

# The point of agreement

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# Brief Abstract

- A recent special issue of *Theoretical Linguistics* addresses whether what is commonly called ‘verb agreement’ is actually verb agreement.
- Lillo-Martin & Meier 2011 show that what is observed is more appropriately called ‘person marking’, and that it is shown by directionality.
- The linguistic discussion is derailed by the question of whether directionality is ‘grammatical’ or ‘part of gesture’.
- Liddell argues that directional verbs move between spatial locations associated with referents; since there are an infinite number of possible points, the forms of these verbs are unlistable, and are therefore just gestural indicating.
- Lillo-Martin & Meier then agree with Liddell that “actual real-world locations of referents are not part of the grammar, so in order for a linguistic object to ‘point to’ such locations, language must interface closely with the gestural system.”
- Several other articles make this same concession.
- In contrast, Quer argues that the reasoning followed by Liddell is flawed, and provides evidence to support his claim.
- In this presentation, I provide additional data in support for the position taken by Quer and highlight the flaw in Liddell’s logic.
- At issue are *gesture*, *pointing*, and *grammar*, and *how we do linguistics*.

# My issues

- Space
  - Space is not always “spatial”
  - Most of the time, space is NOT spatial
- Gesture
- Methods
  - Perception
  - Precision
- Analysis
  - Entailment -- what you think
  - Encoded – what you see

# Two meanings of the title: “The point of verb agreement”

- The role of the ‘point’ in space...  
and whether it qualifies as *verb agreement*
- The issue/’point’ for the field of linguistics of why it matters whether *verb agreement* is verb agreement

# The role of the 'point' in space and whether it qualifies as *verb agreement*

Issues:

- a. Does what has been called verb agreement in SLs do what verb agreement in spoken languages does?
- b. Is pointing just a gesture to show a referent located at the point in space or is *grammar* involved?

# Challenges to verb agreement concept

- Treatment of space – iconicity
- Treatment of pointing - gestural
- Not like spoken language agreement, which is obligatory
- Problem of three verb classes behaving differently with respect to agreement

I have things to say on all four issues but will only discuss first two here.

# Does what has been called verb agreement in SLs do what verb agreement in spoken languages does?

- Lillo-Martin & Meier 2011 make the case that what is observed is more appropriately called ‘person marking’, and that it is shown by **directionality** of verb movement.
- Person marking on verbs behaves like person marking by pointing pronouns – showing the same distinctions.

# Consider the point in space

- Theoretically there are an infinite number of actual points in space
- If actual points in space were relevant to linguistic pointing and SL verb agreement, then it would be impossible to list all the possible forms. “unlistable”
- Liddell concludes from this that use of points are non-linguistic and gestural.

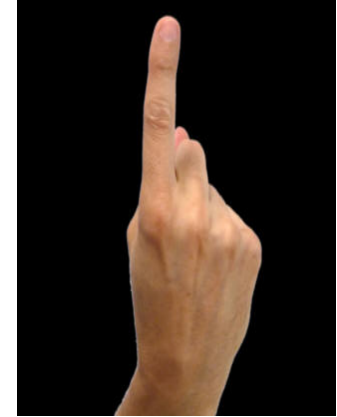


# This line of reasoning about points affects more than pointing

- Verb agreement
- Adjectives
- Numbers

# So, a woman walks into a bakery ...

- I go to the counter and want one cookie/muffin/scone/...
- I make eye contact with the person behind the counter ...







# Spatial arrangements

- Trays have rows, usually one, two or three
- Trays sit next to each other, hence can be referred to as left or right
- I move my hand to indicate how many of each type I want





By this reasoning, the formation of  
the sign ONE is unlistable

- As well as the rest of the numbers
- And the adjectives that describe noun referents
- Not to mention classifier constructions

# This line of reasoning affects more than just points

- Colors
- Descriptive size and shape specifiers
- Gradient handshapes
- Paths through space



# Iconicity and listability

- “... the **number of colors** that are perceptible to the average human (**around 7.5 million**) and the basic **color terms** used by the average speaker of a language (**between 8 and 11**) ...
- The key to the process is that **most description takes place in plain sight** of the colored object (“the guy in the red sweater,” “the blue humming bird”) and the color term can do its job by being amplified and particularized by its context (“this red would work better than that one”).”

(Heritage NIH [esourceresearch.org](http://esourceresearch.org))

# How do we approach this problem?

- Typically, make distinction between linguistic and non-linguistic or iconic or gestural
- Definitional problems
  - What do we mean by gesture?
  - Iconic?
  - Linguistic?
    - Cf Husain et al 2009 neuroimaging study of ASL vs three types of non-ASL/gestures/emblems
    - They distinguish 'linguistic' from 'semantic' (!!)

# Nature of the Problem: Entailment vs. Encoding

- “Lack of distinction in form entails lack of distinction in meaning”
- Not always true
  - Janis (1992) observed that failing to reach an exact point in space is irrelevant for verb agreement but very relevant for spatial agreement
    - 'almost give' vs. 'almost arrive'
    - Chuck Smith (2007) 'ALMOST' in ASL: Insights into Event Structure. Purdue MA Thesis.
  - Ambiguity of encoding < Petronio 1995

# Petronio 1995

- Singular vs plural can be encoded in classifier motion verbs: CL:1 vs CL:44
- But notice: no encoding of singular or plural on DP MAN

(35)  $\frac{t}{\text{STORE, MAN CL:1/-'go to'}}$   
*'The man went to the store.'*

(36)  $\frac{t}{\text{STORE, MAN CL:44/-'go to'}}$   
*'The men went to the store.'*

# Petronio 1995

- If you do have coding on DP, singular CL:1 means individual, NOT group/class, even if only one group/class

(41) a.\*  $\frac{t}{\text{STORE}_a}$ , WOMAN CLASS CL:/1/–‘go to’<sub>a</sub>.  
*‘The group of women went (singular) to the store.’*

b.  $\frac{t}{\text{STORE}_a}$ , ONE WOMAN CL:/1/–‘go to’<sub>a</sub>.  
*‘One woman went to the store.’*

In contrast, non-classifier verb  
INFORM-sg is ambiguous - can  
mean singular or plural/group

- (42) a.  $\frac{t}{\text{MAN CLASS, } _1\text{INDEX INFORM-[singular]}}$ .  
*'I informed the group of men.'*
- b.  $\frac{t}{\text{ONE MAN } _1\text{INDEX INFORM-[singular]}}$ .  
*'I informed the man.'*

'singular' coded on GO-TO-CL:1  
entails different interpretation  
than 'singular' encoded on  
INFORM

# Encoding vs. entailment

- (32)  $\frac{t}{\text{STUDENT, FIVE BOOK ANN GIVE}_a\text{-[exhaustive]}}$
- 'Ann gave one book to each of five students.'*
  - 'Ann gave five books to each student.'*

- (33)  $\frac{t}{\text{STUDENT, FIVE PICTURE ANN SHOW}_a\text{-[exhaustive]}}$
- 'Ann showed the five pictures to each student.'*

- What is encoded is  $\text{VERB}_a\text{-[exhaustive]}$  'to each'
- What is entailed differs – two readings for GIVE, only one for SHOW



# The point so far?

- Same form doesn't always entail same meaning
- Difference in form doesn't always entail difference in meaning

# Next step

- What do we mean by 'same form'?
- Two cases of interest:
  - Liddell's 'pointing is deixis'
  - L-M & M first vs non-first pronominals
- Two entirely different approaches to linguistic analysis to which I will return

# 'Same form'

- Discussions of form suffer from **perception** and **precision** problems (notation vs kinematics)

# To illustrate:

- Suppose I point to a lamp
  - Deictic, right?
  - How do you know?
  - What if I am pointing with facial expression that says “you may have a (logical/conversational) point there?” Am I still pointing to the lamp?
- Decision based on perception and context

# Compare to Pfau's Precision

- “To that end I consider manual (movement, handshape, and orientation) and nonmanual (eye gaze) properties of pointing signs.”

# Issue addressed by Magritte's painting Ceci n'est pas une pipe



- It is not a pipe – it is a painting of a pipe

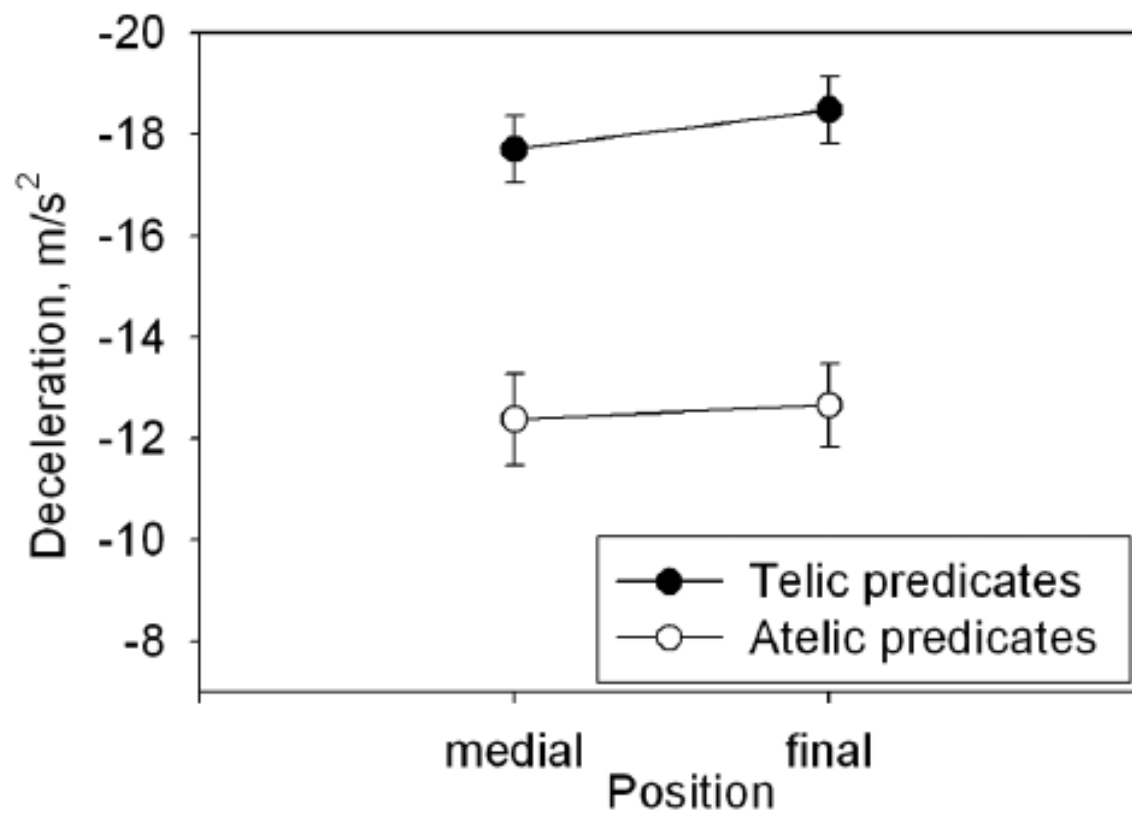
# Perception problem not new

- Klima & Bellugi 1979 “red-faced explanation” for their failure to see aspectual modifications on verbs
- Supalla and Newport 1978 for our collective failure to see differences between verbs and nouns – e.g. FLY vs. AIRPLANE

# Precision problem: lack of instrumental analysis

- Malaia & Wilbur 2011/in press
  - Motion capture distinction between ASL telic and atelic verbs
  - There is a significant difference in peak deceleration between the two groups of verbs
  - Telic verbs are end-marked by higher peak deceleration
  - And with Milković, also in Croatian SL [HZJ] (submitted)
- Malaia et al 2012 shows neuroimaging data for this difference in ASL





# Related to pointing?

- What is the difference **in form** between gestural pointing and pointing used in SLs?
- Pfau referring to pointing for demonstratives, determiners, and pronouns:  
“In future analysis, it would be interesting to address the question of whether different nominal uses can be distinguished on the basis of manner of movement.”

# Consider some possibilities...

- Is SL pointing end-marked like telic verbs?
- Are some SL uses end-marked and not others?
- Are pointings in gesture end-marked?
  - For example, is deictic pointing end-marked and non-deictic co-speech gesture not end-marked?
- Until we know precisely what we are talking about, we don't really know what we are talking about.

# Wilbur 2008 Corollary to the Event Visibility Hypothesis

- I have already argued that we are not referring to actual points, but to the geometric point recruited from geometry for linguistic purposes
- "The morpheme is not 'this particular point in space where the sign movement or indicator pointing just stopped'; rather it is the geometric point in space ( $p$ ), which indicates an individual ( $x$ ), no matter where it is made in space."

# So has Quer 2010 and 2011

“A recurrent source of discrepancy in the analysis of the ultimate nature of pronouns and verb agreement arises from **identifying the actual points** or areas of the signing space **with the linguistic elements** that are realized through them.

... has resulted in a **flawed but common argument** against the linguistic nature of the element controlling the directionality of pronouns and inflected verb forms, namely that points in physical space are infinite and thus not specifiable in the phonological description of pronouns and agreeing verbs.

... this would be analogous to claiming that phonemes in the speech signal do not belong to language because the latter lacks invariance, ... their acoustic realizations vary according to factors such as speaker, speech conditions or surrounding context of a phoneme.

We know, though, that for example, **what is relevant for speech perception is that such acoustic manifestations can be perceived categorically as phonemes**, which are part of the linguistic system.

In the case of SLs, **physical points in space are actually irrelevant** as such: what counts for the linguistic system is how they can be interpreted categorically as referential locations or loci.”



Now look at an example where we have a much better idea of what we are looking at but still have work to do on how we talk about it

- Lillo-Martin & Meier provide eye gaze data to support their analysis of pronouns as divided into just two categories: first person and non-first person
- They admit it's 'quick and dirty'
- And so is my response

# Their Table 1:

Columns → % Eye gaze toward

Rows → Referent of point



Point Toward:	Addressee	Non-addressed referent	Other
Self	.60	.06	.34
Addressee	.67	.00	.33
Non-addressed referent	.63	.31	.06



# L-M & M Eye Gaze Analysis

- Table I makes it clear that for the mini-corpus, gaze to Addressee during points to the Addressee is not anywhere near 100% consistent, and in fact, not significantly above baseline gaze to Addressee during points to Self ( $p = .48$ , one-tailed exact binomial).
- Furthermore, the proportion of gaze to Addressee does not differ for points to Addressee versus points to Non-addressed referents.
- These data indicate that gaze direction is not sufficient to differentiate points to Addressee and points to Non-addressed referents as a grammatical marking of second versus third person.

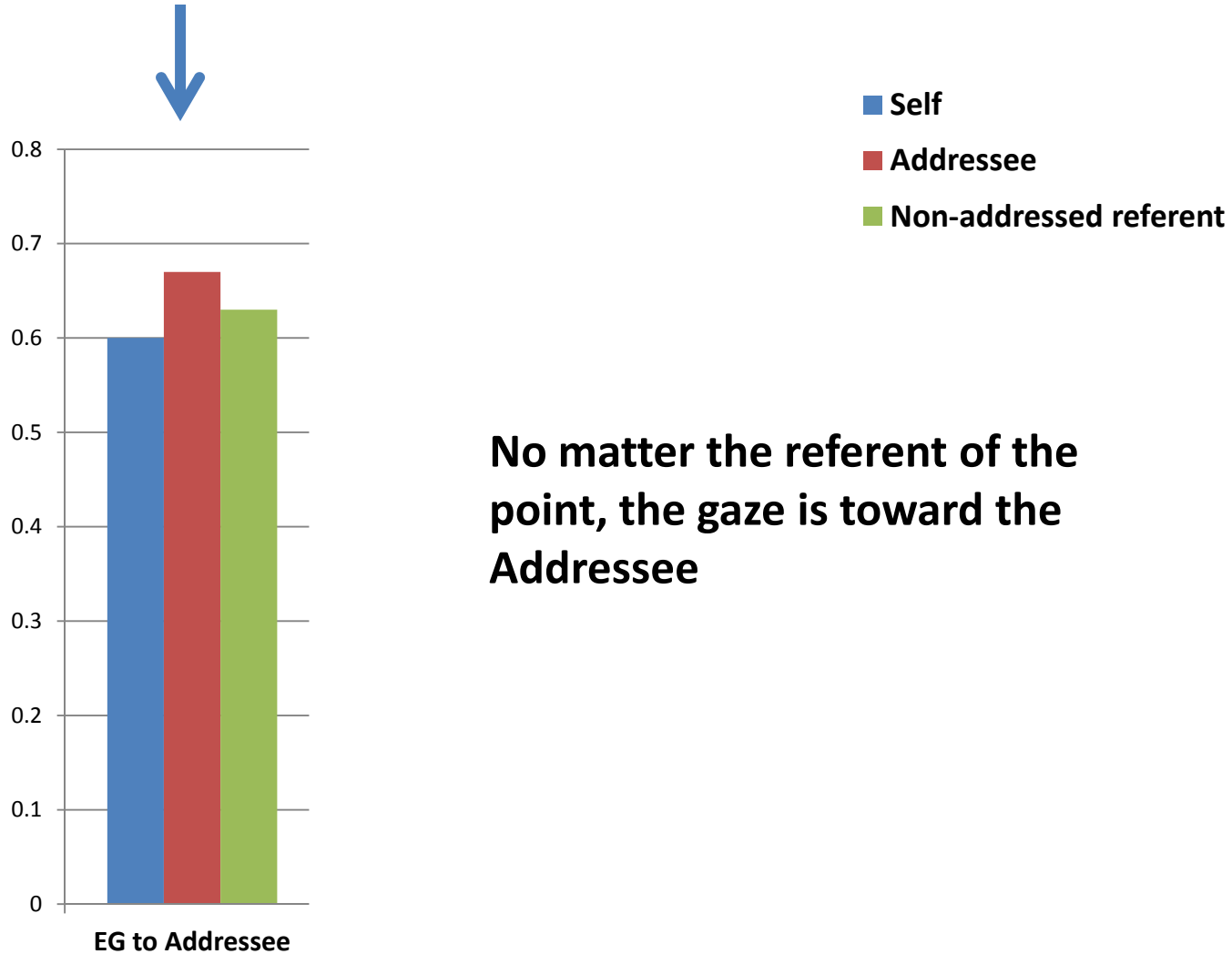
# Table 1:

No matter the referent of the point,  
the gaze is toward the Addressee



Point Toward:	Gaze toward Addressee		
Self	.60		
Addressee	.67		
Non-addressed referent	.63		

# Table 1



**No matter the referent of the point, the gaze is toward the Addressee**

# Table 1:

What about the other 30-40% of the time? Is EG evenly split (as random would predict)?



Point	Addressee	Non-addressed referent	Other
Self	.60		
Addressee	.67		
Non-addressed referent	.63		

# Table 1:

Predict for Self: .20 in each column

Predict for Addressee: .165 in each

Predict for Non-addressed: .185 in each



Point	Addressee	Non-addressed referent	Other
Self	.60		
Addressee	.67		
Non-addressed referent	.63		

# Table 1:

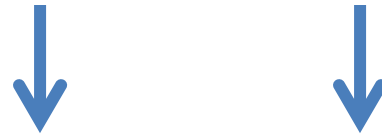
## Is EG evenly split (as random would predict)? NO!!



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NOT .20

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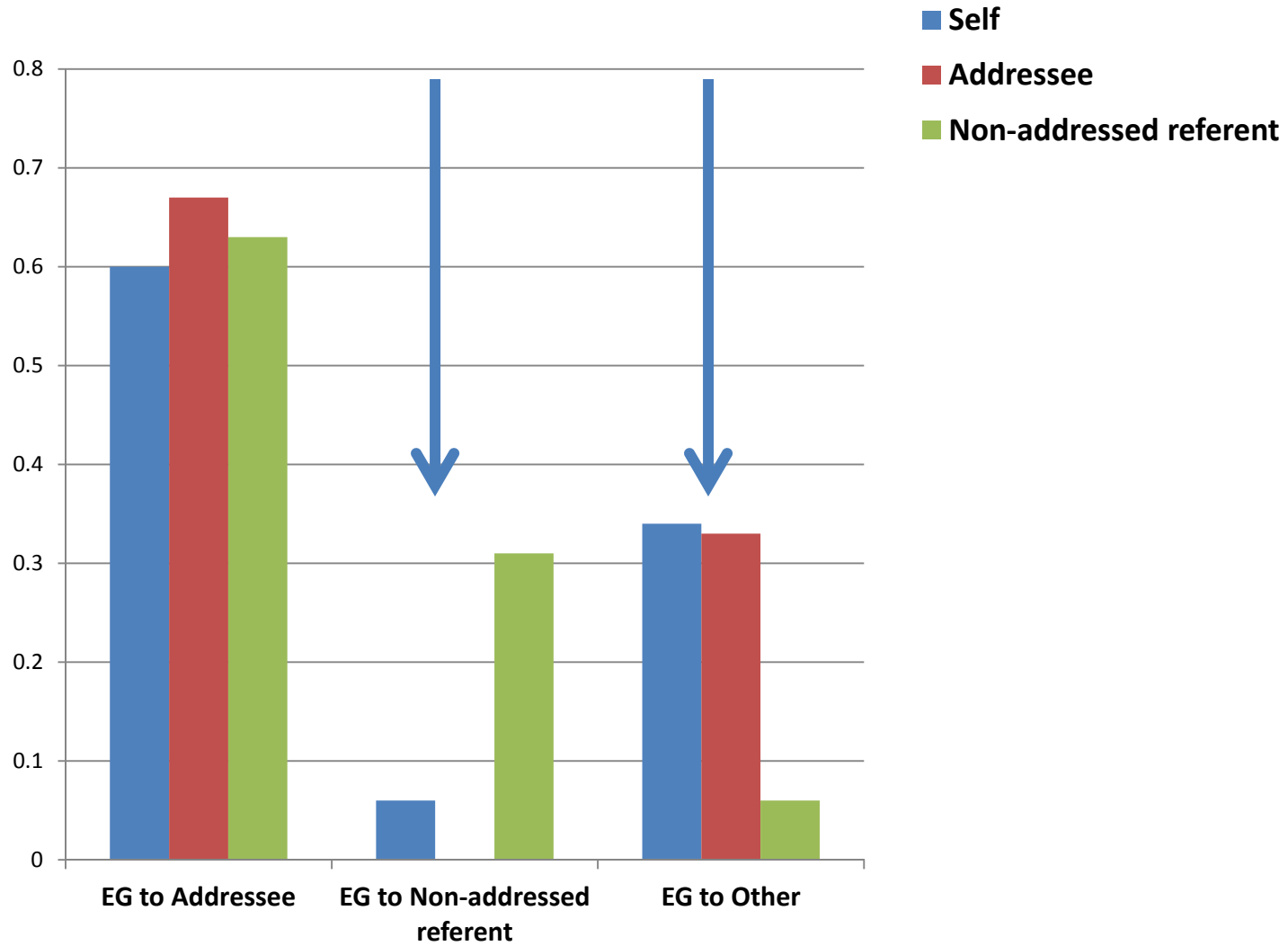
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NOT .185

# Table 1



# What does this tell us?

- There are no Non-addressed referent (third person) gazes during Addressee pointing, but the signer gazes at Other 34% of the time.
- That is, you **can point at the Addressee and look elsewhere, but NOT at another Non-addressed (third person) referent.**
- If there is no distinction between second and third person pointing and gaze, then this fact remains unaccounted for.

# What does this tell us?

- When pointing at a Non-addressed referent (third person), one can gaze at the Addressee or at the Non-addressed referent **but looking at Other locations is very restricted.**
- Indeed, the distribution of gazes as represented during points to Addressee and to Non-addressed referents is significantly different from chance (chi square).
- This warrants an explanation.

# L-M & M refer to Johnston (2010) Corpus Data

- Lacks information for some cells
- But shows a similar non-random distribution of gazes to Addressee or Non-addressed referent while pointing to a Non-addressed referent.
- Also shows restricted gaze to Other while pointing to a Non-addressed referent.

# What next?

- Need more data (we knew that)
- But we know what the relevant factors are that need to be included and controlled
- We can make progress with this line of investigation

# Distinctions in pointing

- My wish list:
  - Kinematics of pointing (especially end marking)
  - By function
  - And phonological categories
  - In connected discourse 😊
- Oh yes, don't forget:
  - Kinematics of verb movement during person marking ...

Another discussion that can lead to progress in linguistic analysis (although only a handful of us interested in doing so)

- Schlenker 2011 provides a **semantic analysis** of the gradient position of the locus of the index and shows how this can be included in the lexical entries of certain verbs



# Schlenker's Goal

- Two apparently contradictory insights about SLs can be made compatible within a formal semantic analysis:
  - (i) the claim that directional verbs incorporate agreement markers/pronouns (e.g. Lillo-Martin and Meier 2011);
  - (ii) the observation that directional verbs have an iconic component (e.g. Liddell 2003).

Pronouns that refer to powerful entities can or must be placed high in the signing space.

-a<sup>+</sup> means 'high'

- Compare 'father' versus 'younger brother':

(4) a. POSS-1 FATHER IX-a<sup>+</sup> SELF-a<sup>+</sup> BUSINESS MAN. IX-a<sup>+</sup> RICH.

'My father is a businessman. He is rich.'

b. ??POSS-1 BROTHER IX-a<sup>+</sup> SELF-a<sup>+</sup> BUSINESS MAN. IX-a<sup>+</sup> RICH.

*Intended:* 'My (younger) brother is a businessman. He is rich.'

Philippe will talk about this later today

If  $i$  is a locus that appears high in the signing space,

$[[IX-i]]^{c,s} = \#$  iff  $s(i) = \#$  or  $\langle 1, i \rangle$  is not iconically projectable to  $\langle c_a, s(i) \rangle$  along the 'power' dimension. If  $[[IX-i]]^{c,s} \neq \#$ ,  $[[IX-i]]^{c,s} = s(i)$ .

In these rules,  $\#$  means presupposition failure.

“We assume that the context provides a variety of possible 'iconic projections' between the signing space and reality; the projections may be geometric or metaphorical - we will leave this point open, specifying in each case along which dimension (e.g. 'power', 'body', etc) the projection is to be effected. In the present case, the high position of the index  $i$  relative to the position of the signer (glossed as 1) is put in correspondence with the relation of power that holds between the denotation of index  $i$  and the denotation of index 1. We write this as  $\langle 1, i \rangle$  (i.e. the pair of positions in signing space that includes as members the signer's position and the locus  $i$ ) is *iconically projectable* to  $\langle c_a, s(i) \rangle$  (i.e. the pair of real-world individuals that includes the agent of the context  $c_a$  and the denotation of the index  $i$ ) *along the 'power' dimension* (i.e. one needs an assumption that people represented higher in the signing space have more power than people represented lower).”

# Extensions

- Schlenker shows that the same approach generalizes to demonstratives **along the ‘position’ dimension**.
- In addition, it can be used for ‘gradient iconicity’, such as the different size handshapes used in classifiers **along the ‘geometric’ dimension** (e.g. data in Emmorey & Herzig 2003).

## Also for **height** in some lexical items

- ASK-QUESTION-i will need to be iconically projectable along the 'position' dimension to the *chin* of the signer when the signer is the person being asked.
- In contrast, COMMUNICATE-TELEPATHICALLY would need to be iconically projectable along the 'position' dimension to the *forehead* or higher, whereas SAY-NO would project to the *nose*.

# For discussion

- Is this something that we should do?
- As Schlenker notes, if something can be iconically projectable, it can also be **metaphorically** projectable.
- Perhaps it can also be **graphically** projectable, **conceptually** projectable, **artistically** projectable, **musically or intonationally** projectable?
- Or even **gesturally** projectable?

# My point here

- The mechanism that Schlenker builds into the semantic model to account for Liddell's iconicity is so powerful that it becomes suspect.
- Gemma Barbera will talk about other uses of 'high' and 'low' in space in the poster session this afternoon.
- I would not want to say that "The 8-11 lexical items for color project on the "hue" dimension to 7.5 million perceptible colors", but rather one must decide which of the available labels **best fits what one sees while remaining distinctive in the context.**

# Suggest a **pragmatic** explanation

- The requirement that the label be distinctive in context is governed by the need for the statement to be *informative*.
- If the viewer cannot determine easily if a locus is intended to be the same or a different referent, ambiguity can result.
- The fact that there are an infinite number of points in space is irrelevant to pointing, pronouns, or person marking ...



# The only thing relevant is ...

- Whether the locations are **distinctive to the viewer** if the referents are not the same.
- Or, as Quer said, “what counts for the linguistic system is how they can be interpreted categorically as referential locations or loci.”

# Now reconsider Liddell's argument

- "Since Liddell (1995) my published work has been carried out within the theory of Cognitive Linguistics, which does not treat gesture as being outside of language.
- "... pointing that frequently accompanies the English word *this* ... considered an aspect of the demonstrative's form, and its import an aspect of its meaning." Langacker (1991: 102)

- Liddell (2000a) argues that the directionality of indicating verbs and non-first person pronouns is “gestural”.
- If gesture is not outside of language, what does it mean to say that something is 'gestural'? **If gesture is part of language, then gesture is linguistic.**

- And if pointing is part of both the form and meaning of deictic *this*, what does that say about the use of pointing in other co-speech contexts that are not deictic?
- What is the relevance of the status of pointing in deictic use with English co-speech to the analysis of pointing in sign language?

**This is the “same form entails same meaning” fallacy.**

- Indeed, Liddell argues that "one should leave open the possibility that directionality of these signs **may not be analyzable using grammatical mechanisms that have their foundation in spoken languages only.**"

- YET, this is exactly the argument Liddell makes when he argues that the treatment of co-speech pointing as part of English deictic *this* should be applied to other uses of pointing in OTHER LANGUAGES, namely sign languages.
- Cognitive Linguistics has its foundation in the treatment of spoken languages.
- A 'new theory' that **doesn't explain more** than the old theory is **not a better theory**.

# I get a little cranky here

- I am old enough to remember phonology before autosegmental phonology and OT
- And to remember syntactic theory with kernel sentences and transformations ;-)
- In my work on reduplication, I've looked at hundreds of languages: Native American, African, Austronesian
- My notion of 'normal for language' is very different from many other people's
- When I look at SLs, I have to struggle to find something 'unusual'

# Presentation stops here

- Subsequent slides were not presented at the FEAST 2012 Conference and are not to be quoted without first contacting me for permission.

Thank you.



So I'm not willing to buy this  
'interaction with gesture' stuff  
until I see better arguments and  
what it contributes to our  
understanding of language and  
linguistic structure

# Arguments I am skipping

- Simplicity of pointing not borne out by acquisition data (Kantor 1982; Hoffmeister dissertation; Fischer 1973)
- Grammaticalization process for pointing (Pfau & Steinbach 2006) and the loss of locative content
- My argument to rethink the number of verb classes – just two -- spatial and non-spatial – and that plain verbs are an arbitrary group of exceptions in the non-spatial group and differ across SLs

# Let me highlight recent work that extends the Event Visibility Hypothesis

- Bradley (2012) “Motion Events and Event Segmentation in ASL: Theta Roles and Path Shapes”
- Comparison of CL-verb uses for temporal vs. spatial meanings with Bohnemeyer et al’s typology for motion events in spoken languages

# Bohnenmeyer et al motion events

- Two of their constraints
  - Argument Uniqueness Constraint
  - Unique Vector Constraint

# Argument Uniqueness Constraint (AUC)

- Only one semantic role of a given type may be assigned within a single clause.
- Jackendoff (1983) provides motion-related semantic roles:
  - bounded paths,
  - routes, and
  - directions

# Bounded paths (SOURCE, GOAL)

- Bounded paths are 'bookended' by the source and goal
- Motion from one to the other is entailed, not coded.
- There may only be one source and one goal per clause/ event.

# Routes (VIA)

- Routes (VIA) are grounds that **lie on the path** between the source and goal.
- Unlike bounded paths, more than one route may be expressed within a single clause, although this is subject to arbitrary lexical constraints.

# Directions (TOWARDS, AWAY-FROM)

- Directions (TOWARDS, AWAY-FROM) are **vectors that lie along the path.**
- Directions **do not entail a change of location –**
- you can **face a direction** without moving along a path and,
- crucially, only one may be specified.



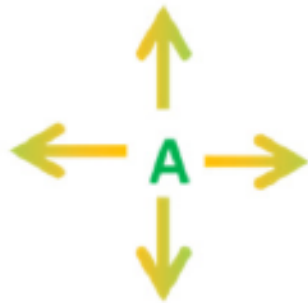
# Options < Jackendoff 1983

Path type	Path function	Corresponding subevent	Examples
bounded paths	<u>from</u> (source)	departure	<u>from the entrance</u> ; <u>off the roof</u> ; <u>out of the kitchen</u>
	<u>to</u> (goal)	arrival	<u>to the entrance</u> ; <u>onto the roof</u> ; <u>into the kitchen</u>
routes	<u>via</u> (route)	passing	<u>past the entrance</u> ; <u>across/over the roof</u> ; <u>through the kitchen</u>
directions	<u>toward</u> ; <u>away-from</u>	any phase of motion oriented in a frame of reference	<u>towards the entrance</u> ; <u>north(bound)</u> ; <u>down</u> ; <u>upriver</u> ; <u>left(ward)</u>

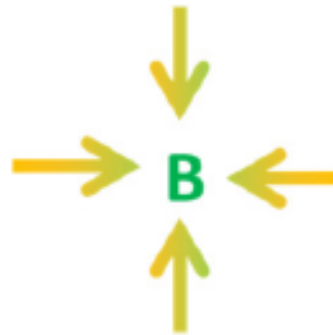
# Remember

- We are talking analysis developed from spoken language

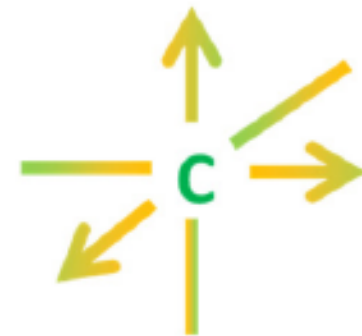
from A



to B



VIA C



# Typology of Event Coding per Clause

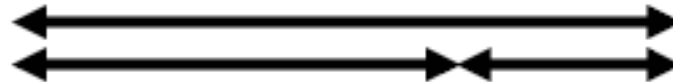
**Departure    Arrival    Passing**

**Type I:** one macro-event expression



Dutch, Ewe, Lao, Marquesan, Tiriyo

**Type II:** one or two macro-event expressions, depending on type of passing event



Arrente, Basque, Hindi, Japanese, Trumai

**Type III:** three macro-event expressions



Jalonke, Kilivila, Saliba, Tidore, Tzeltal, Yéli Dnye, Yukatek, Zapotec

# Space does not always mean space

- Bohnermeyer's constraints can be used to separate spatial use of classifiers from temporal use of classifiers

# Bradley 2012 documents applicability to ASL with CL-verbs

- "Both temporal and spatial uses of CL-verbs uphold the AUC" ... BUT:
  - If only one role is encoded, it will be **source for spatial uses** and **goal for temporal uses**.
  - **Spatial uses of CL verbs allow source, goal and VIA**, whereas **temporal uses only allow goal**.

Spatial use:

"I drove from NYC to LA via Toronto"

# Examples of temporal GO-TO

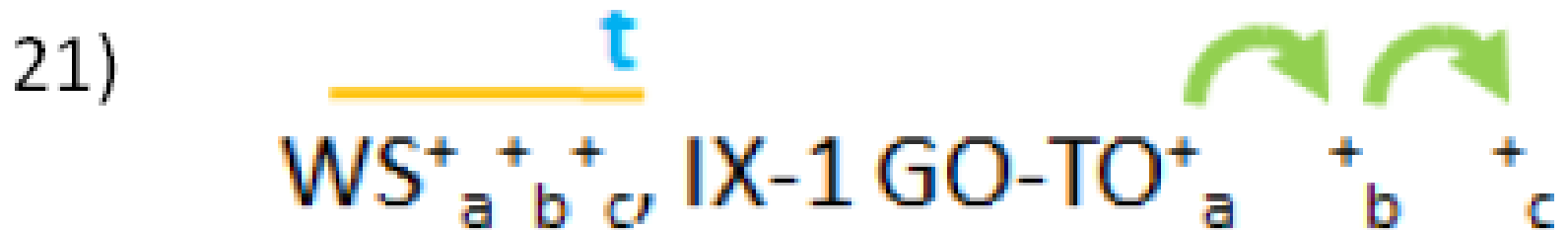
- In temporal space, goal required, as topic or post-verbally (20a,b) but doesn't have to be on verb (20b,c)
- If present, must match the quantification of the goal - three different workshops set up in three different locations, the verb must move to the location of each
- Same workshop spread over 3 days can use same location (20d)

20)

- a.  $\overline{WS^+_{a^+ b^+ c^+}}$  IX-1  $\overline{GO-TO^+_{a^+ b^+ c^+}}$  pnm
- b.  $\overline{3 WS}$ , IX-1  $\overline{GO-TO^+_{(a^+ b^+ c^+)}}$  pnm
- c. IX-1  $\overline{GO-TO^+_{(a^+ b^+ c^+)}}$   $WS^+_{a^+ b^+ c^+}$  pnm
- d.  $\overline{WS^+_{a^+ a^+ a^+}}$  IX-1  $\overline{GO-TO^+_{a^+ a^+ a^+}}$  pnm

# Normally in temporal space, verbs move from neutral space, BUT

- For one workshop that starts right after another, you can get (21)



NOTE this does NOT mean “I went from Workshop A to Workshop C via Workshop B”, which would be the **spatial** interpretation.

# Suggestion ...

- Some verbs can be used spatially or temporally
- So perhaps don't talk about 'spatial verbs'
- Rather, talk about 'spatial meaning'



# Spatial meanings are *marked*

- In the linguistic sense, not the default interpretation even though movement is through space
- To me, this is the result of grammaticalization - as Pfau discussed with reference to Senghas & Coppola's data on NicaSL, it is the **loss of locative function** that signals grammaticalization, and retention of locative /spatial function has to be specified as exceptional.

# Final point

- Second meaning of the title - I see no point in starting from the premise that sign languages can't be analyzed like other languages.
- It is self-defeating, in that you cannot do what you never attempt.
- Rather if certain characteristics of the modality of SLs have resisted the linguistic pull of human cognitive and neurological capacities, that should become clear as a result of extensive critical analysis and discussion of the type that currently surrounds verb agreement/ person marking.
- And let me be clear - I am not advocating linguistics by analogy - this is how spoken languages do it, therefore ...
- I am advocating deep and careful reasoning on reliable data from which testable hypotheses are drawn and tested.
- Finally, any explanation you offer must meet the test of explaining MORE THAN the data from which it was derived.
- So we seek explanation, and not just description.

**THANK YOU.**