Demonstratives in Ga

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Definiteness across domains

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- as in Akan and Lilloet Salish
- but their semantics is very much different
- thus demonstratives in Ga add significantly to the cross-linguistic picture of what are the possible blocks of demonstratives (and their combinationial possibilities)
- in particular: demonstratives in Ga bring situations into prominence (see Simonenko & Carlier 2022, Owusu 2022, see also Roberts 2002, Wolter 2003, 2006, Robinson 2005, Elbourne 2009)

• new data on demonstratives in Ga

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- analysis

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- crosslinguistic picture: demonstratives in Ga are not like in Akan and Salish

Ga language



spoken in West Africa, in Ghana

Ga language



- the Greater Accra Region
- 700 000 speakers
- one of the five government supported languages, taught in the schools
- SVO, 2 lexical tones: low and high

(Renans 2016, Campbell 2017)

- data elicitation in Ghana, Accra with 3 Ga native speakers in April 2016 and with 8 speakers in August 2023
- retrospective data from the two native speaker co-authors, elicited in Spring 2023
- standard semantic fieldwork methodology (Matthewson 2014)
- mostly: acceptability judgment tasks in context

	adnominal	pronominal	adverbial
nee	\checkmark	—	\checkmark
nɛkɛ	$+ n\epsilon\epsilon$	—	\checkmark
nakai	$+ l\epsilon$	\checkmark	\checkmark

(1) wo-bε hewalε ni wo-baa-fee nakai/#nεkε/#nεε.
 1PL-have.neg strength PRT 1PL-FUT-do THAT
 'We don't have the strength to do that.' (Campbell 2017)

- (2) fo-lo-mo le nakai noŋŋ cut-ITER-IMP 3SG that just
 'Keep cutting it up just like that.' [e.g., said to someone cutting up onions]
- (3) ni e-fee e-nine neke ee-bo-lo and 3SG.PRF-do 3SG-hand this 3SG.PROG-shout-ITER
 'And he's made his hands like this (puts hands to mouth in shouting gesture) and he's shouting.'

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 'And he's made his hands like this (puts hands to mouth in shouting gesture) and he's shouting.'
 - Nakai \Rightarrow the action is being performed by someone other than the speaker
 - $n\varepsilon k\varepsilon \Rightarrow$ the action is performed by the speaker

(Campbell 2017)

nakai + lε

DISTAL

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- nakai + lε
- $n\epsilon k\epsilon + n\epsilon\epsilon$

Distal Proximal

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- nakai + lε
- $\bullet \ \mathsf{n}\epsilon\mathsf{k}\epsilon + \mathsf{n}\epsilon\epsilon$
- nɛɛ

Distal

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Proximal

 nakai + Ιε 	DISTAL
• $n\epsilon k\epsilon + n\epsilon\epsilon$	Proximal
• $n\epsilon\epsilon = n\epsilon + l\epsilon$	Proximal

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• $n\epsilon k\epsilon + n\epsilon\epsilon$	Proximal
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• nakai + lε	DISTAL
• $n\epsilon k\epsilon + n\epsilon\epsilon$	Proximal
• $n\epsilon\epsilon = n\epsilon + l\epsilon$	Proximal

Demonstratives in $Ga = \mathbf{x} + \mathbf{l} \mathbf{\epsilon}$

Contrastiveness test

- (4) a. Gbee nεε mii-wo ni gbee nεε mii-jo foi. dog DEM PROG-sleep CONJ dog DEM PROG-run race 'This dog is sleeping and this dog is running.'
 - b. Νεκε gbee nεε mii-wo ni nεκε gbee nεε mii-jo DEM dog DEM PROG-sleep CONJ DEM dog DEM PROG-run foi.

race

'This (very) dog is sleeping and this (very) dog is running.'

c. ? Nakai gbee lɛ mii-wɔ ni nakai gbee lɛ mii-jo DEM dog DEF PROG-sleep CONJ DEM dog DEF PROG-run foi.

race

'That dog is sleeping and that dog is running.'

(5) a. #Gbee lɛ mii-wo ni gbee lɛ mii-jo foi.
 dog DEF PROG-sleep CONJ dog DEF PROG-run race
 'The dog is sleeping and the dog is running.'

- (6) Context: There is a bunch of roses and the speaker points to one of the roses in the bunch and says:
 - a. M-a-he **fɔfɔi nεε**. 1sg-FUT-buy flower DEM 'l'll buy this flower.'
 - b. M-a-he **neke fofoi nee**. 1sg-FUT-buy DEM flower DEM 'I'll buy this (very) flower.'
 - c. M-a-he nakai fofoi lε.
 1SG-FUT-buy DEM flower DEF
 'I'll buy that flower.' (but *flower* must be a bit distant)

- (7) context: There is a bunch of roses and the speaker points to one of the roses in the bunch and says:
 - a. #M-a-he **fɔfɔi lɛ**. 1SG-FUT-buy flower DEF 'I'll buy the flower.'

(8) context: beginning of the conversation

- a. Mikane wolo nyɛ. Wolo nɛɛ ŋɔɔ waa.
 1sG-read book yesterday book DEM interesting very
 'I read a book yesterday. This book was really interesting.'
- b. Mikane wolo nyɛ. Nɛkɛ wolo nɛɛ ŋɔɔ waa.
 1SG-read book yesterday DEM book DEM interesting very
 'I read a book yesterday. This (very) book was really interesting.'
- c. Mikane wolo nyɛ. Nakai wolo lɛ ŋɔɔ waa.
 1SG-read book yesterday DEM book DEF interesting very
 'I read a book yesterday. That book was really interesting.'

(9) context: beginning of the conversation

a. Mikane wolo nyɛ. Wolo lɛ ŋɔɔ waa.
 1SG-read book yesterday book DEF interesting very
 'I read a book yesterday. The book was really interesting.'

Global situation uniqueness I

- (10) There was a big celebration ceremony in Accra which was visited by the Ghanaian president and town elders. I met my friend. We talked about how beautiful the celebration was (but we didn't talk about who there was). He asked me, whether I saw any famous person. I reply:
 - a. #Mina mayhienyielo nee. 1SG-saw president DEM 'I saw this president.'
 - b. #Mina neke maŋhienyielo nee.
 1SG-saw DEM president DEM
 'I saw this (very) president.'
 - c. #Mina nakai maŋhiɛnyiɛlə lɛ.
 1SG-saw DEM president DET
 'l saw that president.'

- (11) There was a big celebration ceremony in Accra which was visited by the Ghanaian president and town elders. I met my friend. We talked about how beautiful the celebration was (but we didn't talk about who there was). He asked me, whether I saw any famous person. I reply:
 - a. Mi-na maŋhiɛnyiɛlo lɛ. 1SG-saw president DEF 'I saw the president.'

Global situation uniqueness II.I

- (12) a. Hulu nɛɛ mii-tso waa ŋmɛnɛ.
 sun DEM PROG-shine very today
 'This sun is strong today.' → affective reading
 - b. #Neke hulu nee mii-tso waa ŋmɛnɛ.
 DEM sun DEM PROG-shine very today 'This (very) sun is strong today.'
 - c. #Nakai hulu le mii-tso waa ŋmɛnɛ.
 DEM sun DEF PROG-shine very today 'That (very) sun is strong today.'

(13) Hulu le mii-tso waa ŋmɛnɛ. sun DEF PROG-shine very today 'The sun is strong today.'

Product-producer bridging

- (14) Kofi he wolo nyε.'Kofi bought a book yesterday.'
 - a. #Woloŋmalo nee je Kumase. author DEM be.from Kumasi 'This author is from Kumasi.'
 - b. #Νεκε woloŋmalɔ nεε jε Kumase.
 DEM author DEM be.from Kumasi
 'This (very) author is from Kumasi.'
 - c. #Nakai woloŋmalɔ lɛ jɛ Kumase.
 DEM author DEF be.from Kumasi
 'Kofi bought a book yesterday. That author is from Kumasi.'

- (15) Kofi he wolo nyε.'Kofi bought a book yesterday.'
 - a. Woloŋmalɔ lε jε Kumase. author DEF be.from Kumasi 'The author is from Kumasi.'
(16) Wo-na soomotsu lɛ yɛ akrowa lɛ teŋ.
 'We found the church (building) in the middle of the village.'

- a. #Zingle nee e-bo nkanale. roofing DEM PERF-become rust
 'This roofing is rusty.'
- b. #Neke zingle nee e-bo nkanale.
 DEM roofing DEM PERF-become rust
 'This (very) roofing is rusty.'
- c. #Nakai zingle le e-bo nkanale. DEM roofing DEF PERF-become rust 'This (very) roofing is rusty.'

- (17) Wo-na soomotsu lε yε akrowa lε teŋ.'We found the church (building) in the middle of the village.'
 - a. Zingle le e-bo nkanale. roofing DEF PERF-become rust 'The roofing is rusty.'

Adnominal demonstratives in Ga

	demonstrative	anaphoric	global sit. uniq.	bridging
nɛɛ	✓	\checkmark	_	_
ηεκε ηεε	\checkmark	\checkmark		
nakai le	\checkmark	\checkmark	—	
lε	—	\checkmark	✓	 ✓

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nakai le	\checkmark	\checkmark	—	
lε	—	\checkmark	✓	 ✓

Adnominal Demonstratives in Ga = $\mathbf{x} + \mathbf{l} \mathbf{\epsilon}$

- Nakai and nɛkɛ identify the head noun as a member or example of a larger category
- (18) neke nuu e-sa ni o-ke hi shi this man 3sg-fit REL 2sg-take live down 'This is the type of man you should marry.'
- (19) moko nakai-lε a-kε lε be-ee
 Someone that-TOP 3PL.IMPERS-take 3SG quarrel-NEG
 'Such a person, you don't quarrel with them.'

Kind reading

(20) a. **Ameo** e-bu. Tomato PERF-be.in.wide.supply 'Tomatoes are very common.'

- Νεκε ameo nεε e-bu.
 DEM.PROX tomato DEM PERF-be.in.wide.supply
 'This (very variety of) tomato is very common.'
- c. Nakai ameo lɛ e-bu. DEM.DIST tomato DEF PERF-be.in.wide.supply 'That tomato is very common.'
- d. **#Ameo Ιε** e-bu.

tomato DEF PERF-be.in.wide.supply 'The tomato is very common.'

Adnominal demonstratives in Ga

	demonstrative	anaphoric	global sit. uniq.	bridging
nee	√	\checkmark	_	
ηεκε ηεε	\checkmark	\checkmark		—
nakai lɛ	\checkmark	\checkmark		—
lε	—	\checkmark	✓	 ✓

	demonstrative	anaphoric	global sit. uniq.	bridging
nee	\checkmark	\checkmark		—
ηεκε ηεε	\checkmark	\checkmark		
nakai le	\checkmark	\checkmark	—	
lε	—	\checkmark	✓	 ✓

Adnominal Demonstratives in Ga = $\mathbf{x} + \mathbf{l} \mathbf{\epsilon}$

lε — conveys the information that a discourse referent is familiar and unique in bearing the property in question

(Renans 2016, 2022, Campbell 2017)

Definite determiner $l\varepsilon$

(22)

- (21) context: Yesterday was the Ghanaian national day and there were a lot of celebrations in Accra, which were visited by one president and many town elders.
 - a. Mi-na maŋhiɛnyiɛlo lɛ. 1sg-saw president DET 'l saw the president.'
 - b. #Mi-nà màŋ ônúkpá lɛ.
 1SG-see town elder DET
 'I saw the town elder.'
 - a. context: There were five town elders at the celebrations. We've talked about **one** of them. \Rightarrow (21-b) is acceptable
 - b. context: There were five town elders at the celebrations. We've talked about **two** of them. \Rightarrow (21-b) is unacceptable

(Renans 2016, 2022)

NP $l\varepsilon$ — analysis (Renans 2016, 2022)

Iε takes two arguments (Elbourne 2005, Schwarz 2009, Arkoh & Matthewson 2013, a.o.):

• NP

• pronominal argument of type e

(23)
$$\llbracket [\mathbf{I} \mathbf{\varepsilon} \rrbracket = \lambda \mathbf{y} \cdot \lambda P : \exists ! \mathbf{x} [P(\mathbf{x}) \land \mathbf{x} = \mathbf{y}] \cdot \iota \mathbf{x} [P(\mathbf{x}) \land \mathbf{x} = \mathbf{y}]$$



(25) $\llbracket DP \rrbracket^g = \iota x [gbee(x) \land x = g(3) \approx \text{the unique individual } x \text{ such that } x \text{ is a dog and } x \text{ is identical to } g(3)$

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nee	\checkmark	\checkmark		
ηεκε ηεε	\checkmark	\checkmark		
nakai le	\checkmark	\checkmark		—
lε	_	\checkmark	 ✓ 	 ✓

• $l\varepsilon$ — familiarity + uniqueness

	demonstrative	anaphoric	global sit. uniq.	bridging
nee	\checkmark	\checkmark		—
ηεκε ηεε	\checkmark	\checkmark		
nakai le	\checkmark	\checkmark		—
β		\checkmark	 ✓ 	\checkmark

- $l\varepsilon$ familiarity + uniqueness
- $x + l\varepsilon$ familiarity + anti-uniqueness

- gbee $l\varepsilon$ 'the dog' unique and familiar dog
- nakai gbee lε 'that dog' (potentially) non-unique and familiar dog

(26) $\llbracket dem_{dist} \rrbracket = \lambda S.\lambda P.\lambda x.P(x)((f)_{dist}(S))$ property of individuals to have the nominal property in the unique situation pointed at by the Speaker which the Speaker considers not to be part of their situation

- (26) $[\![dem_{dist}]\!] = \lambda S.\lambda P.\lambda x.P(x)((f)_{dist}(S))$ property of individuals to have the nominal property in the unique situation pointed at by the Speaker which the Speaker considers not to be part of their situation
 - S set of situation $\langle s, t \rangle$ (syntactically pronoun over sets of situations)

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 - **f**_{deic} prominence-based choice function that picks out a situation out of a set of situations (via ostentation)

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nakai NP *le* — analysis

(27) $\llbracket [nakai \rrbracket = \lambda S.\lambda x : x in(f_{dist}(S)) (cf. Simonenko & Carlier 2022) \\$



(28) $\begin{bmatrix} DP_2 \end{bmatrix}^g = \iota x [gbee(x) \land x = g(3) in (f_{dist}(S)) \approx \text{the unique individual } x \\ \text{in the most prominent situation such that } x \text{ is a dog and } x \text{ is identical} \\ \text{to } g(3) \end{bmatrix}$



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Situation 1



Situation 2









- (29) a. ? Nakai gbee lɛ mii-wo ni nakai gbee lɛ DEM dog DEF PROG-sleep CONJ DEM dog DEF mii-jo foi. PROG-run race 'That dog is sleeping and that dog is running.'
 - $\Rightarrow\,$ acceptability of (29) depends on the size of the set of situations CF works on

Choice function in the denotation of nakai

 f_{deic} — prominence-based choice function that picks out a situation out of a set of situations (via ostentation)

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 - **proximal f**: picks the most prominent (=pointed at) (=pointed at) situation out of a set of situations that *the Speaker considers to be part of their situation* (Marchello-Nizia 2006, 116)
 - **distal f:** picks the most prominent (=pointed at) situation out of a set of situations that *the Speaker considers not to be part of their situation* (Marchello-Nizia 2006, 116)

- (30) fo-lo-mo lε nakai noŋŋ cut-ITER-IMP 3SG that just
 'Keep cutting it up just like that.' [e.g., said to someone cutting up onions]
- (31) ni e-fee e-nine neke ee-bo-lo and 3SG.PRF-do 3SG-hand this 3SG.PROG-shout-ITER
 'And he's made his hands like this (puts hands to mouth in shouting gesture) and he's shouting.'
 - Nakai \Rightarrow the action is being performed by someone other than the speaker
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(Campbell 2017)

(32) Á7hen! Á•7•ma ti7 ta=t'ánamten=a lhkúnsa look good•CRED• demon det=moon=EXIS today ku=sgáp.
 DET=evening Look! The moon looks beautiful tonight.'

(32) Á7hen! Á•7•ma ti7 ta=t'ánamten=a lhkúnsa look good•CRED• demon det=moon=EXIS today ku=sgáp.
 DET=evening Look! The moon looks beautiful tonight.'

Demonstratives in St'at'imcets:

- enocode uniqueness
- not familiarity

(33) Saa car no yε Toyota. dem car DEF COP Toyota 'That car is Toyota.'

(Owusu 2022)

- no introduces the non-uniqueness presupposition
- saa domain restriction

(Owusu 2022)

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- they bring prominence to situations (cf. Simonenko and Carlier 2022)
- they derive compositionally from the meaning of the definite determiner, restricted to the situation picked by the CF
- thus the data from Ga add to the cross-linguistic picture of what the buildings blocks of demonstratives are