## Demonstratives in Ga

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Definiteness across domains
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## Today's talk

- family of demonstratives in Ga


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- demonstratives in Ga : sth + definite determiner


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## Today's talk

- family of demonstratives in Ga
- demonstratives in Ga: sth + definite determiner
- it is morphologically transparent
- 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 combinatiorial 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)


## Roadmap

- new data on demonstratives in Ga


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- new data on demonstratives in Ga
- analysis


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- new data on demonstratives in Ga
- analysis
- 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
- 700000 speakers
- one of the five government supported languages, taught in the schools
- SVO, 2 lexical tones: low and high
(Renans 2016, Campbell 2017)


## Methodology

- 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

Demonstratives in Ga

|  | adnominal | pronominal | adverbial |
| :--- | :---: | :---: | :---: |
| nعє | $\checkmark$ | - | $\checkmark$ |
| nعk | + nєє | - | $\checkmark$ |
| nakai | + I | $\checkmark$ | $\checkmark$ |

## Pronominal demonstratives

(1)

> wo-b $\quad$ hewale ni wo-baa-fee nakai/\#neke/\#neq.
> 1PL-have.neg strength PRT 1PL-FUT-do THAT
'We don't have the strength to do that.'
(Campbell 2017)
(2) fo-lo-mə le nakai nэŋŋ
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.'
(2) fo-lə-mə le nakai nəŋŋ cut-ITER-IMP 3SG that just
'Keep cutting it up just like that.' [e.g., said to someone cutting up onions]

$$
\begin{equation*}
\text { ni } \quad \text { e-fee } \quad \text { e-nine } \quad n \boldsymbol{k} \boldsymbol{\varepsilon} \boldsymbol{\varepsilon} \text { ee-bo-lo } \tag{3}
\end{equation*}
$$

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.'

- $N a k a i \Rightarrow$ the action is being performed by someone other than the speaker
- $n \varepsilon k \varepsilon \Rightarrow$ the action is performed by the speaker


## Adnominal demonstratives in Ga

- nakai $+1 \varepsilon$

Distal

Adnominal demonstratives in Ga

- nakai + $1 \varepsilon$

Distal

- nek $+\mathrm{n} \varepsilon \varepsilon$

Proximal

Adnominal demonstratives in Ga

- nakai + $1 \varepsilon$

Distal

- nek $+\mathrm{n} \varepsilon \varepsilon$

Proximal

- nєє

Adnominal demonstratives in Ga

- nakai + $1 \varepsilon$

Distal

- nek $+\mathrm{n} \varepsilon \varepsilon$

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- $\mathrm{n} \varepsilon \varepsilon=\mathrm{n} \varepsilon+\mathrm{I} \varepsilon$

Proximal

Adnominal demonstratives in Ga

- nakai + $1 \varepsilon$

Distal

- nek $+\mathrm{n} \varepsilon \varepsilon$

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Proximal

- nakai $+1 \varepsilon$
- $n \varepsilon k \varepsilon+n \varepsilon \varepsilon$
- $\mathrm{n} \varepsilon \varepsilon=\mathrm{n} \varepsilon+\mathrm{I} \varepsilon$

Demonstratives in $\mathrm{Ga}=\mathbf{x}+\mathbf{I} \boldsymbol{\varepsilon}$
(4) a. Gbee né mii-wo ni gbee né mii-jo foi. dog DEM PROG-sleep CONJ dog DEM PROG-run race 'This dog is sleeping and this dog is running.'
b. Nek gbee né mii-wo ni nek gbee né 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 le mii-wo ni nakai gbee le mii-jo

DEM dog DEF PROG-sleep CONJ DEM dog DEF PROG-run foi.
race
'That dog is sleeping and that dog is running.'

## Contrastiveness test II

(5) a. \#Gbee le mii-wo ni gbee $\boldsymbol{I} \boldsymbol{\varepsilon}$ mii-jo foi. dog DEF PROG-sleep CONJ dog DEF PROG-run race 'The dog is sleeping and the dog is running.'

## Demonstration

(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 fકfıi neє.

1SG-FUT-buy flower DEM
'I'll buy this flower.'
b. M-a-he neke fffor né.

1SG-FUT-buy DEM flower DEM
'I'll buy this (very) flower.'
c. M-a-he nakai fofıi le.

1SG-FUT-buy DEM flower DEF
'I'll buy that flower.' (but flower must be a bit distant)

## Demonstration II

(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 fofai le.

1SG-FUT-buy flower DEF
'I'll buy the flower.'

## Anaphoric uses

(8) context: beginning of the conversation
a. Mikane wolo nyع. Wolo nєє ŋэァ waa.

1SG-read book yesterday book DEM interesting very
'I read a book yesterday. This book was really interesting.'
b. Mikane wolo nyє. Neke wolo neє ŋŋэ waa. 1SG-read book yesterday DEM book DEM interesting very
'I read a book yesterday. This (very) book was really interesting.'
c. Mikane wolo nyع. Nakai wolo le ŋээ waa. 1SG-read book yesterday DEM book DEF interesting very 'I read a book yesterday. That book was really interesting.'

## Anaphoric uses II

(9) context: beginning of the conversation
a. Mikane wolo nyє. Wolo le ŋээ 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 mayhienyiclo neє. 1SG-saw president DEM 'I saw this president.'
b. \#Mina neke maghienyielo neє. 1SG-saw DEM president DEM 'I saw this (very) president.'
c. \#Mina nakai mayhienyielo le.

1SG-saw DEM president DET
'I saw that president.'

## Global situation uniqueness I.II

(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 mayhienyielo le.

1SG-saw president DEF
'I saw the president.'

## Global situation uniqueness II.I

(12) a. Hulu neع mii-tso waa ŋmene.
sun DEM PROG-shine very today
'This sun is strong today.' $\rightsquigarrow$ affective reading
b. \#Neke hulu ner mii-tso waa ymene.

DEM sun DEM PROG-shine very today
'This (very) sun is strong today.'
c. \#Nakai hulu le mii-tso waa ŋmene.

DEM sun DEF PROG-shine very today
'That (very) sun is strong today.'

## Global situation uniqueness II.II

(13) Hulu le mii-tso waa $\mathfrak{\text { gmene. }}$ sun DEF PROG-shine very today
'The sun is strong today.'
(14) Kofi he wolo nyع. 'Kofi bought a book yesterday.'
a. \#Wolonmalo neє j $\varepsilon \quad$ Kumase.
author DEM be.from Kumasi
'This author is from Kumasi.'
b. \#Neke woloymalo né je Kumase.

DEM author DEM be.from Kumasi
'This (very) author is from Kumasi.'
c. \#Nakai woloŋmalo le je Kumase.

DEM author DEF be.from Kumasi
'Kofi bought a book yesterday. That author is from Kumasi.'

## Product-producer bridging II

(15) Kofi he wolo nyع. 'Kofi bought a book yesterday.'
a. Woloymalole $\mathrm{l} \varepsilon \quad$ Kumase. author DEF be.from Kumasi
'The author is from Kumasi.'
(16) $\quad W \supset$-na soomotsu $\mid \varepsilon$ y $\varepsilon$ akrowa $\mid \varepsilon$ ten. 'We found the church (building) in the middle of the village.'
a. \#Zingle neє e-bo nkanale.
roofing DEM PERF-become rust
'This roofing is rusty.'
b. \#Neke zingle neє 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.'

## Part-whole bridging II

(17) $\quad$ Wっ-na sכomっtsu $\mid \varepsilon$ y akrowa $\mid \varepsilon$ tey. '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 |
| :---: | :---: | :---: | :---: | :---: |
| nยє | $\checkmark$ | $\checkmark$ | - | - |
| nєkย กع์ | $\checkmark$ | $\checkmark$ | - | - |
| nakai 1¢ | $\checkmark$ | $\checkmark$ | - | - |
| $1 \varepsilon$ | - | $\checkmark$ | $\checkmark$ | $\checkmark$ |

Adnominal demonstratives in Ga

|  | demonstrative | anaphoric | global sit. uniq. | bridging |
| :--- | :---: | :---: | :---: | :---: |
| n $\varepsilon \varepsilon$ | $\checkmark$ | $\checkmark$ | - | - |
| n $k \varepsilon$ n $\varepsilon \varepsilon$ | $\checkmark$ | $\checkmark$ | - | - |
| nakai $\varepsilon$ | $\checkmark$ | $\checkmark$ | - | - |
| І $\varepsilon$ | - | $\checkmark$ | $\checkmark$ | $\checkmark$ |

$$
\text { Adnominal Demonstratives in } \mathrm{Ga}=\mathrm{x}+\mathrm{I} \boldsymbol{\varepsilon}
$$

## Without $1 \varepsilon / n \varepsilon \varepsilon$ - type identification

- Nakai and $n \varepsilon k \varepsilon$ - 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-le a-ke le 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.'
b. Neke ameo né e-bu.

DEM.PROX tomato DEM PERF-be.in.wide.supply
'This (very variety of) tomato is very common.'
c. Nakai ameo le e-bu.

DEM.DIST tomato DEF PERF-be.in.wide.supply
'That tomato is very common.'
d. \#Ameo le e-bu.
tomato DEF PERF-be.in.wide.supply
'The tomato is very common.'

Adnominal demonstratives in Ga

|  | demonstrative | anaphoric | global sit. uniq. | bridging |
| :---: | :---: | :---: | :---: | :---: |
| nยє | $\checkmark$ | $\checkmark$ | - | - |
| nєkย กع์ | $\checkmark$ | $\checkmark$ | - | - |
| nakai 1¢ | $\checkmark$ | $\checkmark$ | - | - |
| $1 \varepsilon$ | - | $\checkmark$ | $\checkmark$ | $\checkmark$ |


|  | demonstrative | anaphoric | global sit. uniq. | bridging |
| :---: | :---: | :---: | :---: | :---: |
| nยะ | $\checkmark$ | $\checkmark$ | - | - |
| nekย ne์ | $\checkmark$ | $\checkmark$ | - | - |
| nakai l $\varepsilon$ | $\checkmark$ | $\checkmark$ | - | - |
| $1 \varepsilon$ | - | $\checkmark$ | $\checkmark$ | $\checkmark$ |

$$
\text { Adnominal Demonstratives in } \mathrm{Ga}=\mathrm{x}+\mathrm{I} \boldsymbol{\varepsilon}
$$

## Definite determiner $l \varepsilon$

- $l \varepsilon$ - conveys the information that a discourse referent is familiar and unique in bearing the property in question


## Definite determiner $/ \varepsilon$

(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 maghienyielo le. 1SG-saw president DET
'I saw the president.'
b. \#Mi-nà màn ònúkpá le.

1sG-see town elder DET
'I saw the town elder.'
(22) 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

NP $1 \varepsilon$ - analysis (Renans 2016, 2022)

- $l \varepsilon$ takes two arguments (Elbourne 2005, Schwarz 2009, Arkoh \& Matthewson 2013, a.o.):
- NP
- pronominal argument of type $e$
(23) $\quad \llbracket \mid \varepsilon \rrbracket=\lambda \mathbf{y} \cdot \lambda P: \exists!x[P(x) \wedge \mathbf{x}=\mathbf{y}] \cdot \iota x[P(x) \wedge \mathbf{x}=\mathbf{y}]$
(24) gbee $1 \varepsilon$ ('the dog')


$\langle e, t\rangle \quad\langle\langle e, t\rangle, e\rangle$


$$
e \quad\langle e,\langle\langle e, t\rangle, e\rangle\rangle
$$

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

Adnominal demonstratives in Ga

|  | demonstrative | anaphoric | global sit. uniq. | bridging |
| :---: | :---: | :---: | :---: | :---: |
| nยє | $\checkmark$ | $\checkmark$ | - | - |
| nekะ neє | $\checkmark$ | $\checkmark$ | - | - |
| nakail $\varepsilon$ | $\checkmark$ | $\checkmark$ | - | - |
| $1 \varepsilon$ | - | $\checkmark$ | $\checkmark$ | $\checkmark$ |

- $/ \varepsilon$ - familiarity + uniqueness

Adnominal demonstratives in Ga

|  | demonstrative | anaphoric | global sit. uniq. | bridging |
| :---: | :---: | :---: | :---: | :---: |
| nยє | $\checkmark$ | $\checkmark$ | - | - |
| nekะ neะ | $\checkmark$ | $\checkmark$ | - | - |
| nakail $\varepsilon$ | $\checkmark$ | $\checkmark$ | - | - |
| $1 \varepsilon$ | - | $\checkmark$ | $\checkmark$ | $\checkmark$ |

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


## Definites \& demonstratives in Ga

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

Demonstratives: bringing situation into prominence (Simonenko \& Carlier 2022)
(26) $\quad \llbracket d e m_{\text {dist }} \rrbracket=\lambda S . \lambda P . \lambda x . P(x)\left((f)_{\text {dist }}(S)\right)$
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) $\quad \llbracket d e m_{\text {dist }} \rrbracket=\lambda S . \lambda P . \lambda x . P(x)\left((f)_{\text {dist }}(S)\right)$ 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)
(26) $\quad \llbracket d e m_{\text {dist }} \rrbracket=\lambda S . \lambda P \cdot \lambda x \cdot P(x)\left((f)_{\text {dist }}(S)\right)$ 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)
- P - property of individuals (syntactically NP)
(26) $\quad \llbracket d e m_{\text {dist }} \rrbracket=\lambda S \cdot \lambda P \cdot \lambda x \cdot P(x)\left((f)_{\text {dist }}(S)\right)$ 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)
- P - property of individuals (syntactically NP)
- $\mathbf{f}_{\text {deic }}$ - prominence-based choice function that picks out a situation out of a set of situations (via ostentation)
(26) $\quad \llbracket d e m_{\text {dist }} \rrbracket=\lambda S \cdot \lambda P \cdot \lambda x \cdot P(x)\left((f)_{\text {dist }}(S)\right)$ 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)
- P - property of individuals (syntactically NP)
- $\mathbf{f}_{\text {deic }}$ - prominence-based choice function that picks out a situation out of a set of situations (via ostentation)
(27) $\quad$ nakai】 $=\lambda \mathbf{S} . \lambda x: x \operatorname{in}\left(f_{\text {dist }}(S)\right)$ (cf. Simonenko \& Carlier 2022)

(28) $\quad \llbracket \mathrm{DP}_{2} \rrbracket^{g}=\iota x\left[\operatorname{gbee}(x) \wedge x=g(3)\right.$ in $\left(f_{\text {dist }}(S)\right) \approx$ the unique individual $x$ in the most prominent situation such that $x$ is a dog and $x$ is identical to $g(3)$






## Situation 2







## Contrastiveness test

(29) a. ? Nakai gbee le mii-wo ni nakai gbee le

```
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

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


## Choice function in the denotation of nakai

- $\mathbf{f}_{\text {deic }}$ - prominence-based choice function that picks out a situation out of a set of situations (via ostentation)
- 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-mə le nakai nэŋŋ
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.'
- $N a k a i \Rightarrow$ the action is being performed by someone other than the speaker
- $n \varepsilon k \varepsilon \Rightarrow$ the action is performed by the speaker

Demonstratives in Ga are not like in St'at'imcets
(32) Á7hen! Á•7•ma ti7 ta=t'ánamten=a lhkúnsa look good $\bullet$ CRED $\bullet$ demon det=moon=exis today ku=sgáp.
DET=evening
Look! The moon looks beautiful tonight.'

## Demonstratives in Ga are not like in St'at'imcets

(32) Á 7 hen ! Á $\bullet$ •ma ti7 ta=t'ánamten=a lhkúnsa look good $\bullet$ CRED $\bullet$ demon det=moon=exis today
ku=sgáp.
DET=evening
Look! The moon looks beautiful tonight.'
Demonstratives in St'at'imcets:

- enocode uniqueness
- not familiarity


## Ga demonstratives are not like in Akan

(33) Saa car no ye Toyota. dem car Def cop Toyota 'That car is Toyota.'

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


## Summary

- demonstratives in Ga encode familiarity and non-uniqueness


## Summary

- demonstratives in Ga encode familiarity and non-uniqueness
- they bring prominence to situations (cf. Simonenko and Carlier 2022)
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- they derive compositionally from the meaning of the definite determiner, restricted to the situation picked by the CF
- demonstratives in Ga encode familiarity and non-uniqueness
- they bring prominence to situations (cf. Simonenko and Carier 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

