ed.), 85–126. Amsterdam: John Benjamins.
- Talmy, Leonard. 2000. Toward a cognitive semantics. Cambridge MA: The MIT Press.
- Wierzbicka, Anna. 1982. "Why can you *have a drink* when you can't **have an eat*?". *Language* 58(4): 753–99.
- Williams, Kemp. 1991. Radial structuring in the Hausa lexicon: A prototype analysis of Hausa 'eat' and 'drink'. *Lingua* 85: 321–40.
- Yusuf, H.R. 1984. Collocational use of the Hausa word sha. Studies in Hausa Language, Literature and Culture: Proceedings of the First Hausa International Conference, July 7–10, 1978; Ibrahim Yaro Yahaya & Abba Rufa'i (Eds), 342–368. Kano: CSNL, Bayero University.