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## Generic subjects

No dedicated generic subject form, yet easily interpreted generically in novel concept acquisition tasks

### Bare Plurals

- Groups of atoms (Krifka 1995, Link 1983)
- Allow for averaging over members of a group
- Allow for exceptions more easily

### Indefinite Singulars

- Atomic instances of a kind
- Any arbitrary instances should be able to represent the kind
- Imply principled connections (Lawler 1973, Gelman et al. 2010, et seq.)

### Definite Singulars

- Directly refer to kinds (Borik & Espinal 2012, et seq.)
- Allow kind-level predicates, not reliant on instances of a kind

## Category-property links

### Principled connections

- Normative expectations/force
- “a type *should* have their properties” (Prasada & Dillingham 2006)
- ‘by virtue of’, ‘is one aspect of’

### Statistical connections

- Happenstance, accidental, no normative expectations
- Majority prevalence
- ‘just happen to’, ‘just because most’

The subject’s distribution is limited by the kind of property to which it is connected (P & D 2009)

## Research questions & predictions

### General

- Can linguistic cues guide our cognitive system in concept acquisition?
- How does the morphosyntax of a generic subject interact with the properties of a kind?
- How are less commonly used generic subjects (indefinite singular, definite singular) interpreted, compared to the bare plural?

### Adult participants

- Interaction of subject form and property type allows

### Child participants

- Early acquisition of all generic subject types supports the idea of default generalisations
- Late acquisition provides insight into developmental patterns, which might be more reliant on exposure

## Experimental design and stimuli

### Novel kind induction

- nonsense names of two to three syllables in length
- counterbalanced across groups (defined here by connection type)

2x4 between-participants design

- connection type (principled vs. statistical)
- subject form (BP, IS, DS, *this* [control])

### Match-to-sample task (cf. Hollander et al., 2009)

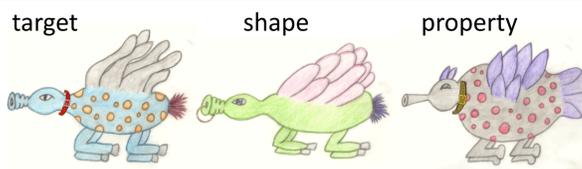
- Identify another instance of the same kind from two novel pictures
- one sample is similar in **shape**, the other possesses the predicated **property**

**Prompt:** *Do you know about kevtas?* {Kevtas/A kevtas/The kevtas/This kevtas} wear(s) scarves.

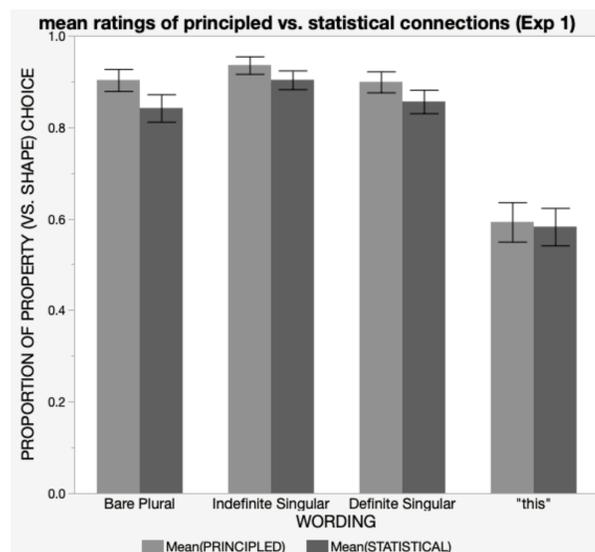
- Followed by target image

**Question:** *Which one of these is also a kevtas?*

	BP	IS	DS	<i>this</i>
Principled	Feps are spotted	A fep is spotted	The fep is spotted	This fep is spotted
Statistical	Feps wear collars	A fep wears a collar	The fep wears a collar	This fep wears a collar



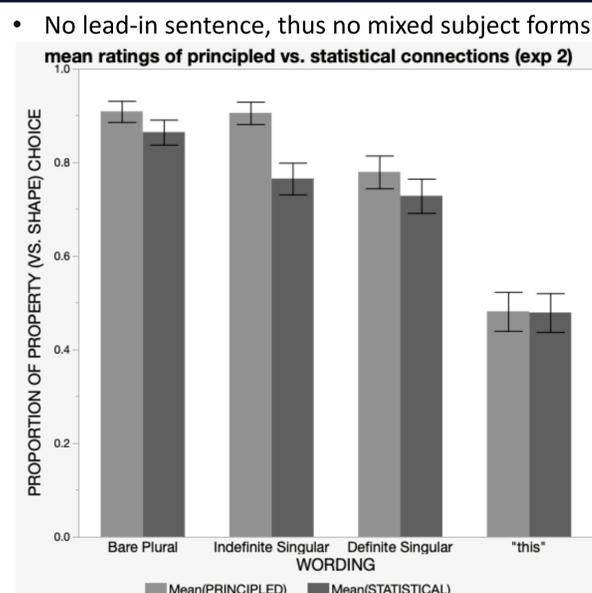
## Results (Study 1 – Adults)



**Figure 1.** Mean ratings for principled (light) and statistical (dark) connections by wording. Error bars  $\pm 1$  SE from mean

- N = 395
- Main effect of connection type ( $p < .0001$ )
- *Property* chosen more for principled than statistical connections
- **All** generic subjects differed from control ( $< .001$ )
- No interaction, no variation within generic subjects

## Results (Study 2 – Adults)



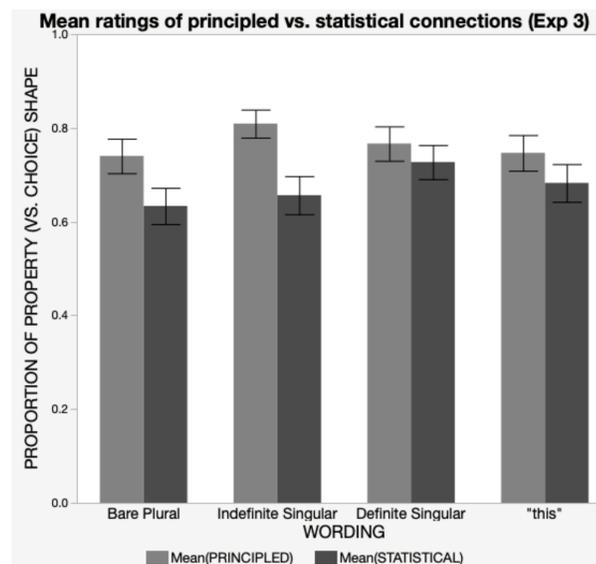
**Figure 2.** Mean ratings for principled (light) and statistical (dark) connections by wording. Error bars  $\pm 1$  SE from mean

- N = 396
- Main effect of connection type ( $p < .0001$ )
- IS subjects:
  - Interaction within property type (principled > shape)
  - interaction wording x subject form x block order

## Audio stimuli (children)

**Stimuli design: audio matching across conditions**  
{Kevtas/[A/The/This] kevtas} {have/has} curly fur.  
{Kevtas/[A/The/This] kevtas} {wear/wears} scarves.  
• 2x4x3 (connection type, wording, age group)

## Results (Study 3 – Children only)



**Figure 3.** Mean ratings for principled (light) and statistical (dark) connections by wording. Error bars  $\pm 1$  SE from mean

- N = 297
- Main effect of property type (PC > SC) and of age group
- Higher ratings for control than in adult studies
- Interaction of child age x condition for oldest age group
- Condition x property type for bare plurals and indefinite singulars
- Pairwise comparisons: different developmental patterns
  - BP & IS: 4-5 < 6-7 < 8-10
  - DS: 4-5 = 6-7 < 8-10
  - “This”: 4-5 = 6-7 = 8-10

## Discussion

- Morphosyntax is indeed used to distinguish between different types of generalisations
- **Audio** stimuli might be perceived as more formal instructions, at least by children
- Knowing that the **indefinite singular** is not normally used to express **statistical properties**, participants might have provided a “charitable interpretation” of the stimuli and task
- Denotations of **nouns as names for kinds** as well as **Generics-as-Default** (Leslie & Gelman 2012) might explain high ratings for control sentences as well as main effects
- The role of **category type** affects perception of category-property links, animal categories are known for their high essentialism
- Task-dependent effects: using visual stimuli might overwrite the effect of linguistic input

## Future research

### Adult participants: reverse paradigm

- 2x2 design: property type (principled vs. statistical) x target image (shape vs. property)
- “Which of the following four options would you use to describe the first picture to someone, so that they would also think the circled picture is a febbit, and not the other one?”

### Child participants: “Sandwich”

- Middle sentence to make it more conversational: “That’s what I know about {[the/a/this/∅] kevtas(s)}.”

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