

# Mapping the conceptual space of intersubjective epistemicity

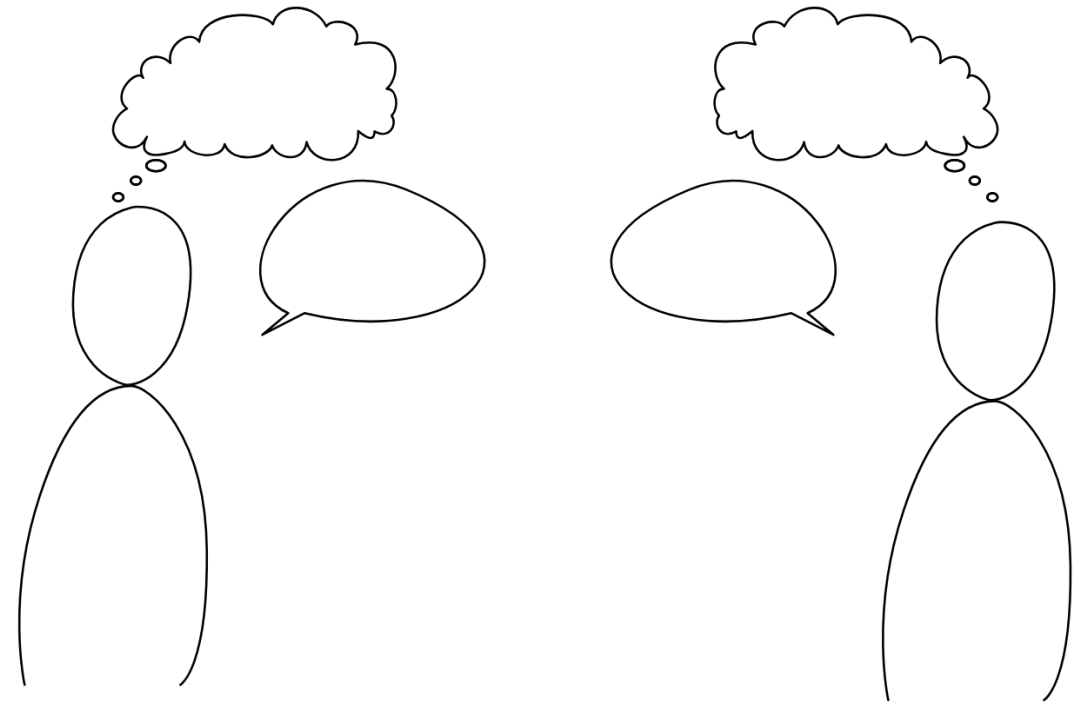
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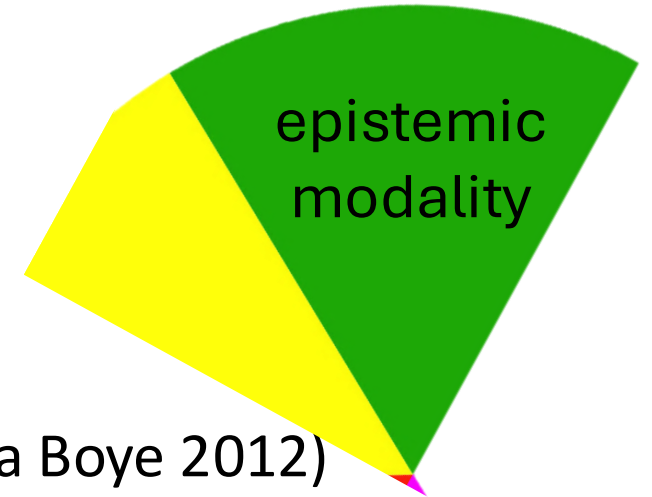
Speakers of any language  
continuously keep track of what  
others know and how their own  
knowledge can be related to the  
knowledge of others.  
(Bergqvist & Kittilä 2020: 12)



- 1.A: Sai mica se l'Antonio verrà più tardi?  
know.2SG at.all if the.Antonio will.come more late  
'Do you know by any chance if Antonio will come later?'
- 2.B: l'Antonio, non so, ma la Vitto sicuro.  
l'Antonio NEG know.1SG but theVitto sure  
'As for Antonio, I do not know, but surely Vitto is'
- 3.A: No vabbè! La Vitto? Era al mare nè, mi aveva detto.  
NEG PRT the Vitto was at.the sea PRT to.me had told  
'No way! Vitto? She was at the seaside heh, she told me'
- 4.B: Sarà già tornata...  
will already be.back...  
'She must be back already'
- 5.A: Mah, non mi ha mica scritto niente. Tu vieni?  
PRT NEG to.me has PRT written nothing you come?  
'Sounds weird, she did not text me anything though...You, on the other hand?'
- 6.B: Vengo, ma potrei essere in ritardo.  
come.1SG but could.1SG be in late  
'I'm coming, but I might be late'



- How certain is the speaker of this information?



West-Greenlandic (Inuit, Greenland; Fortescue 1984: 293, via Boye 2012)

- (1) Qama-**junnarsi**-vuq.  
be.out.hunting.seals-EPMOD-3SG.IND  
'He's **probably** out hunting seals.'
- (2) Tamma-**qquuqa**-at.  
get.lost-EPMOD-3PL.IND  
'They **must** have got lost.'

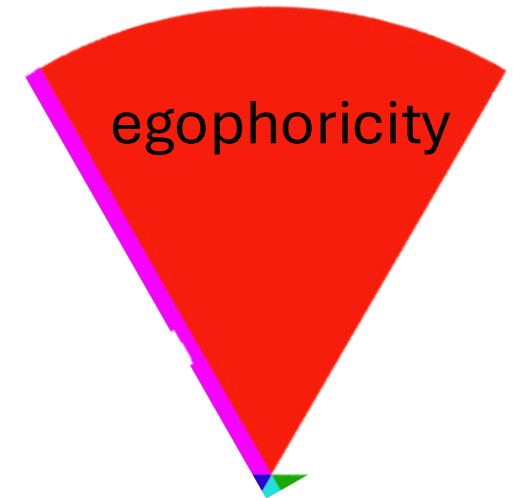


evidentiality

- What is the source of speaker's knowledge?

Tariana (Arawak, Brazil; Aikhenvald 2004:320)

- (3) a. Juse irida di-manika-**ka**.  
José football 3M.SG-play-RECPST.**VISUAL**  
'José played football (we saw it).'
- b. Juse irida di-manika-**mahka**.  
José football 3M.SG-play-RECPST.**NONVISUAL**  
'José played football (we heard it).'



- Does the speaker have privileged access to the information, e.g. being involved in the event?

Newar (Tibeto-Burman, Nepal; Bendix 1992: 233–236, via San Roque et al. 2018)

- (4) *ji wan-ā*  
I go-INT  
'I went.'
- (5) *wa wan-a*  
s/he go-EXT  
'S/he went.'
- (6) *ji kutuwal-a*  
I get.lost-EXT  
'I got lost.'

	statement	question
1st	EGO	NON-EGO
2nd	NON-EGO	EGO
3rd	NON-EGO	NON-EGO

egophoric distribution



mirativity

- Is the information is surprising for speaker or hearer?

Dhimal (Sino-Tibetan, Nepal; King 2009: 251, 252, via García 2016:187)

(7) dhemal-lai katha phər̥ra mare-**sa**-khe ru!  
Dhimal-PL language flowingly kill-**MIR**-IMPF EXCL  
'Why, it seems [he] speaks Dhimal fluently!'

(8) rem-pha gwamgwam-pa ca-**sa**-hi  
be.good-do heartily-do eat-**MIR**-PST  
'It seems he really ate with gusto (the poor thing must have been starved)'

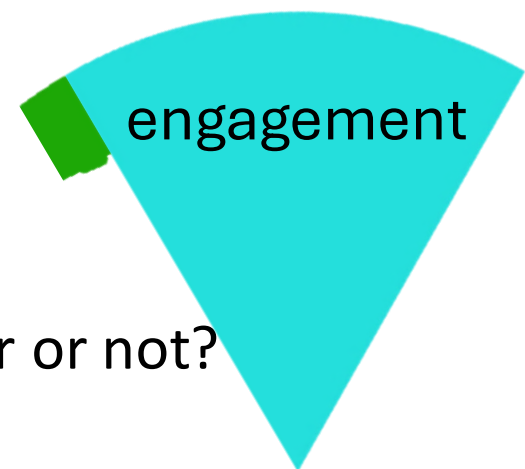
- How old/new/contrastive is the information for the hearer?

Makhuwa-Enahara (Bantu, Moçambique)

(9) DJ K-**o**-m-phwány-**a** Fernáántu.  
1SG.SM-PFV.DJ-1OM-find-FV 1.Fernando  
'I met Fernando.'

CJ Ki-m-phwany-**alé** Fernaantú.  
1SG.SM-1OM-find-PFV.CJ 1.Fernando  
'I met Fernando (and not someone else).'



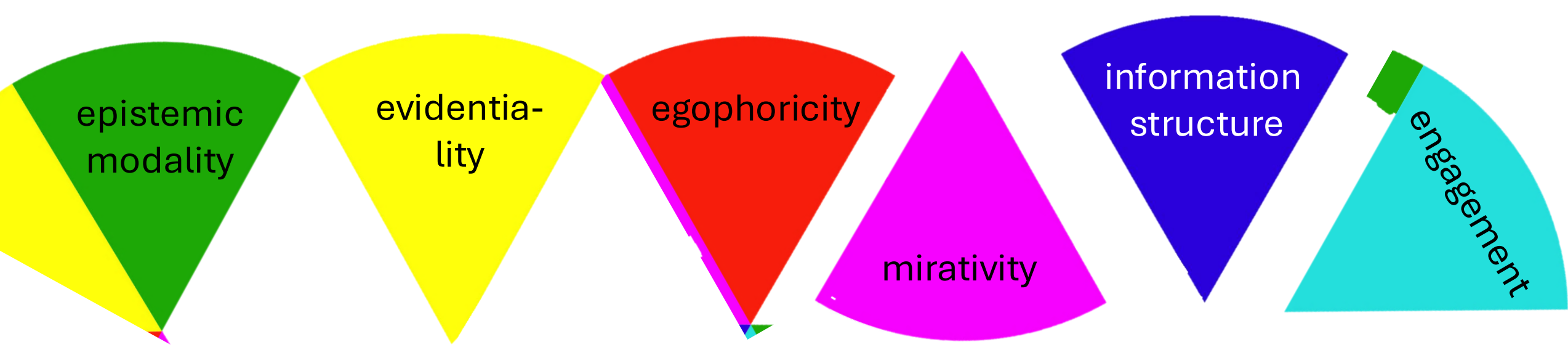


- Is the knowledge and attention shared between speaker and hearer or not?  
“grammaticalised intersubjectivity” (Evans et al. 2018a: 113)

Kogi (Arwako-Chibchan, Colombia) has 4 auxiliaries  
na- means that ‘the speaker knows e and expects the addressee to be unaware of e’ (1a), and  
ni- means that ‘the speaker knows e and expects the addressee to know e too’ (1b) (Bergqvist 2016: 2)

- (10) a. kwisa-té      **na**-nuk-kú  
         dance-IMPF   **SPKR.ASYM**-be.LOC-1S  
         ‘I am/was dancing.’ (informing)
- b. kwisa-té      **ni**-nuk-kú  
         dance-IMPF   **SPKR.SYM**-be.LOC-1S  
         ‘I am/was dancing.’ (confirming)

TABLE 1. <i>Meaning dimensions of epistemic marking prefixes in Kogi (after Bergqvist, 2016)</i>		
	Speaker-authority	Addressee-authority
Asymmetric	na-	sha-
Symmetric	ni-	shi-
Non-Speech Participant	ska(n)-	

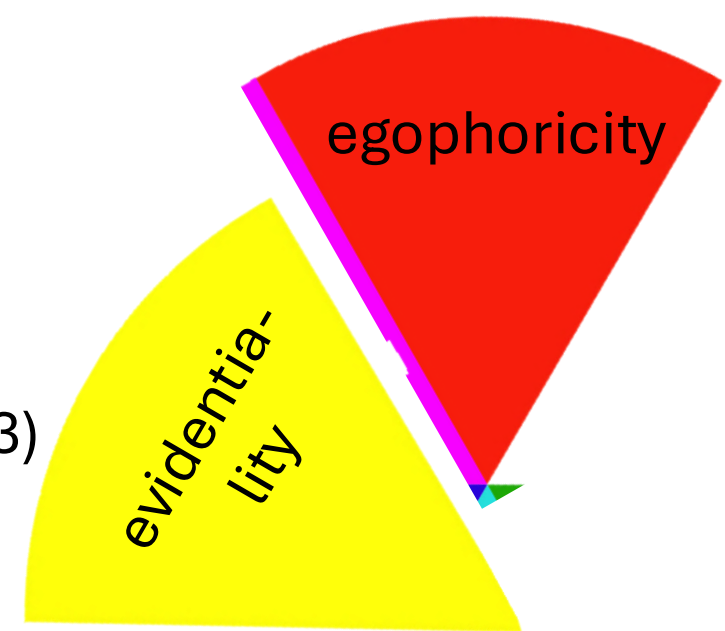


Discussion for each:

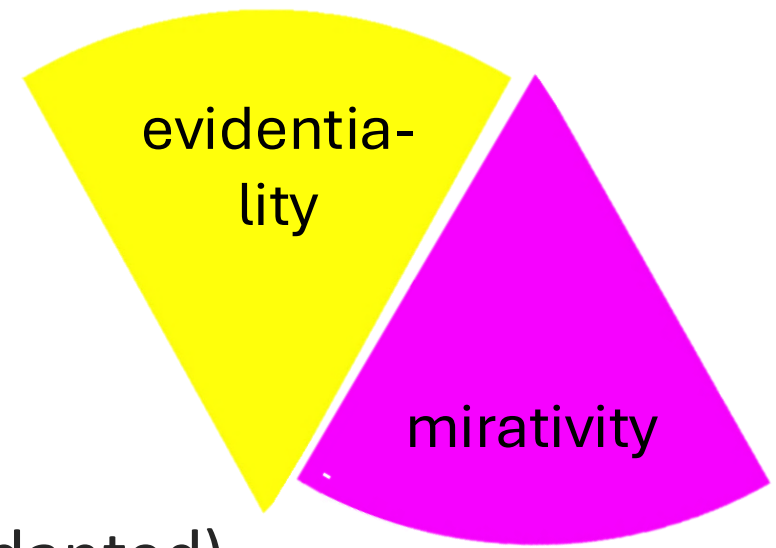
- Is it an independent category?
- What is the definition of the category?
- Is the category universal?

Duna (San Roque 2015: 191-192, via Bergqvist & Grzech 2023)

- source of evidence
- but distributed as egophoric marking



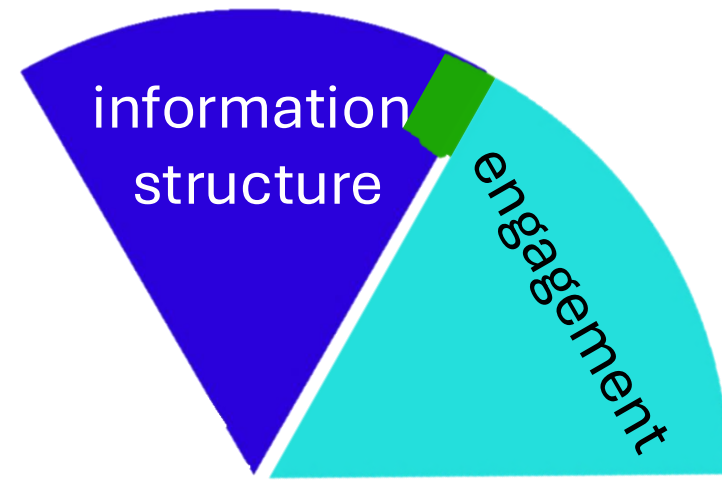
- (11) a. *Ita-ka no mbou ali-tia.*  
pig-ERG 1.S garden dig-PFV.VIS  
'Pigs dug up my garden (I saw).'
- b. *Ita-ka no mbou ali-tia=pe?*  
pig-ERG 1.S garden dig-PFV.VIS=Q  
'Pigs dug up my garden (you saw)?'



Fur (Nilo-Saharan, Sudan; Waag 2010: 260, glosses adapted)

- speaker has witnessed event
- unexpectedness for the addressee

(12) D-íí-ŋ            bára    **kaman**    ʔéla.  
SG-2SG-GEN   brother   EV            3SG.come.PFV  
'Your brother has really come.' (I have seen him)



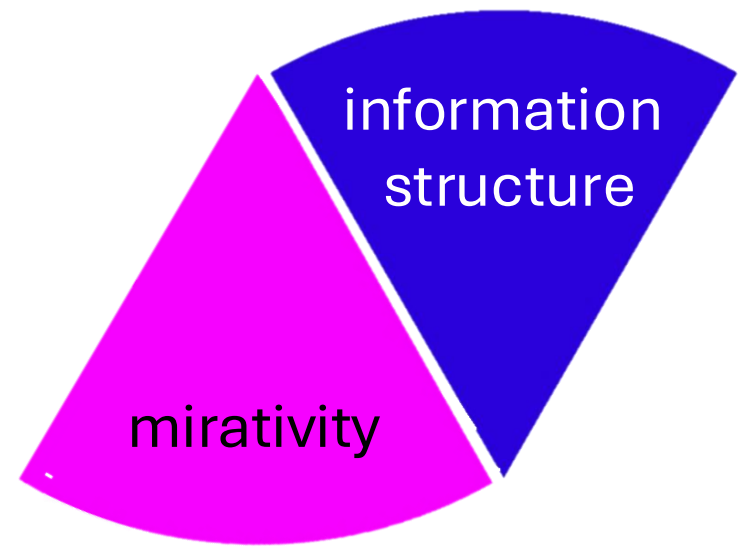
Coastal Marind (Papuan; Olsson 2019)

‘absconditive’ (info hidden to hearer) “expresses the addressee’s lack of attention, or lack of epistemic access, to the state of affairs conveyed by the verb.”

- thetics
- verum
- privileged access

(13) Kosi-awe      **up**-ø      kw-ayit-a.  
small-fish(II)    **ABSC**:II-3SG.A- INESS-run-around:3SG.U-EXT  
‘There’s a little fish swimming around inside.’

(14) **Ep**-ak-o-      lay-e.  
**ABSC**:I-1SG.A-3SG.DAT- talk-IPFV  
‘I *am* talking to him.’



Rukiga (Bantu, Uganda; Asiimwe & Van der Wal 2021)

- contrastive topic
- surprise

(15) O-kw-éézi (kw-ó) n-áá-kú-reeb-a.

AUG-15-moon 15-CM 1SG.SM-N.PST-15OM-see-FV

‘The moon I have seen (the sun and/or the stars maybe I have not seen)’.

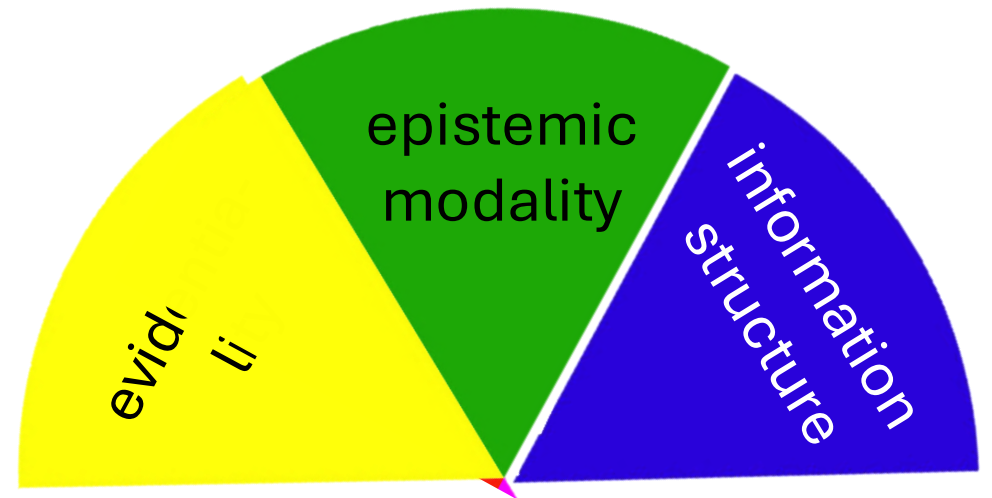
(16) Context: Someone has a function or has organised an event and sends out invitations. S/he does not expect many guests to turn up, but...

Abantu bó bíija.

a-ba-ntu ba-o ba-ij-a

AUG-2-person 2-CM 2SM.N.PST-come-FV

‘People really came (many people turned up, more than those expected).’



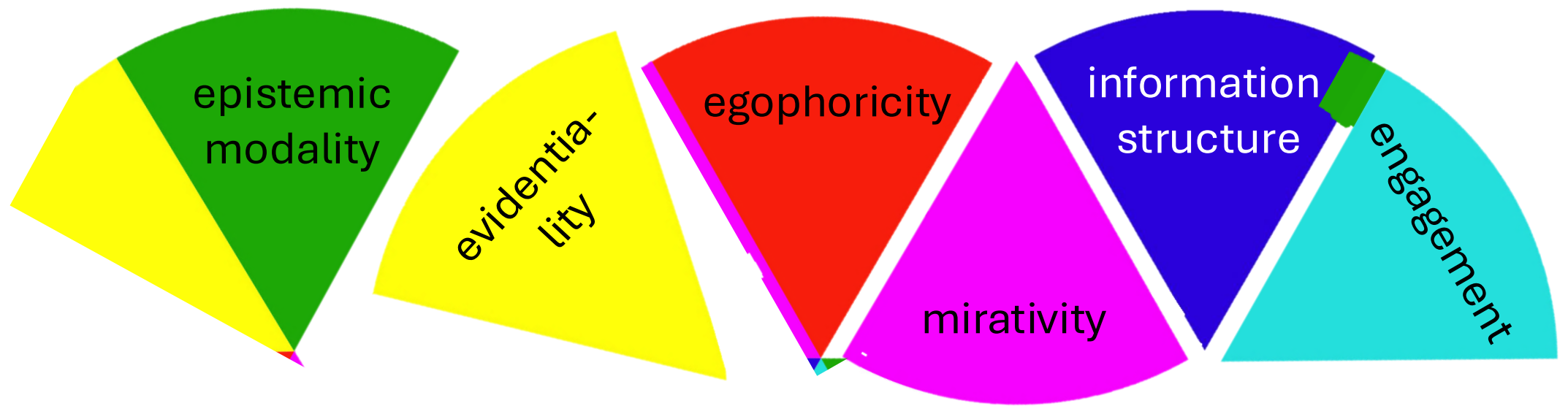
!Xun (Khoisan, Namibia; König 2013: 80, glosses adapted)

- non-firsthand evidential
- uncertainty
- contrast with addressee's expectation

(17) Hà á **cālā** kē ú |'àn hà.

PRO Q **NONFIRSTH.EV** PST go with PRO

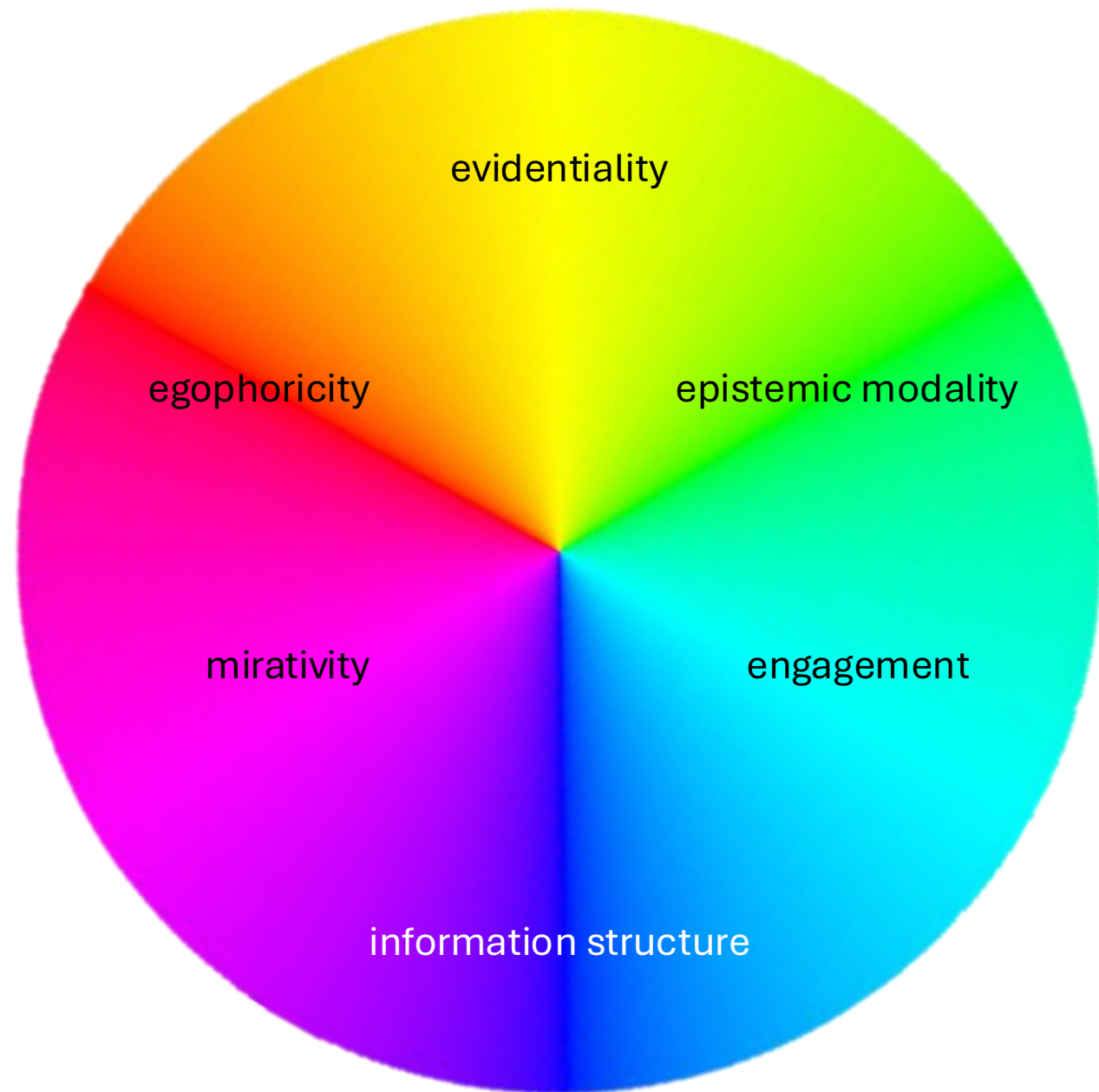
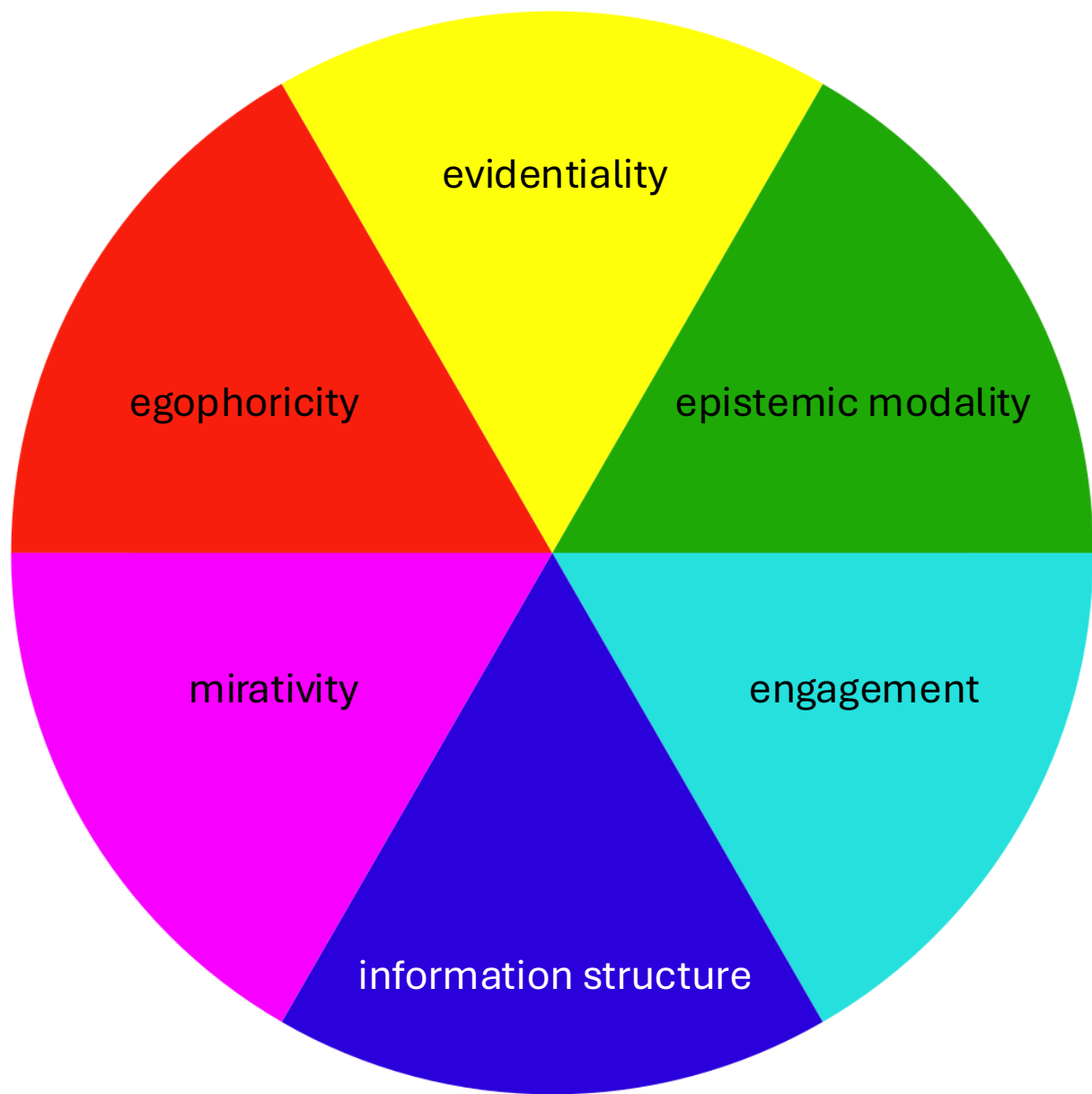
‘He is said to have left together with her (but I doubt it).’

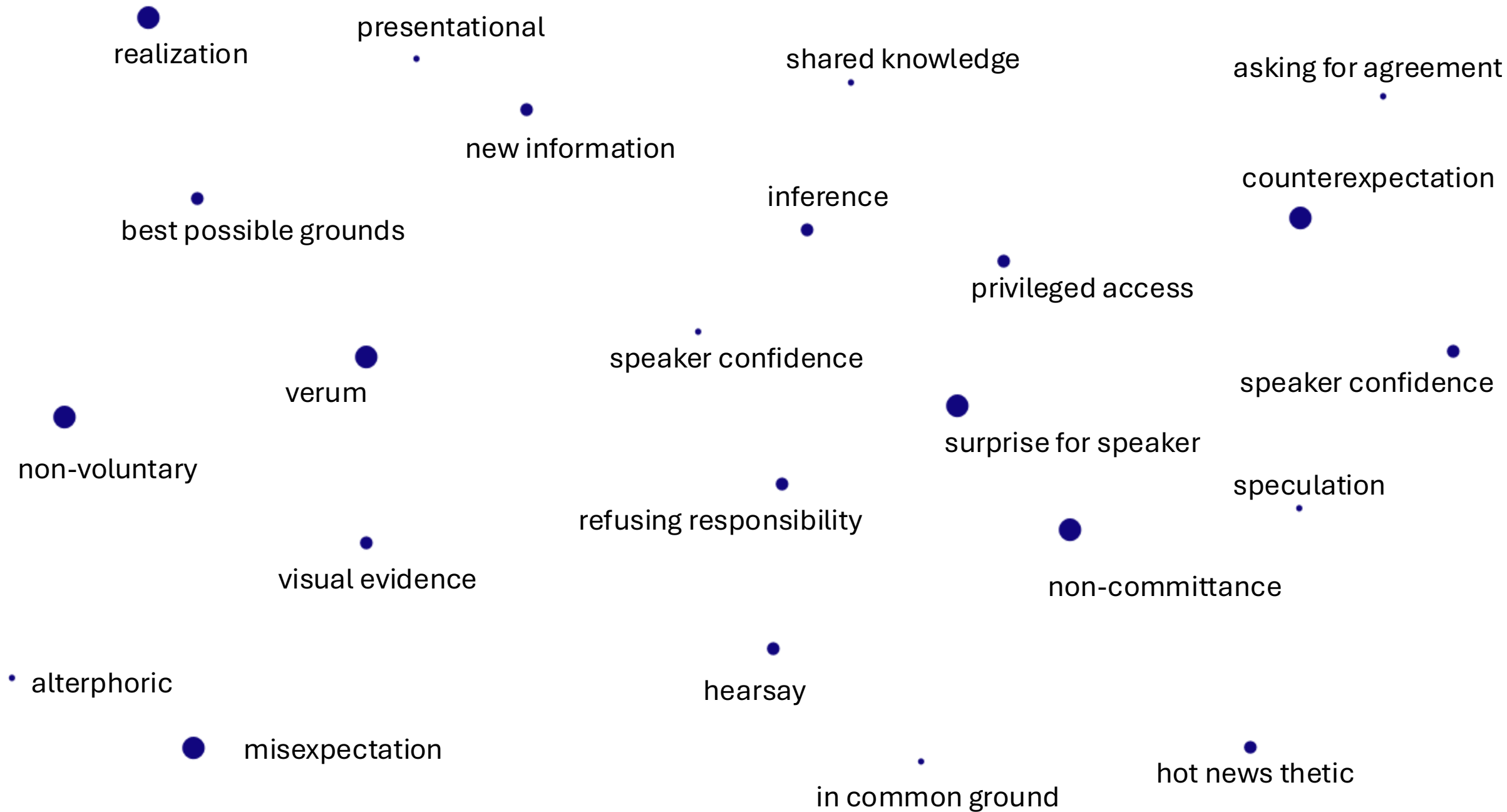


It is a widely known fact that the abovementioned categories overlap in form, meaning, and function (Bergqvist & Kittilä 2020:4)

“The four groups of knowledge-related meanings – evidentiality, egophoricity, mirativity, epistemic modality – interact. [...] In such cases, one category is used as a ‘strategy’ to express some meanings which are core to another one.” (Aikhenvald 2023: 6)







# Conceptual space

If... (assumptions & hypotheses)

- These are universal interactional needs
- They represent a universal conceptual space
- Linguistic structure is indicative of conceptual structure
- Only adjacent concepts can be expressed together (Croft's connectivity hypothesis)

then...

- we can use co-expression within a language and across languages to see which aspects are closer together
- we can use the consecutive and overlapping co-expression to create a multidimensional map
- with this map we get an insight into the conceptual space of **epistemic and attentional knowledge management**

# MapLE research questions



1. What are the nodes in this conceptual space?
2. How are the nodes grouped in linguistic strategies?
3. What does the grouping tell us about the relations between the nodes?
4. What do those relations reveal about our linguistic ability, our conceptual organisation, and their possible interaction?

# 1. What are the nodes?


		meta-information-up...																			
		</																			

## 2. How are the nodes grouped?

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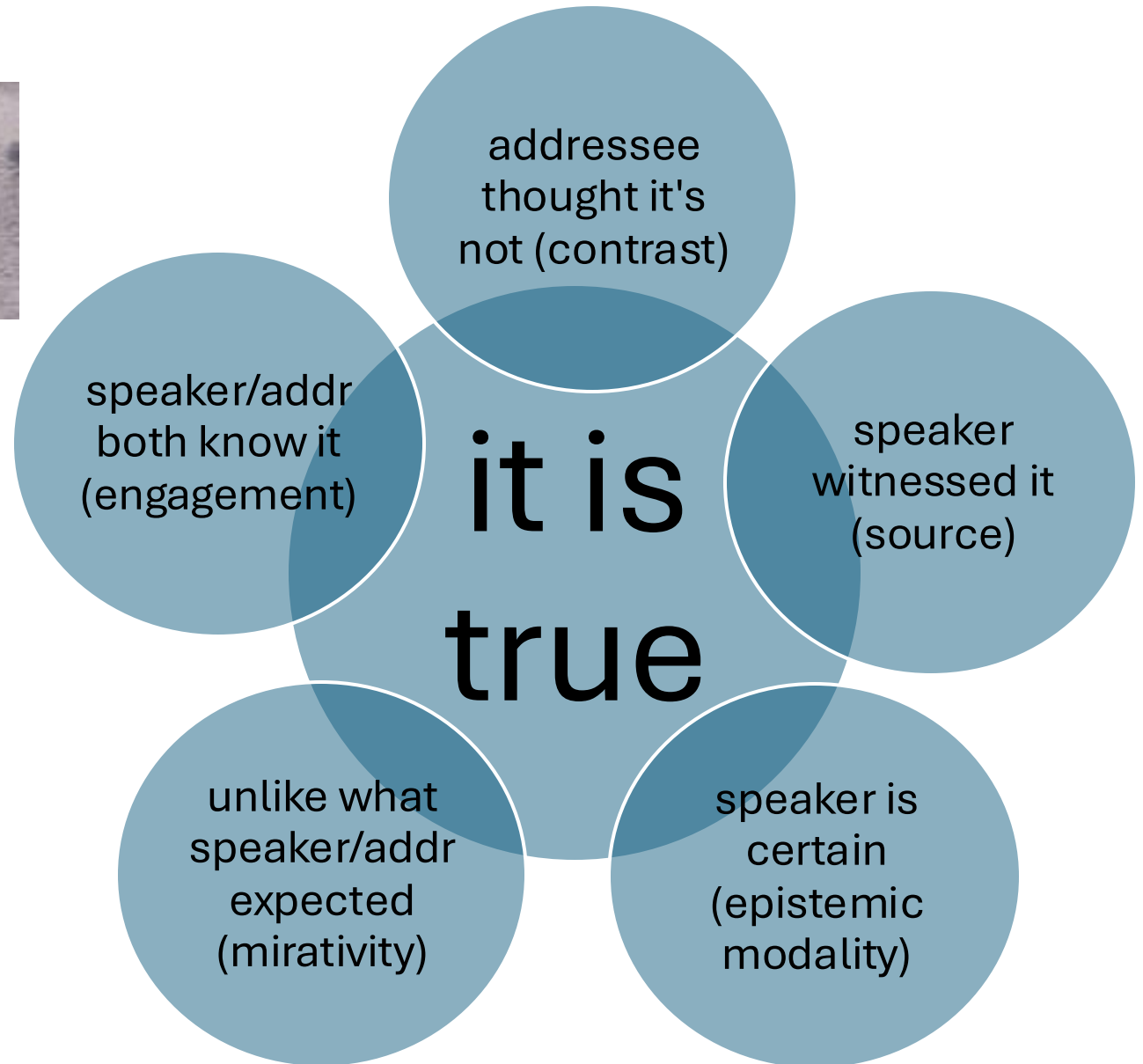


(Aikhenvald 2005: 303)



(Aikhenvald 2005: 303)







Crisófia Langa da Câmara

Cinyungwe (Mozambique, Crisófia Langa da Câmara)

(18) Ku-**nemb**-a w-a-**nemb**-a(=di).

INF-write-FV 2SG.SM-PST-write-FV=VERUM

‘You DID write.’ (I didn’t think you did) /

‘You really wrote!’ (more than expected)

(19) A: I am not convinced that he can sing. He told me he can. Have you ever heard him sing?

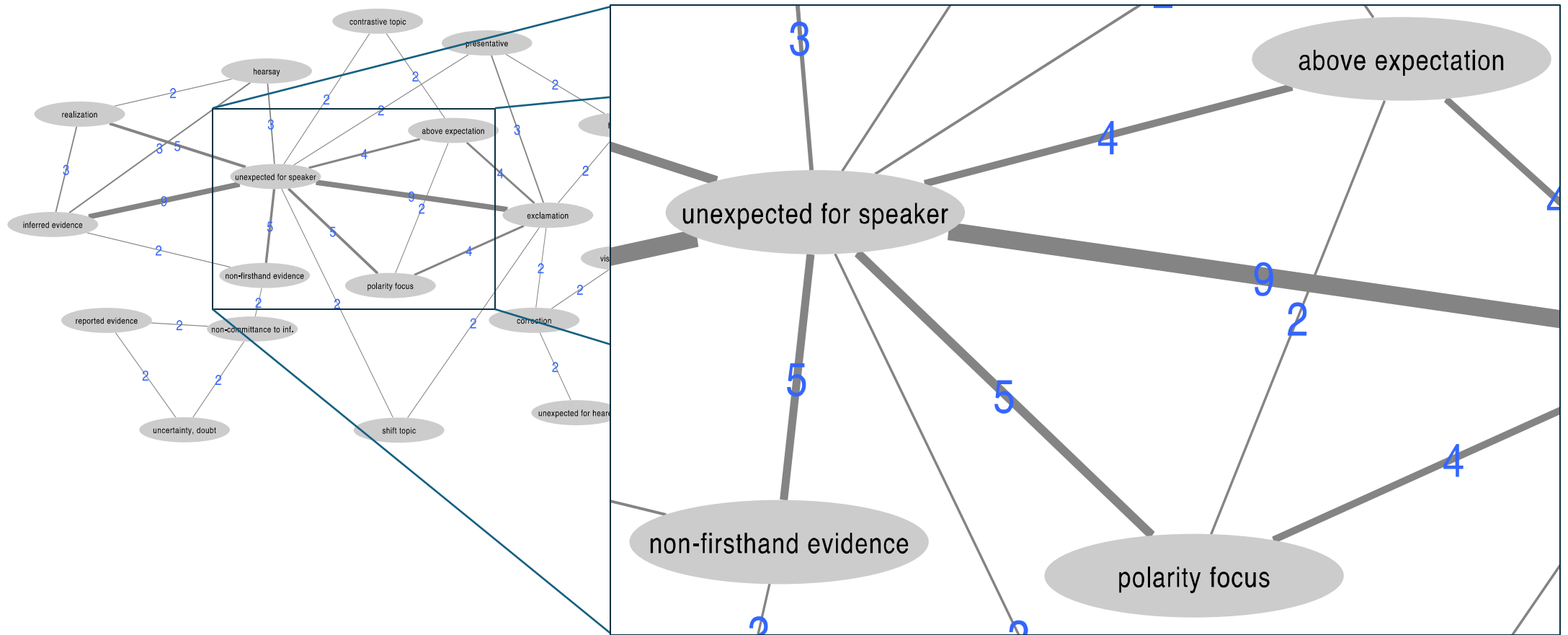
B: A-ni-yimb-a=**di**

1SM-PRS-sing-FV=VERUM

‘He DOES sing!’

Interpretation: “I am confirming that he can really sing. I heard him singing; I am the witness.”

### 3. What is the relation between the nodes?



## 4. What do the relations reveal?

- Test typological predictions

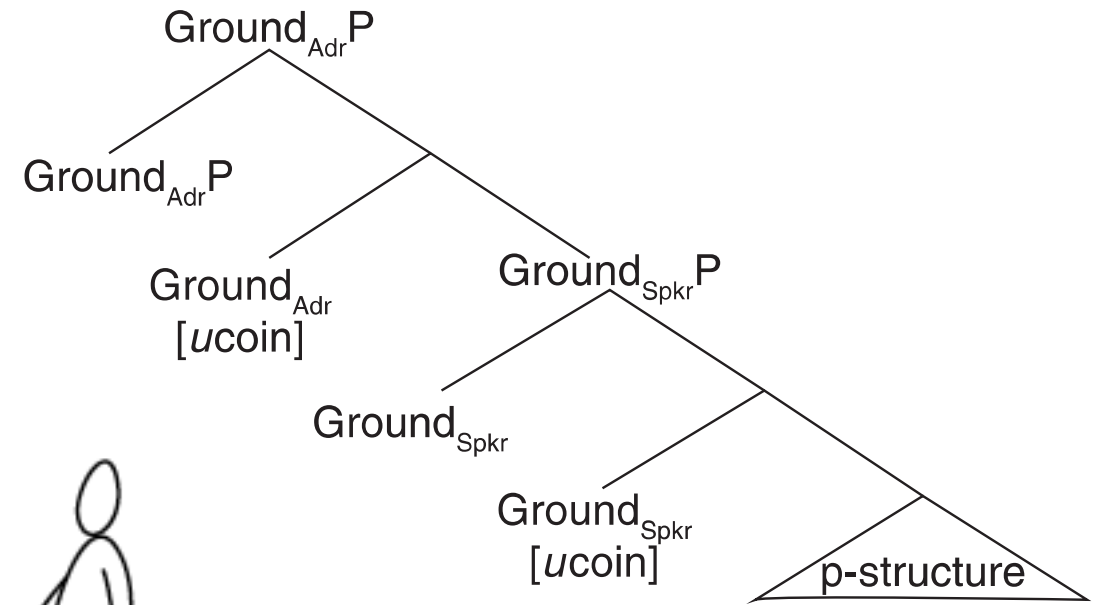
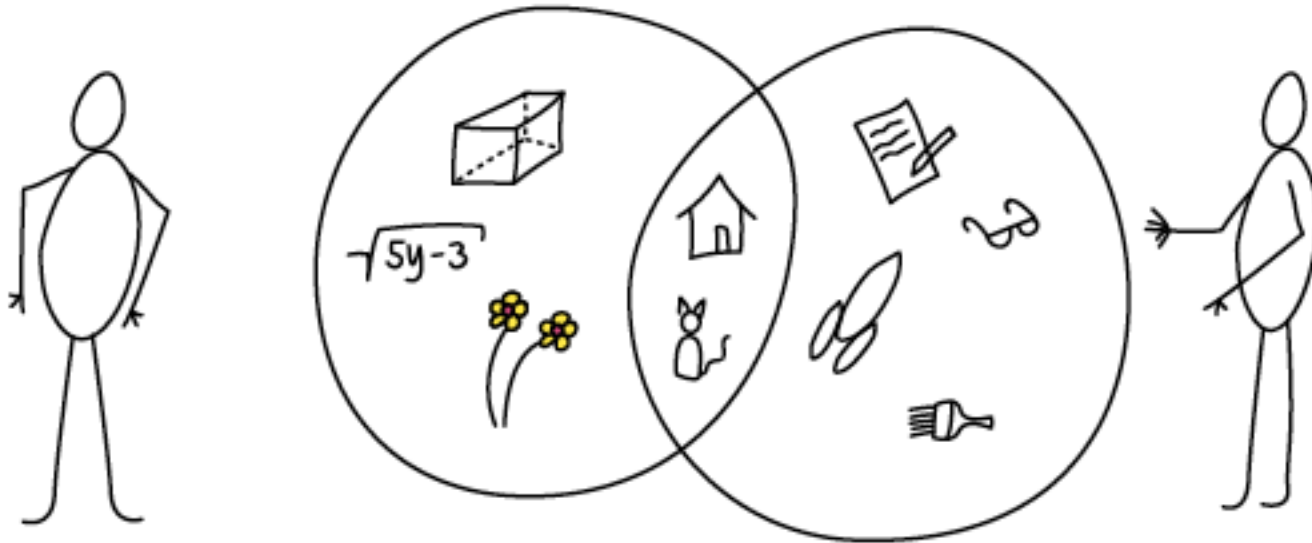
“Visual or direct evidentials hardly ever have any mirative extensions.”  
(Aikhenvald 2021: 35)



“only certain kinds of evidentials can be used to express surprise; specifically, in systems with two or more grammatical evidentials, the evidential that is most specialized for **sensory evidence** is usually the one that expresses mirativity.” (Peterson 2016: 1329)

## 4. What do the relations reveal?

- Test typological predictions
- Implications for theoretical models



## Territory of knowledge (Kamio 1997)

## 4. What do the relations reveal?

- Test typological predictions
- Implications for theoretical models

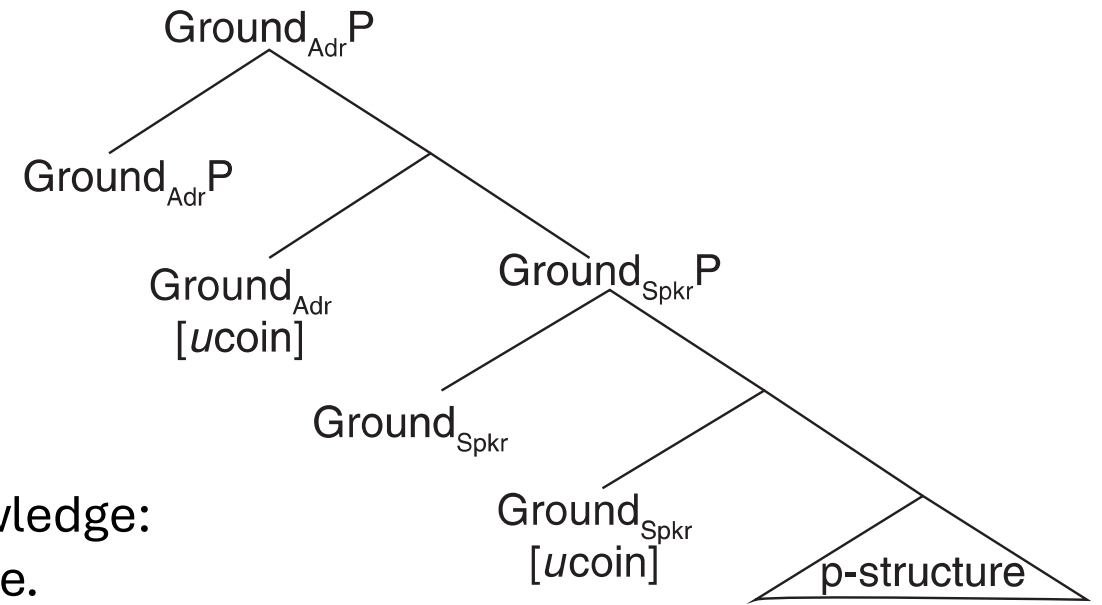
Wiltschko (to appear):

Bare declarative clauses are used to express knowledge:

Uncertainty must be marked; certainty need not be.

[<sub>GroundSpkr</sub> Ground-Spkr [+ coin] [<sub>CP</sub> It's raining]]  
[<sub>GroundSpkr</sub> Ground-Spkr [+ coin] [<sub>CP</sub> I suppose it's raining]]  
[<sub>GroundSpkr</sub> Ground-Spkr [+ coin] [<sub>CP</sub> I know it's raining]]

Mandarin: *le* as a marker of certainty?



GroundSpkr [+coin]

statements

1SG (na=na) pala ku-mtu-**s**  
(1SG.NOM=TOP) plantain eat-IMPF-**EGO**  
'I am eating plantains.'

2SG (nu=na) pala ku-mtu-**y**  
2SG.NOM=TOP) plantain eat-IMPF-**NONEGO**  
'You are eating plantains.'

3SG (us=na) atal ayna-mtu-**y**  
(3SG.NOM=TOP) chicken cook-IMPF-**NONEGO**  
'S/he is cooking chicken.'

GroundSpkr [-coin] OR GroundAdr [+coin]

questions

1SG min-ta=ma ashap-tu-**y**?  
who-ACC=INTER annoy-IMPF-**NONEGO**  
'Whom am I annoying?'

2SG shi=ma ki-mtu-**s**?  
what-INTER do-IMPF-**EGO**  
'What are you doing?'

3SG min=ta-s a-mtu-**y**?  
where=LOC-ABL come-IMPF-**NONEGO**  
'Where is he coming from?'

Awa Pit (Curnow 2002)

Speas (2004): "Dick Hudson commented in the discussion that these morphemes could be described as agreement with the source of information or authority, which is the speaker in a statement and the hearer in a question."

*kwisa-té      **na**-nuk-kú*

dance-IMPF   **SPKR.ASYM**-be.LOC-1s

‘I am/was dancing.’ (informing)

*kwisa-té      **ni**-nuk-kú*

dance-IMPF   **SPKR.SYM**-be.LOC-1s

‘I am/was dancing.’ (confirming)

Kogi (Bergqvist 2016: 2)



*nas hanchibé sha-kwísa=tuk-kú*  
1S.IND good ADR.ASYM-dance=be.LOC-1S  
'I am dancing well (in your opinion)?'

*ma kwisa-té shi-ba-lóx*  
2S.IND dance-IMPF ADR.SYM-2S-be  
'You're dancing (you look like you are)?'  
Kogi (Bergqvist 2016: 3)

GroundSpkr [+coin]  
GroundAdr [-coin]

GroundSpkr [-coin]  
GroundAdr [+coin]

	speaker- authority	addressee- authority
asymmetric	<i>na-</i>	<i>sha-</i>
symmetric	<i>ni-</i>	<i>shi-</i>
non-speech participant	<i>ska(n)-</i>	

GroundSpkr = GroundAdr

GroundSpkr ≠ GroundAdr

Kogi (Evans et al. 2018b:145, Bergqvist 2016: 2)

Kemal gel-di  
Kemal come-PST  
'Kemal came.'

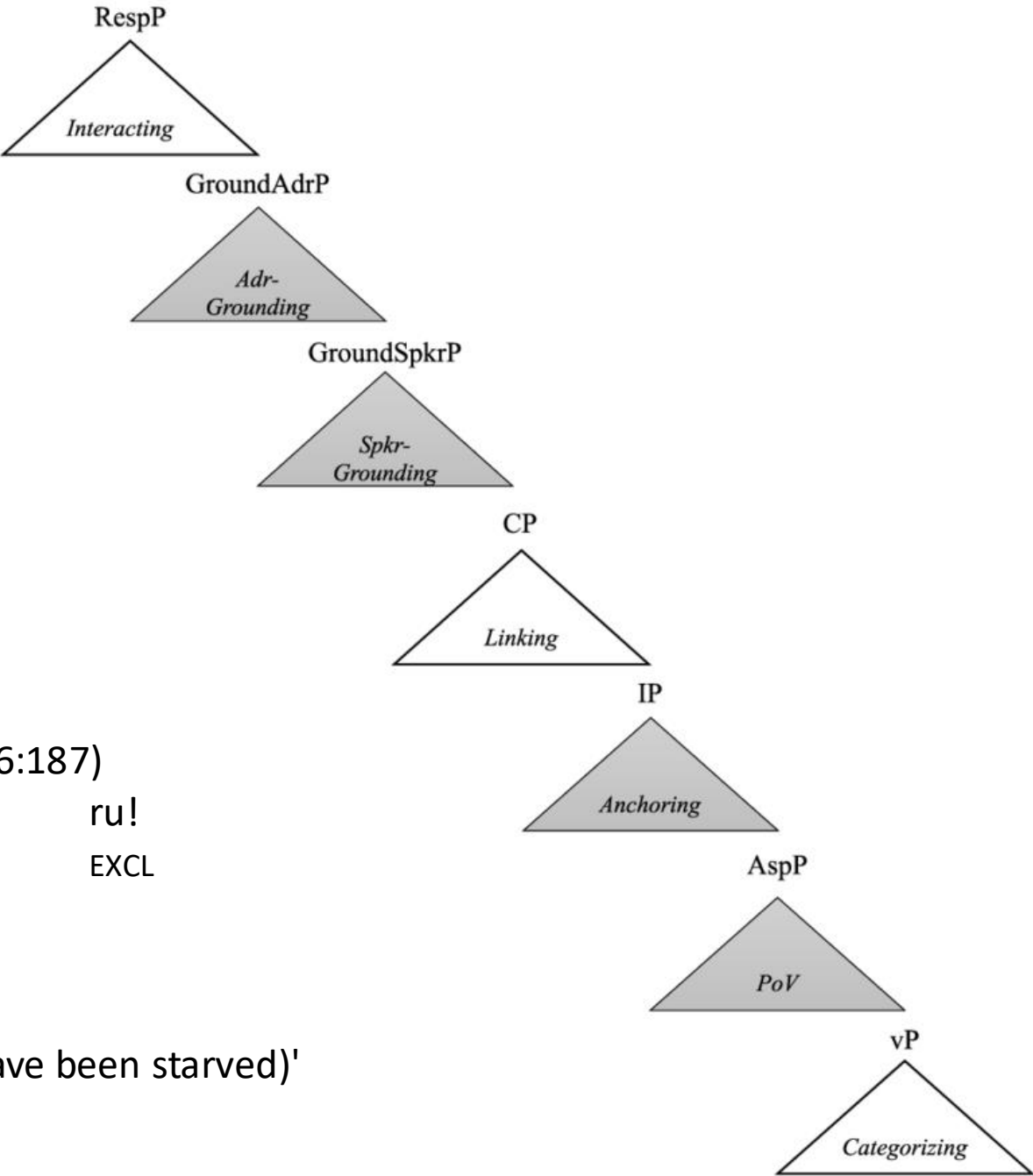
*Kemal gel-miş.*  
Kemal come-PST.IND/**MIR**  
'Kemal came.'

Turkish (Slobin & Aksu 1982: 186-187)

Dhimal (Sino-Tibetan, Nepal; King 2009: 251, 252, via García 2016:187)

(7) dhemal-lai      katha      phər̥ra      mare-**sa**-khe      ru!  
Dhimal-PL      language      flowingly      kill-**MIR**-IMPF      EXCL  
'Why, it seems [he] speaks Dhimal fluently!'

(8) rem-pha      gwamgwam-pa      ca-**sa**-hi  
be.good-do      heartily-do      eat-**MIR**-PST  
'It seems he really ate with gusto (the poor thing must have been starved)'



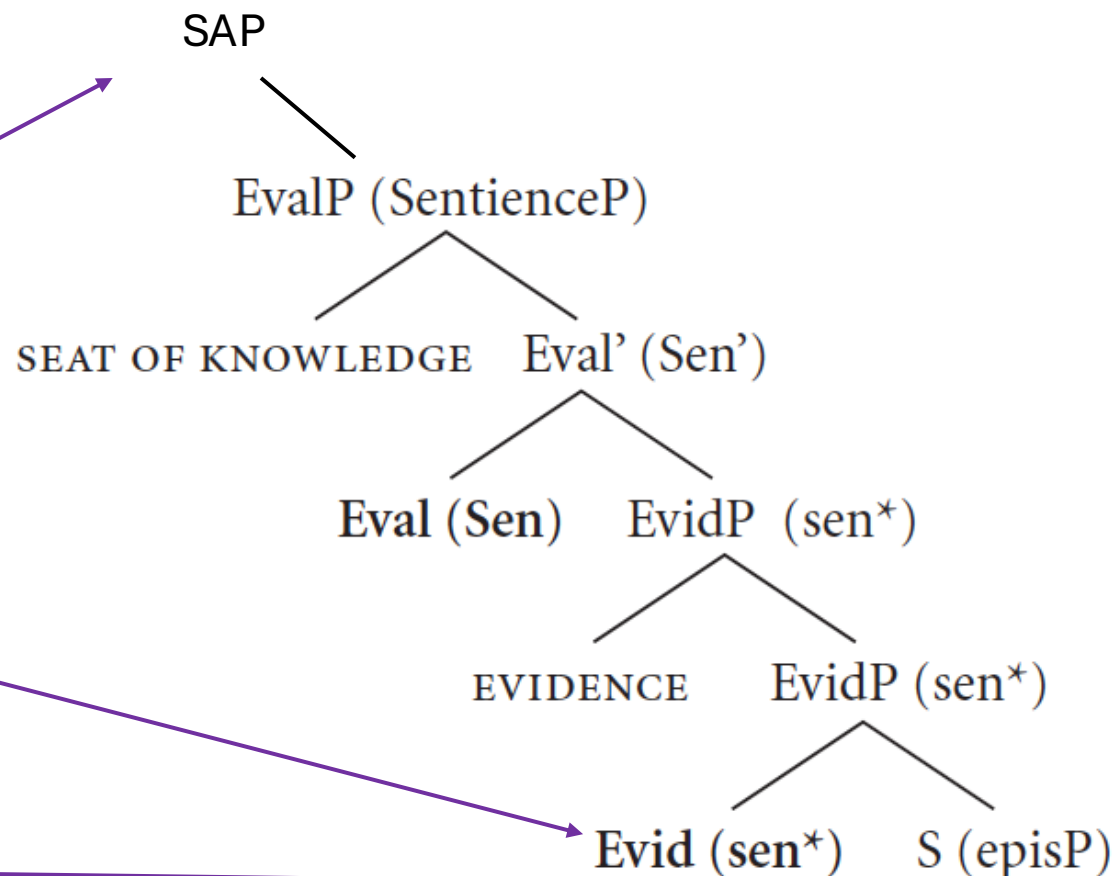
SAP > EvalP > EvidP > EpisP

Cantonese (Tang 2015: 436)

Tenggong keoi wui heoi wo5.  
hear-say he will go WO  
'It is said that he will come.'

Keoi wui heoi wo4.  
he will go WO  
'Unexpectedly he will go.'

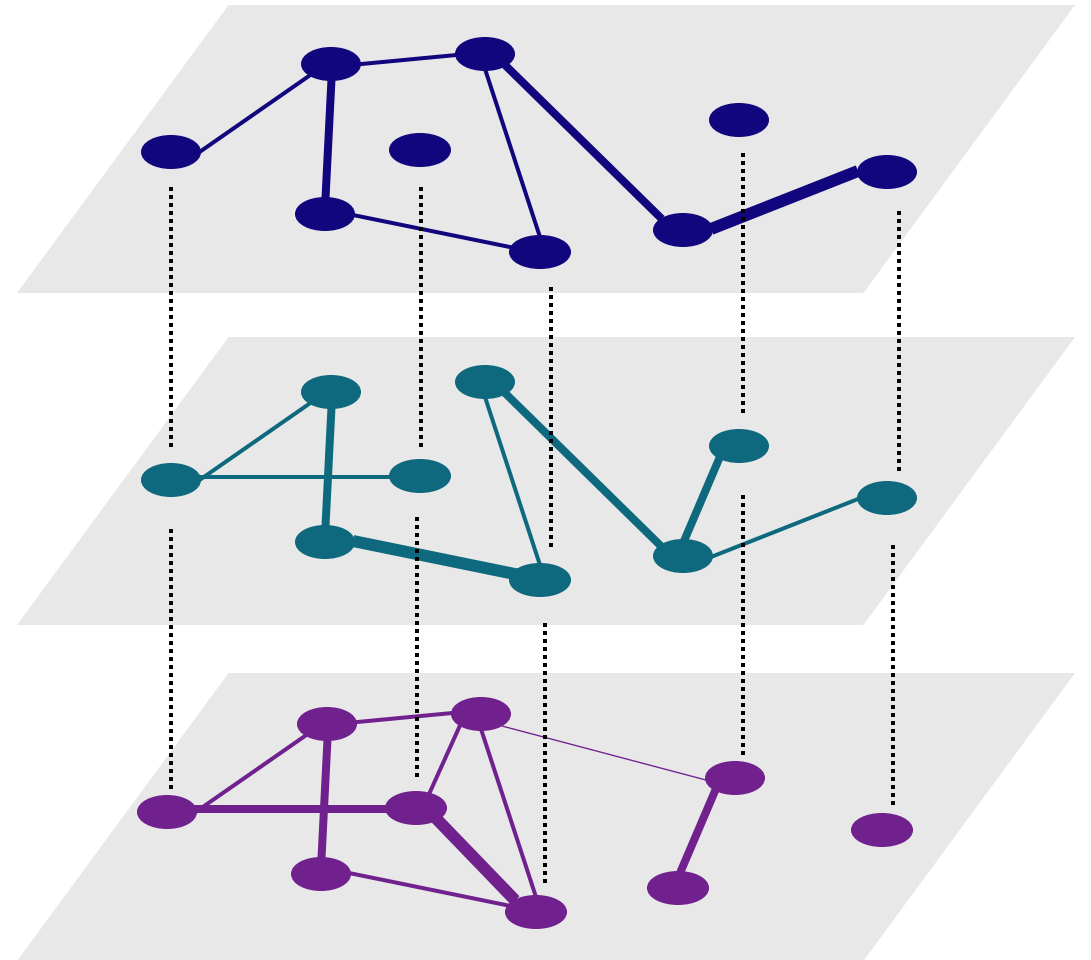
Keoi wui heoi lo1.  
he will go LO  
'He (obviously/definitely) will go (needless to say).'

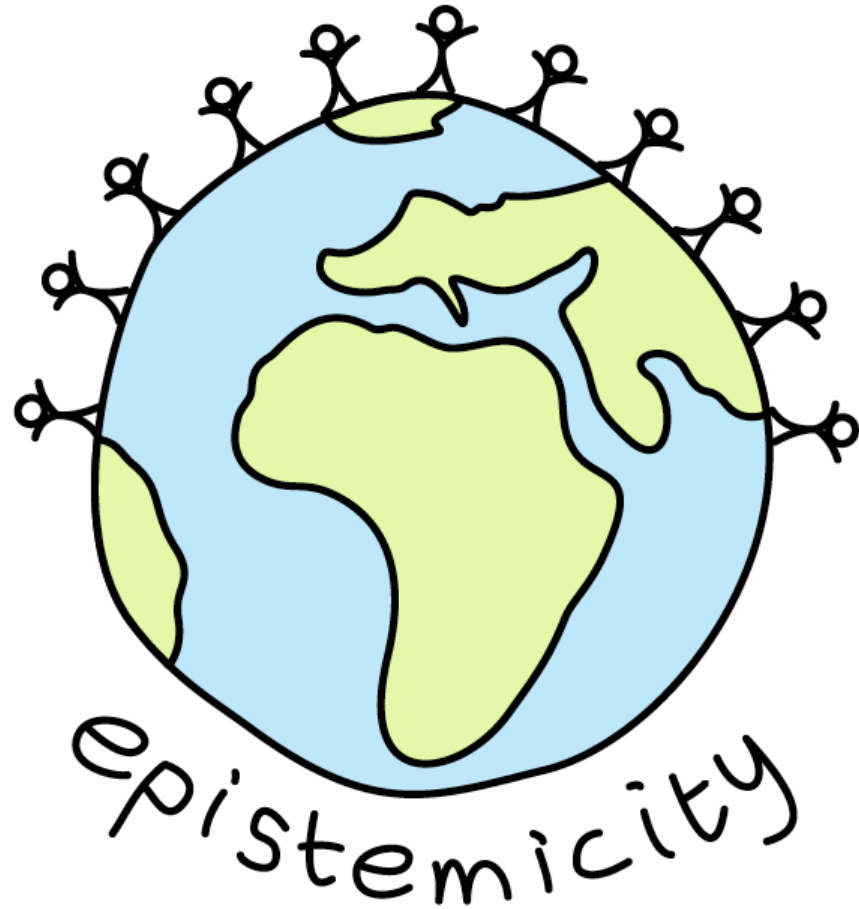


Speas & Tenny (2003: 334)

## 4. What do the relations reveal?

- Test typological predictions
- Implications for theoretical models
- Relativity hypothesis





- Aspects of epistemicity can be found anywhere in any language
- They form one conceptual space
- But taking them as cross-linguistically valid categories may not be most interesting or helpful

# Thank you!



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