

# Frames of reference in Chiapas Zoque descriptions of location and orientation

Luke McDermott, University of Manchester

Egocentric

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# Overview

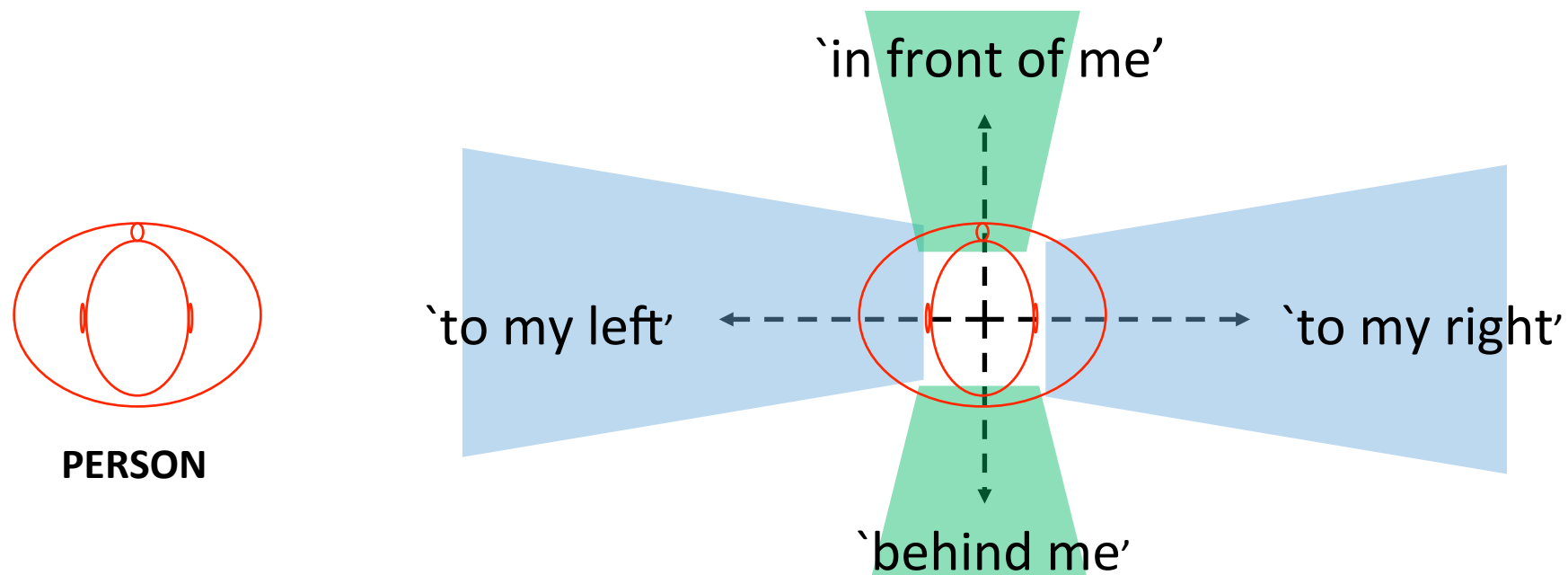
- Introduction to frames of reference
- Chiapas Zoque and fieldwork
- Egocentric frames in location and orientation
- Egocentric descriptions in Chiapas Zoque
- Discussion of Ball and Chair data
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# Frames of reference (FoRs)

- Coordinate systems that partition space => a set of axes
- Directions or regions within these axes are associated with linguistic spatial relators



# Why investigate linguistic FoRs?

- Central to the debate around the role language plays in cognition
- Strong suggestions for connection between use of FoRs in language and cognition (see Pedersen et al, 1998 for example)
- Considerable efforts have been made to determine degree and nature of variation in FoR use in language (see Levinson & Wilkins, 2006 and O'Meara & Perez Baez, 2011).
- First FoR data presented from Zoquean language, second from a Mixe-Zoquean after Ayutla Mixe (Romero, 2011)

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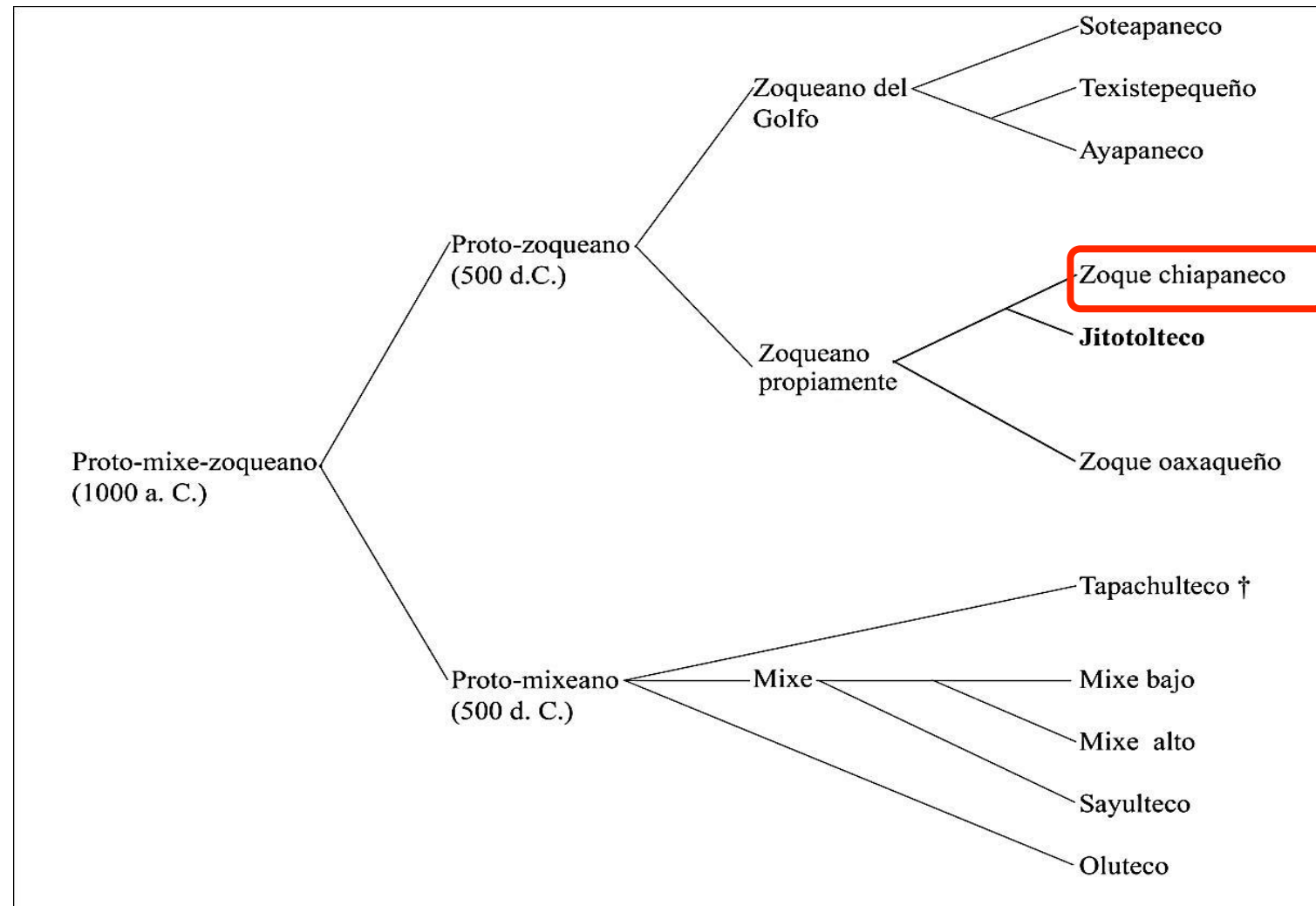
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# Chiapas Zoque

## Typological features:

- polysynthetic
- head-marking
- ergative-absolutive alignment
- “free word order”
- completive-incompletive TAM system

see Faarlund, 2012, for more details



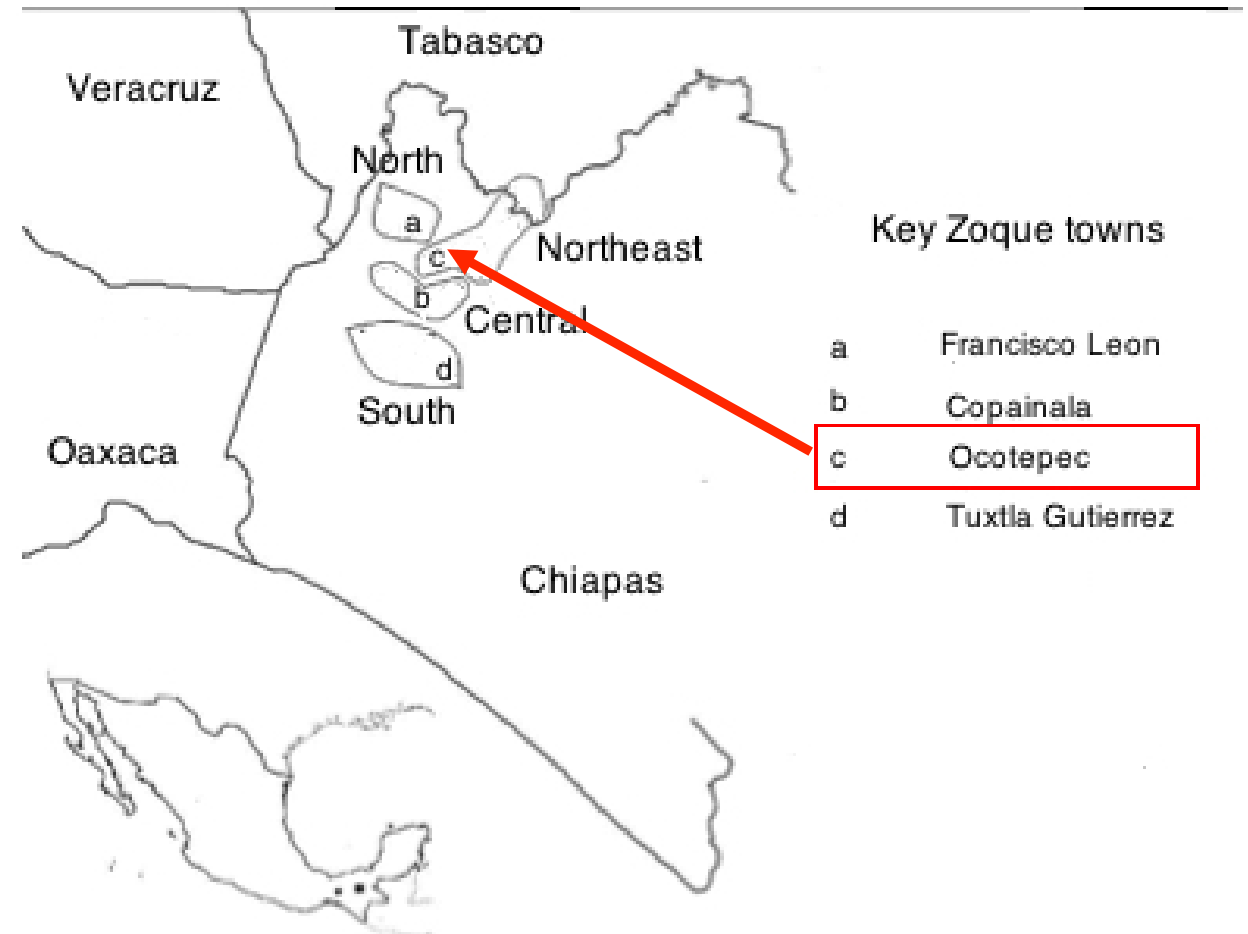
(Adapted from Zavala, 2011)



# Fieldwork (2013 – ongoing)

- Fieldwork conducted in Ocoatepec, Chiapas
- Population ~ 11,000
- 99% of whom speak CZ
- 64% bilingual

Data taken from Mexican Census (2010)



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- Topological relations picture series (Bowerman & Pedersen, 1992) – [May 2014](#)
- Picture series of positional verbs (Ameka et al, 1999) – [May 2014](#)
- Ball and chair communicative task (B&C; Bohnemeyer, 2008 ) – [Jan/ Feb 2015](#)
- The man and tree communicative task (Levinson et al, 1992) – [Jan/ Feb 2015](#)
- Motion land (Bohnemeyer, 2001) – [Jan/Feb 2015](#)
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- Naturalistic data: narratives, living space descriptions, route descriptions etc

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# Data collection – ball and chair task



- 48 Photographs in total
- 5 runs
- Participants: 6 men, 4 women
- Aged: 18-50
- All bilingual, L1 speakers

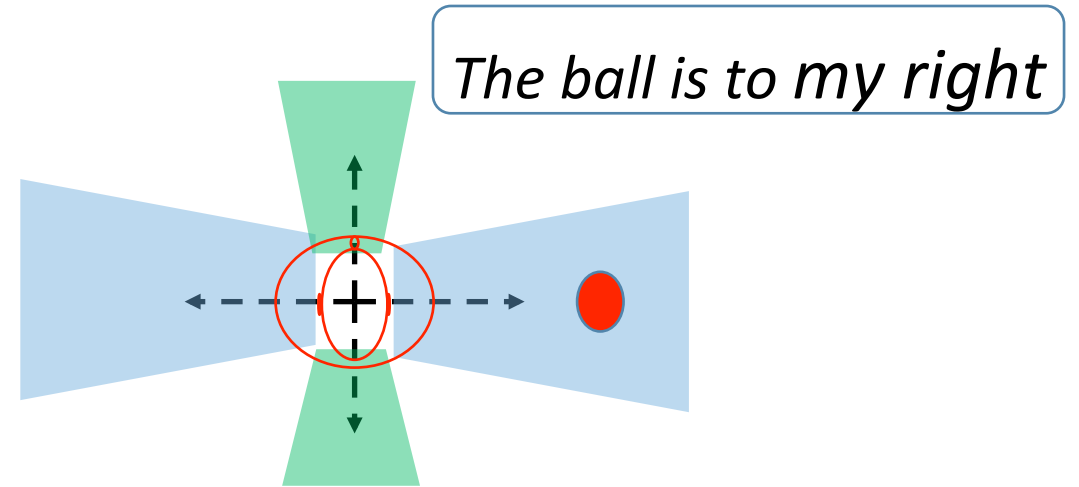


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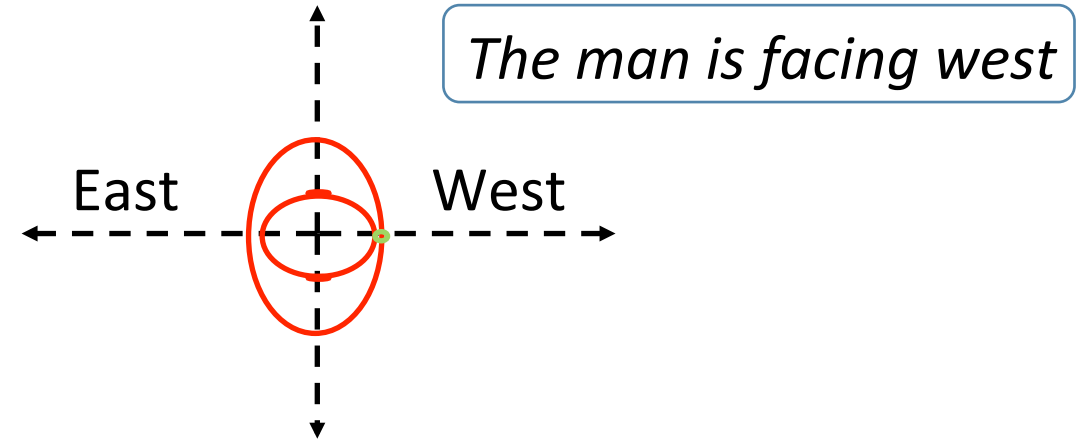
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# Locative and orientational statements

- **Locative:** specify a region in space where an object can be found

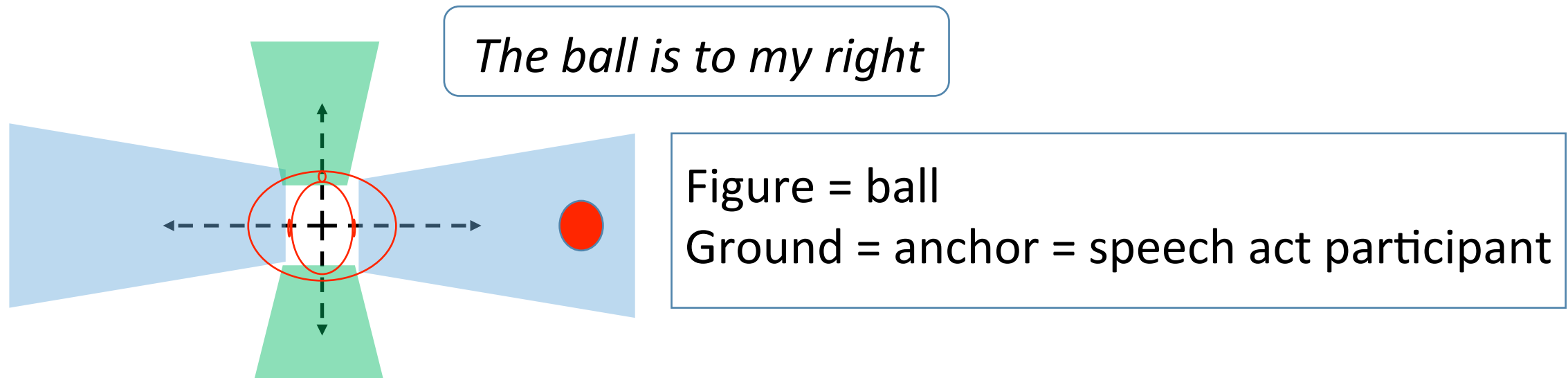


- **Oriental:** align a facet of an object with an EXTERNAL direction



# Classification of FoRs

- **Figure:** The object about which information is given
- **Anchor:** The entity that forms the *basis* for the axes of the FoR
- **Ground:** An entity relative to which a figure is located (location only)





# Egocentric frames

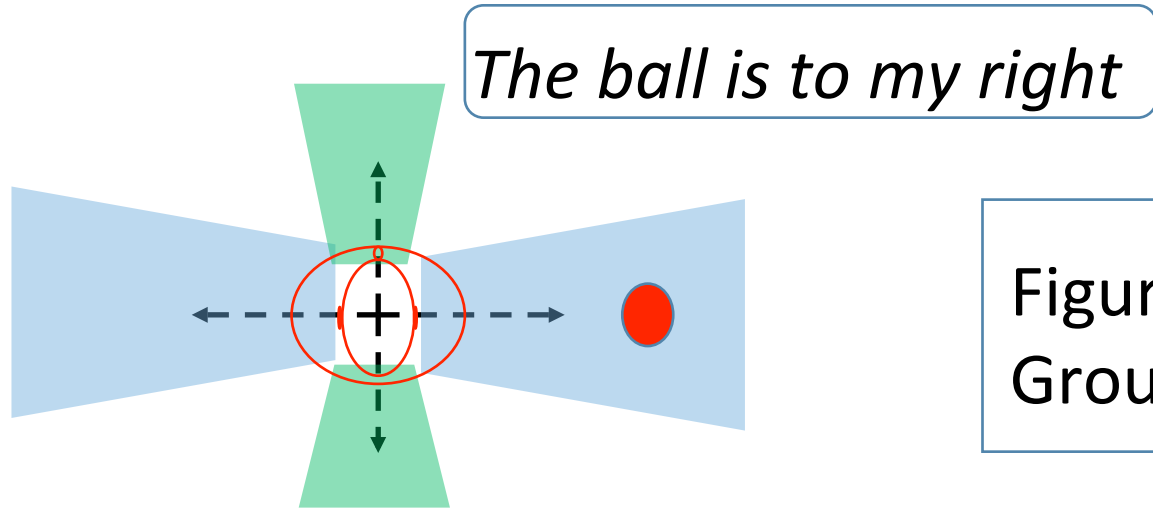


Figure = ball  
Ground = anchor = speech act participant

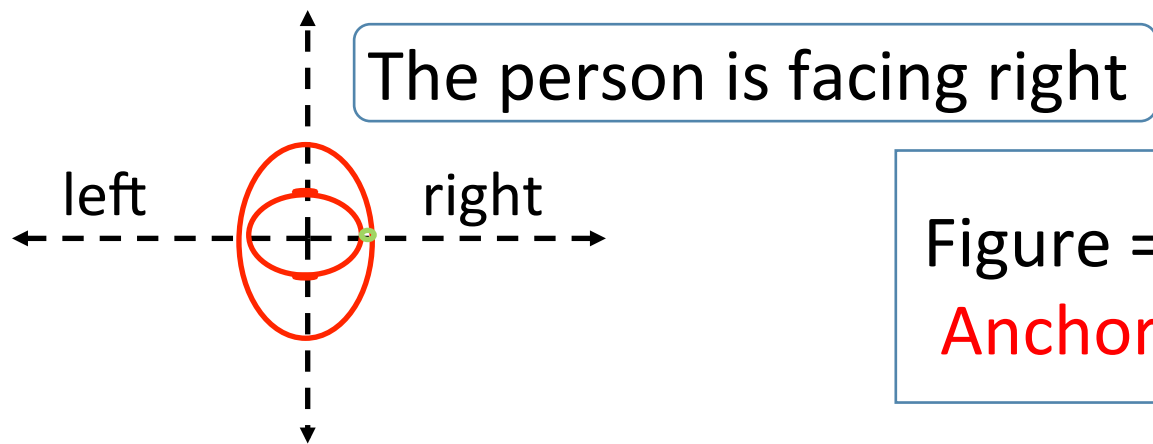


Figure = person  
Anchor = speech act participant

# Egocentric intrinsic frame => direct (location )

*The ball is to my right*

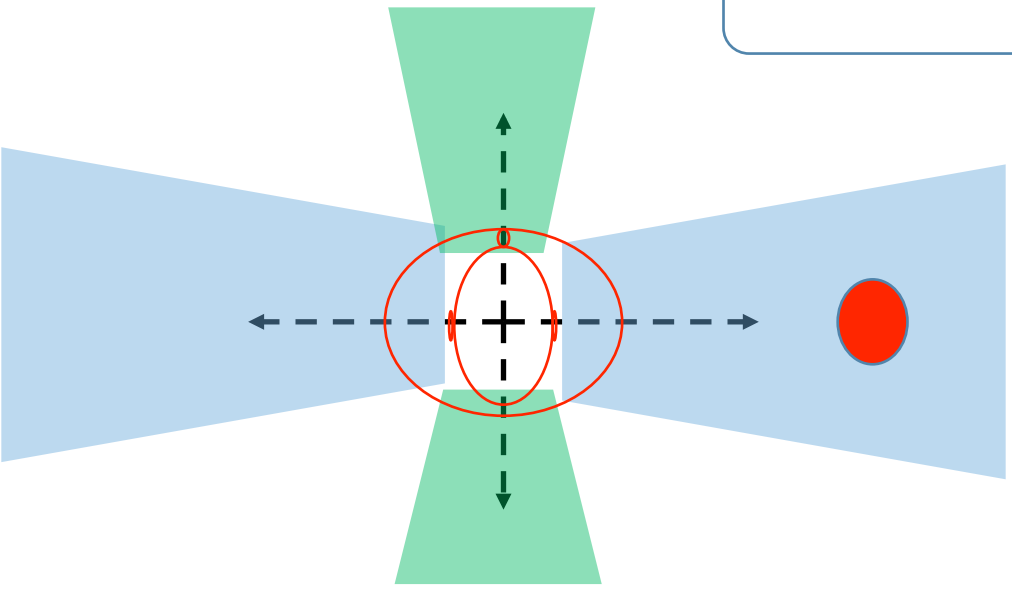


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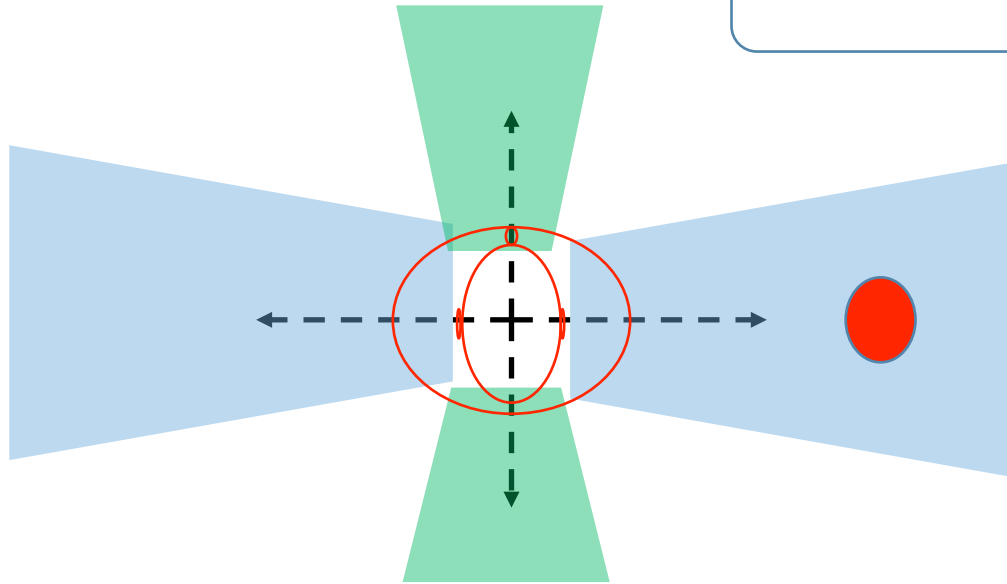
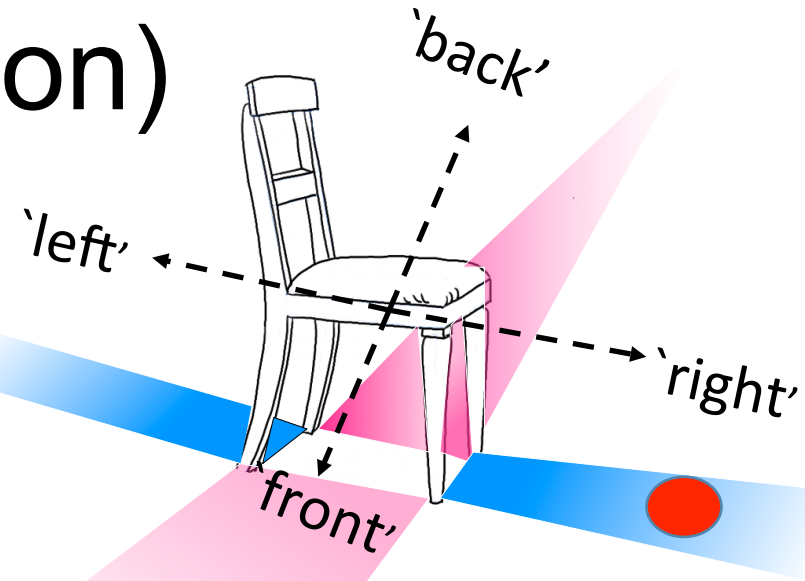


Figure = ball

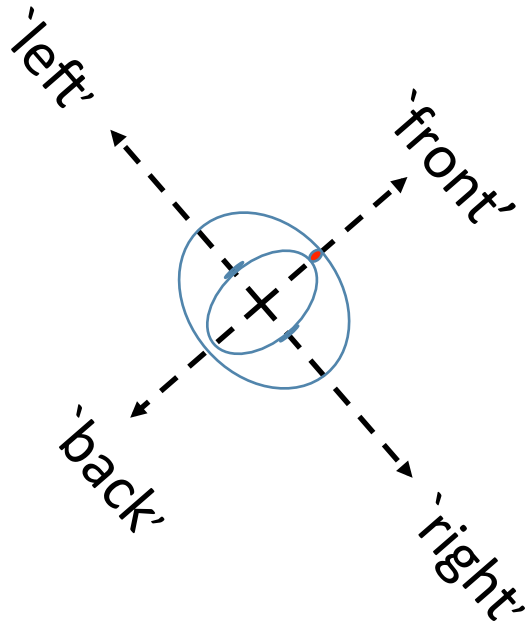
**Ground = anchor** = speech act participant

# Relative frame (location)

*The ball is to the right of the chair*



**Transposition**



Anchor = speech act participant  
**Ground ≠ speech act participant**

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# Spatial descriptions in Chiapas Zoque

- Three basic constituents (variable word order)

*[NP/DP]<sub>figure.phrase</sub>*

*PRED*

*[XP]<sub>ground.phrase</sub>*

Introduces the figure object – unmarked phrase

Varies between the different spatial domains:  
motion, location and orientation

different forms; same in all domains

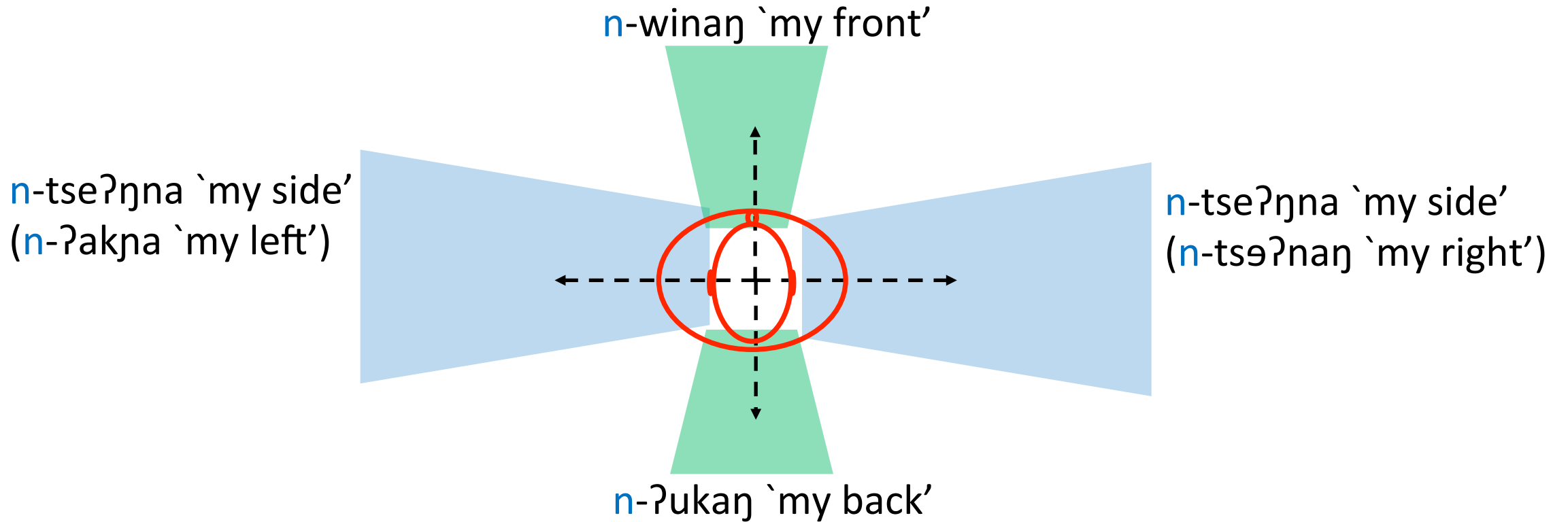
## Locative statement

- (1)    pelota ?it-u                    jəʔmə jəʔ    tsoʔt-pa-mə hama  
ball    EXIST-CMP here    this ?-ICP-LOC sun  
*‘This ball here is in the east’* (B&C 1-7, P)

## Orientational statement

- (2)    jəʔ poʔkstək jəʔmə ket-keʔt-u            jəʔmə (...) tsoʔt-pa=mə hama  
PRX chair    here    look-REP-CMP here    (...) ?-ICP=LOC sun  
*‘This ball here is again facing east’* (B&C 1-2, P)

# Direct frame (location)

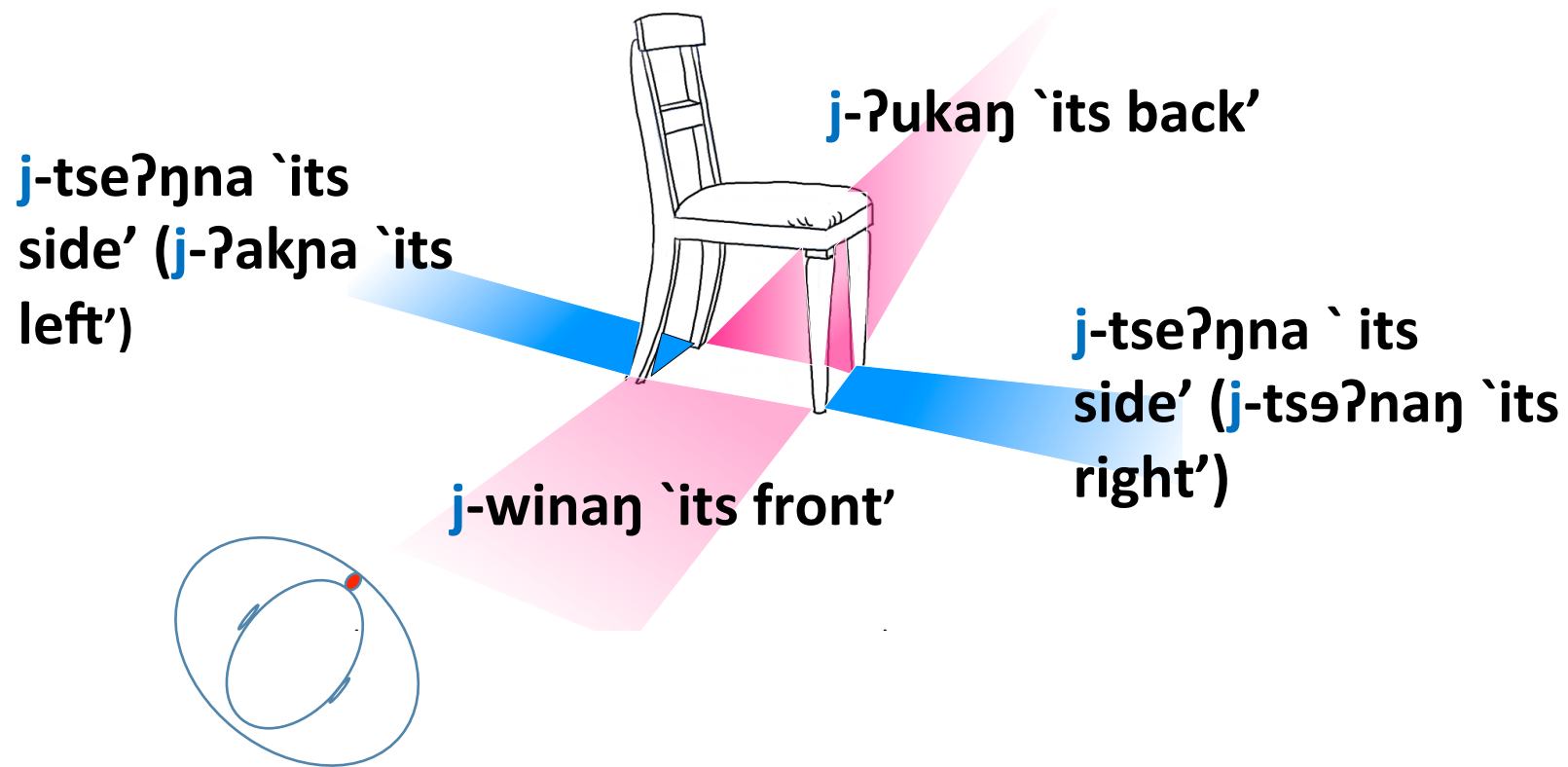


- (3) n-neʔ                      n-tsəʔnaŋ=ʔomo            ʔit-u            teʔ    pelota (...)  
 1PSR-PRO.GEN 1PSR-right.region=IN EXIST-CMP DET ball (...)  
 'The ball is on my right-hand side (...)' (B&C 4-7, B)





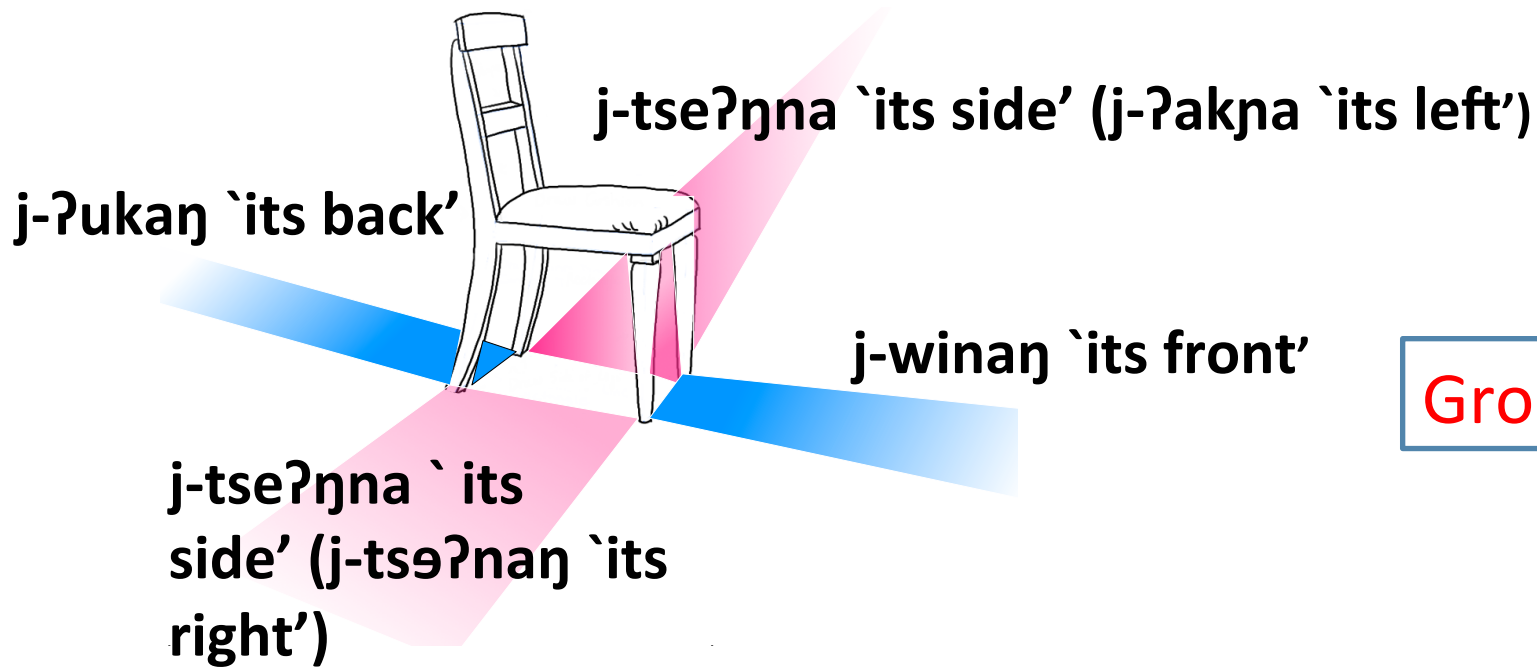
# Relative frame – locative statements



- (4) **j-neʔ**                      **j-ʔakna**=ʔomo                      ʔit-u                      tumə pelota nə  
 3PSR-PRO.GEN 3PSR-left.region=IN EXIST-CMP one ball PROG  
**j-sidi-u=pə**                      (...)   
 3ERG-fly-CMP=REL  
 'There is a ball to its left that is flying (...)' (B&C 2-2, AT)



# Object-centered frame (non-egocentric intrinsic)

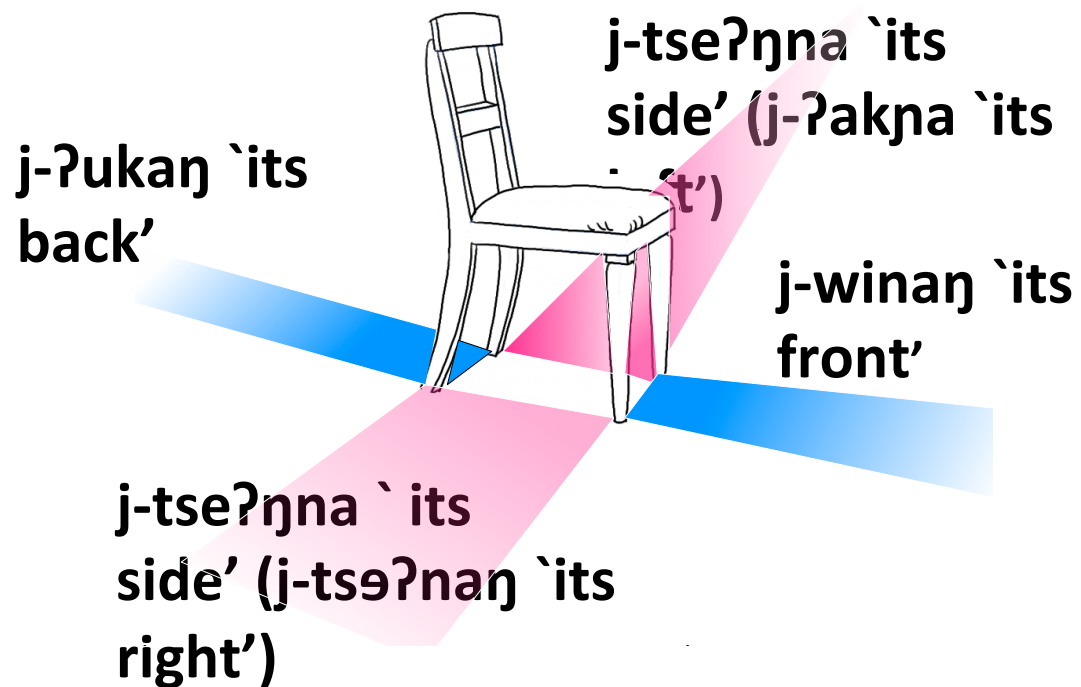


Ground = anchor = chair

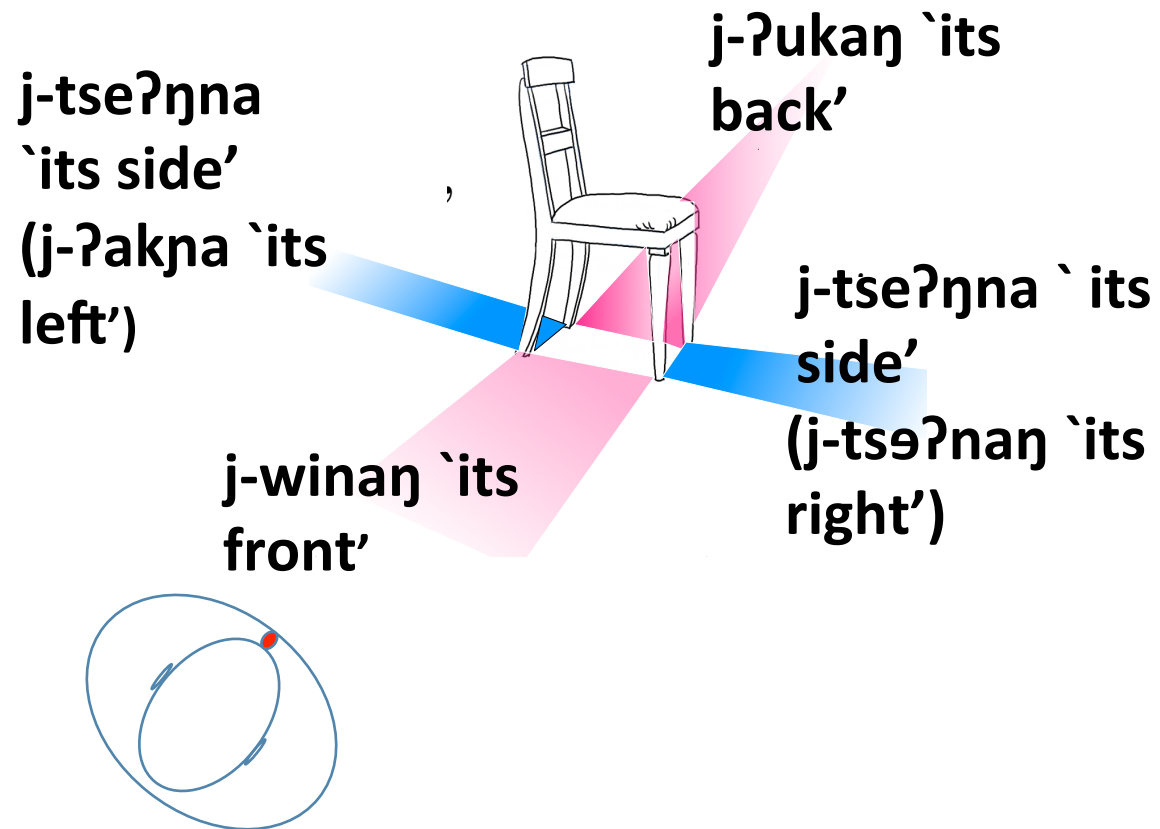
- (5) teʔ poʔkstək=ʔis j-tseʔnna=ʔomo ʔit-u tumə pelota  
 DET chair=GEN 3PSR-side.region=IN EXITS-CMP one ball  
 'A ball is at the chair's side' (B&C 1-3, LG)



# Relational noun assignments

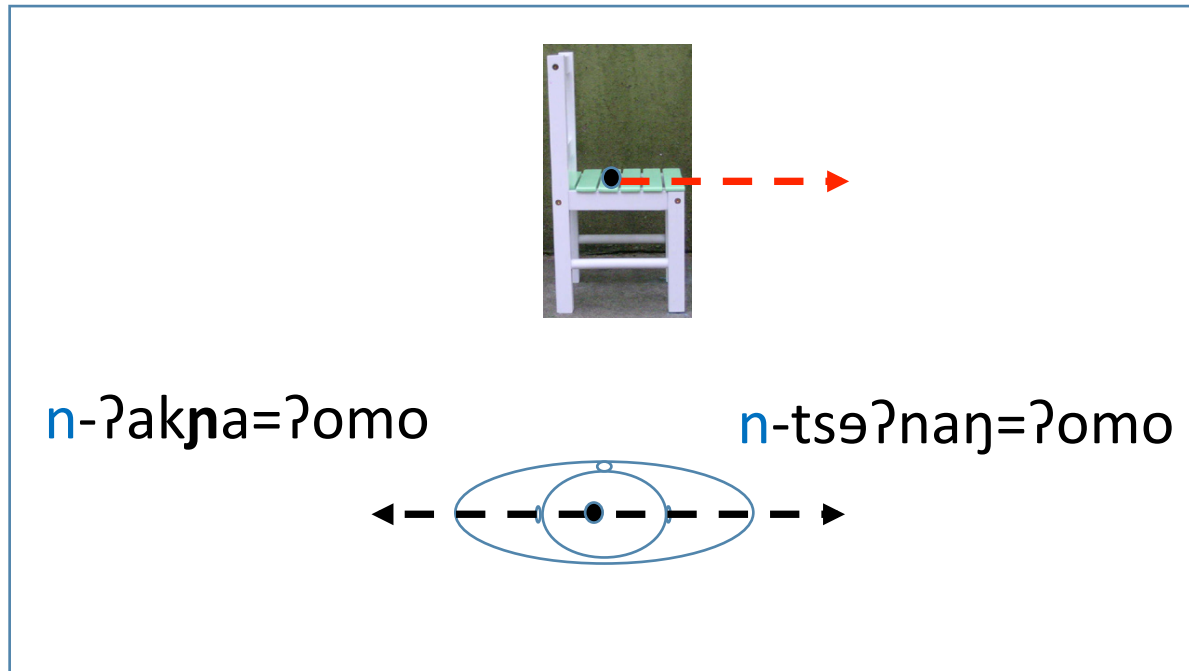


Object-centered



Relative

# Egocentric orientational statements



- (6) poʔkstək (...) ket-u tiʔjək=mə n-tseʔnaŋ=ʔomo=tam  
 chair (...) look-CMP SMT=LOC 1PSR-right.region=IN=PL  
 ‘The chairs are looking to my right’ (B&C 2-9;2-8, B)

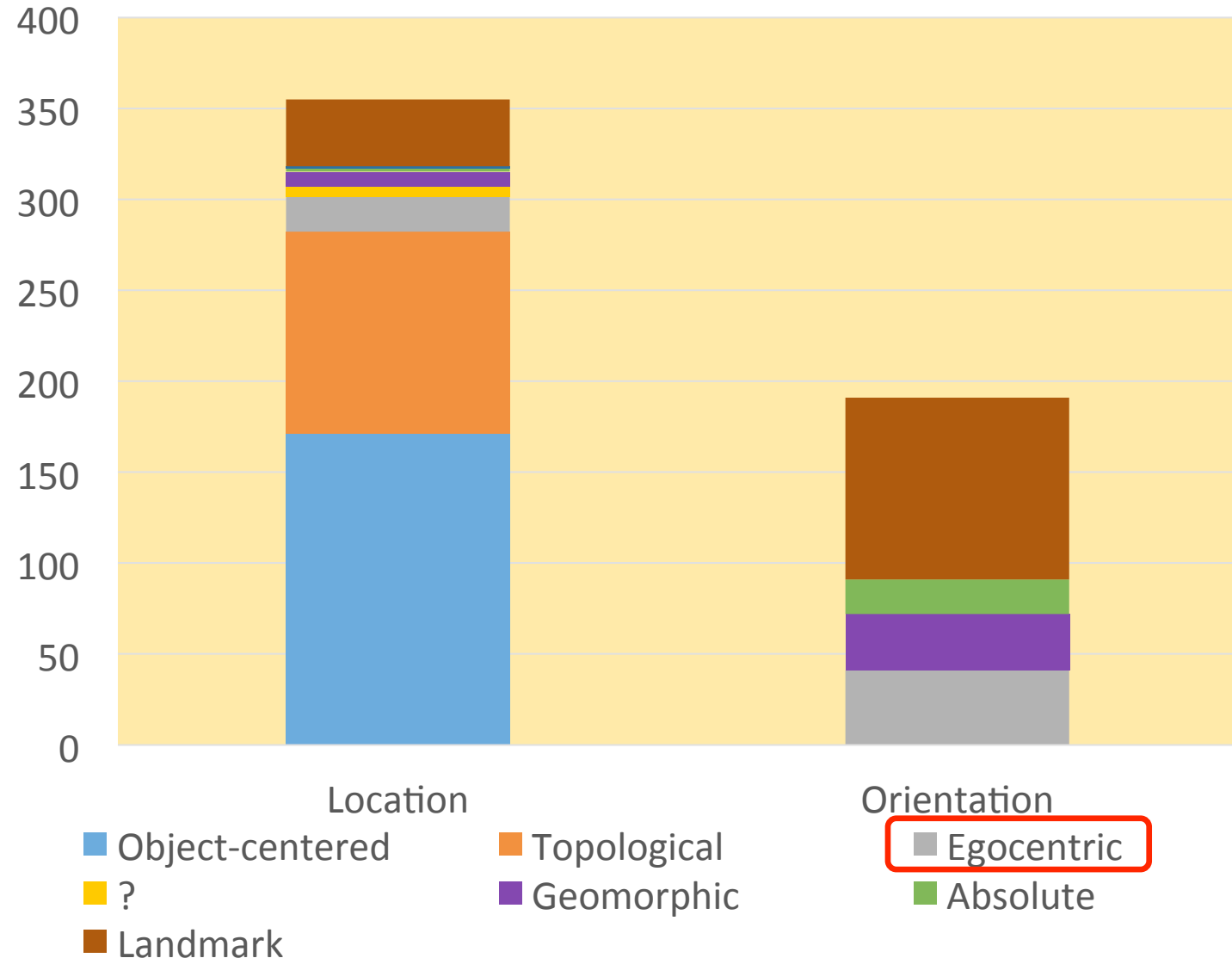
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# Frequency of egocentric descriptions in B&C data

- **Locational domain:** Very low use of egocentric descriptions
- **Oriental domain:** Constitute significant proportion of descriptions

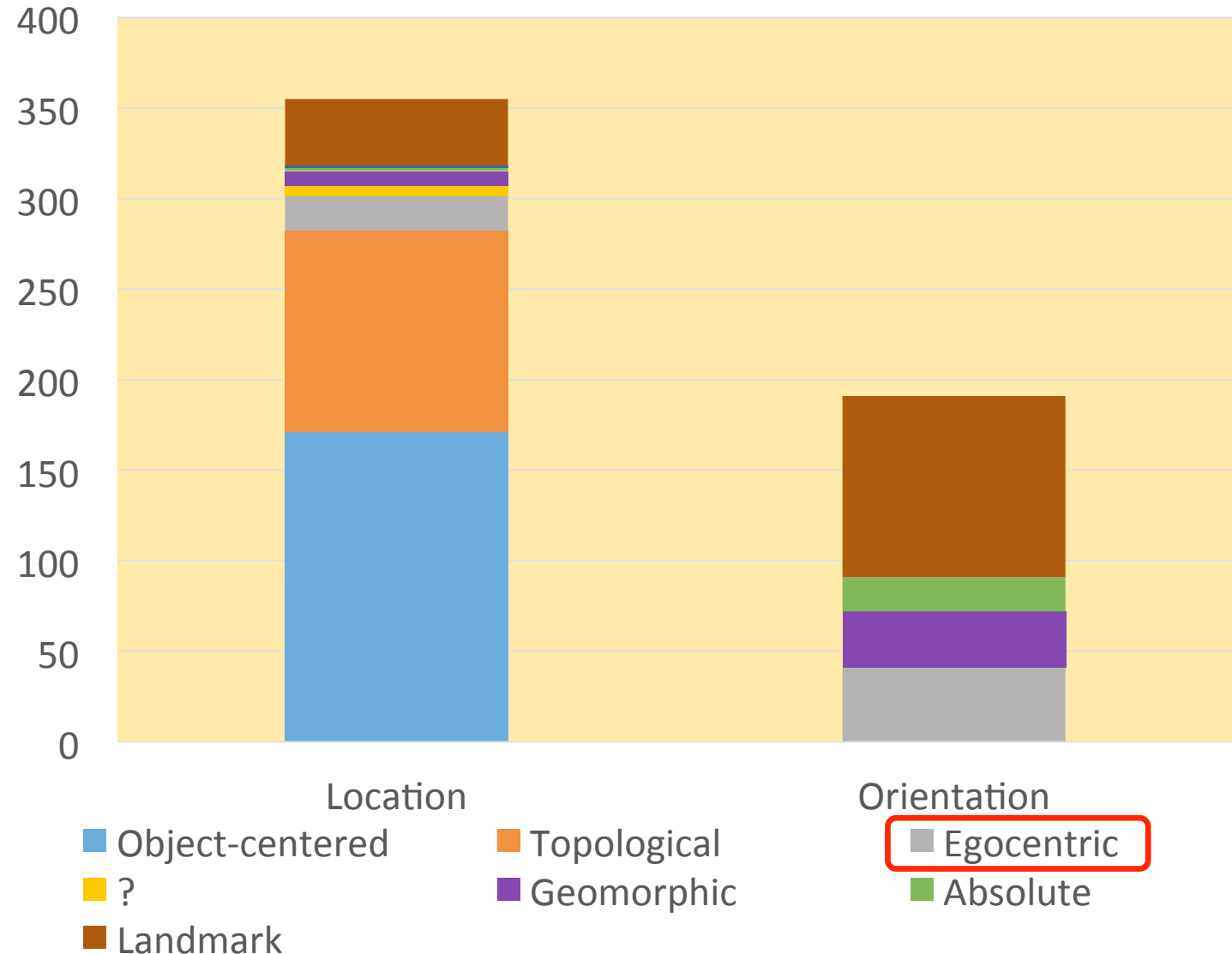
FoRs used in horizontal propositions



# Discussion

- Orientational domain => Egocentric perspective available
- Locational domain => Egocentric severely restricted
- Relative descriptions restricted by dominance of the object-centered frame for *faceted object*
- Direct descriptions limited by absence of pertinent ground

FoRs used in horizontal propositions



# Summary

- Direct locative and egocentric orientational statements formed using region-denoting terms associated with the speech act participant
- Relative locative statements formed using region-denoting terms associated with an external object, but assigned based on the perspective of the speech act participant
- During the B&C task, egocentric frames were used regularly in orientational descriptions
- Relative locative descriptions were severely restricted due to the dominance of the object-centered frame with which it shares a form
- Direct locative descriptions were restricted by the absence of the pertinent ground in the context of the B&C task i.e. the chair



# Acknowledgements

- Everyone in Ocotepc who has made my project possible through their kindness and patience
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# Dominance of the object-centered frame

- This dominance can be evaluated by looking at uses of the relevant relational nouns.

Relational noun	Preferred Interpretation when possessed by chair	# of occurrences (REL/OC)
ʔakŋa `left' / tsəʔnaŋ `right'	Relative	6/1
winaŋ `front' / ʔukaŋ `back'	Object-centered	0/58
tseʔŋna `side'	Object-centered	1/52

# Dominance of object-centered frame

- Relative used regularly in locative statements with non-faceted grounds

(18)      tsima=?is j-?ukaŋ=kə?mə              tsə?j-u  
cup=GEN 3PSR-back.region=IN remain-CMP  
' (the toy) Stays behind the cup' (CP, MJ)



- Relative descriptions were given 2 out of 5 times for the toy in this position

# Discussion - Age profile of relative users

- 47 from 48 relative descriptions in both domains during B&C came from participants under 30
- Older participants appear to favour the direct frame in the locative domain – no relative uses in wider data

(9)    n-neʔ            n-tseʔnaŋ=ʔomo            ʔit-u            teʔ    pelota (...)  
1PSR-ANAP    1PSR-right.region=IN    EXIST-CMP    DET    ball    (...)  
‘ *The ball is on my right (...)*’ (4-7, Bal)



- Apparent increase in relative use perhaps a result of contact with Spanish