TIMED PICTURE NAMING IN ITALIAN-SPEAKING CHILDREN & ADULTS: DIFFERENCES BETWEEN NOUNS & VERBS

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Simona D'Amico

Simone Bentrovato

Manual Gasparini

Daniela Costabile

Elizabeth Bates

WHY ARE VERBS ACQUIRED LATER THAN NOUNS?

- **Gentner (1982)**

- **Caselli et al., 1995, 1999**

WHY ARE VERBS ACQUIRED LATER THAN NOUNS?

- **Underlying structure more complex**
  - Verbs reflect predicates and arguments
  - Nouns typically refer to single entities
- **Evanescent referents**
  - Verbs refer to moving, disappearing, changing actions and events
  - Nouns refer to static, single entities
- **Mapping from meaning to label is more variable for verbs**
  - Many ways to describe the same event

QUESTIONS TO BE ADDRESSED IN THE PRESENT STUDY

- Is this noun-verb difference restricted to the first stages of lexical development?

- Or is the same verb disadvantage observed in lexical retrieval in a stage after first words are acquired?

D'Amico, S., Devescovi, A., & Bates, E. (2001). Picture naming and lexical access in Italian children and adults. *Journal of Cognition & Development, 2(1), 71-105.*

- Timed naming of 250 object pictures in Italian 5-year olds & adults
- More alternative names, less agreement on the target name & slower RTs for that target name in children
- Similar predictor-outcome correlations but larger AoA effects in children

PRESENT STUDY

- **Timed naming of 250 object pictures in Italian 5-year-olds & adults (prior study)**

  compared with

- **Timed naming of 269 action pictures in a separate sample of 5-year-olds & adults (new study)**

PARTICIPANTS

- **68 5-year-old children**
  - 34 Object Naming
  - 34 Action Naming
- **84 college students**
  - 50 Object Naming
  - 34 Action Naming
- **50 additional college students in an earlier action-naming study with instructions to produce verbs in the infinitive form**

MATERIALS

- **250 black-and-white drawings of common objects** (animals, household objects, fruits and vegetables, body parts, vehicles, people)

- **269 black-and-white drawings of concrete actions** (transitive, intransitive activities and events)

- **From various sources** (Snodgrass & Vanderwart, Abbatte & La Chapelle, Peabody Picture Vocabulary Test, Boston Naming Test, Boston Action Naming Test, miscellaneous)

PROCEDURE

- **All pictures scanned and digitized for presentation on a Macintosh workstation**
- **Presented in the PsyScope Experimental Control Shell** (Cohen, MacWhinney, Flatt & Provost, 1993)
- **Participants tested individually**
  - **Automatic inter-trial timing for adults**
  - **Experimenter-advanced timing for children**
- **Response times collected by voice key** (CMU Button Box)
- **Responses audio-recorded for coding**

INSTRUCTIONS

- *Name the picture as fast as you can without making a mistake*

- *Give the first name that comes to mind, without any words before it*

- *Try to speak clearly, don't say "hmmm" or make any other sounds before the word*

- *Try to use just one single word when you can*

- **Practice items prior to onset of experiment**

INSTRUCTIONS FOR VERBS

- ## ORIGINAL NORMING STUDY (50 ADULTS)
  - Instructed to produce verbs in the infinitive form during practice trials

- ## PILOT STUDIES OF CHILDREN
  - 5-year-olds found it impossible to produce the infinitive form consistently, resorted repeatedly to third person singular

- ## FINAL STUDY
  - 34 children instructed to produce 3rd p. sing.
  - New sample of 34 adults instructed to produce 3rd p. sing.

SCORING

- **LEVEL I:**
  - Valid Responses
  - Non-Responses
  - Invalid responses (unusable RT)
- **LEVEL II:**
  - Target Name (given by most participants)
  - Morphological variant of target name
    - E.g. "doggie" for "DOG"
  - Synonym of Target Name
  - Other

DEPENDENT VARIABLES
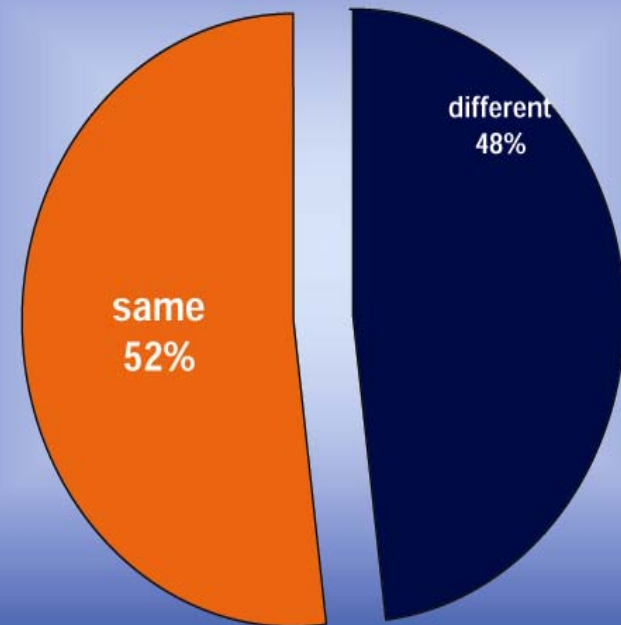## (All Analyses Over Items)

- **Name Agreement**
  - – **Percent of participants producing target name**
  - – **Also called dominant response**

- **Number of Different Names Elicited**

- **Target RT**
  - – **Mean RT for all participants producing target name**

Percent of object and action item on which children and adults produce the same or a different target name
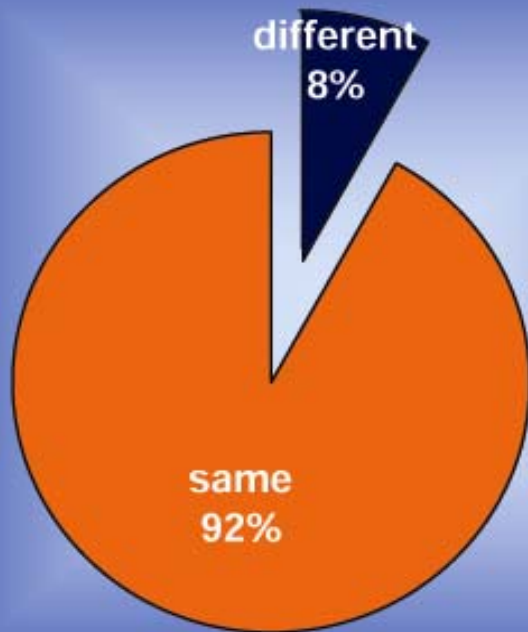
What kinds of differences did we find in child vs. adult target names for NOUNS? (8% of cases)

Children make phonological simplifications...

<u>ADULT</u>	<u>CHILD</u>
• **Cintura** *(belt)*	• **Cinta** *(belt)*
• **Fischietto** *(whistle-diminutive)*	• **Fischio** *(whistle)*

Children make part-whole confusions

ADULT

- **Tacco**
  (heel)
- **Acquario**
  (acquarium)
- **Giradischi**
  (recordplayer)
- **Interruttore**
  (light-switch)

CHILD

- **Scarpa**
  (shoe)
- **Pesci**
  (fish-plural)
- **Disco**
  (record)
- **Luce**
  (light)

Children use more generic/superordinate terms...

ADULT

- **Infermeriera**
  (nurse)
- **Igloo**
  (igloo)
- **Sgabello**
  (stool)
- **Palma**
  (palmtree)

CHILD

- **Signora**
  (lady)
- **Casa**
  (house)
- **Sedia**
  (chair)
- **Albero**
  (tree)

What kinds of differences did we find in child vs. adult target names for VERBS? (48% of cases)

Children express concrete meanings...

ADULT

- **Elemosina**
  (begs)

- **Imbuca**
  (posts)

- **Rimorchia**
  (tows)

- **Opera**
  (operates)

CHILD

- **Chiede i soldi**
  (asks for money)

- **Mette la posta**
  (puts in the mail)

- **Porta**
  (brings)

- **Cura**
  (cures)

Children use more periphrastic constructions...

ADULT

- **Si inchina**
  (bows-reflexive)
- **Accende**
  (lights)
- **Regala**
  (gives-a-gift)
- **Cavalca**
  (rides)

CHILD

- **Fa l'inchino**
  (makes a bow)
- **Fa il fuoco**
  (makes a fire)
- **Da un regalo**
  (gives a gift)
- **Va a cavallo**
  (goes on horseback)

Children use concrete scene descriptions...

ADULT

- **Carica**
  (loads)

- **Camminano**
  (walk-plural)

- **Paga**
  (pays)

- **Allaccia**
  (ties)

CHILD

- **Mette le scatole**
  (puts in the boxes)

- **Arrivano a scuola**
  (arrive-plural at school)

- **Compra il latte**
  (buys milk)

- **Si allaccia le scarpe**
  (ties-reflexive the shoes)

SUMMARY PART I

- **Children and adults disagree dramatically on names for actions**
- **Noun disagreements (8%) involve**
  - **Phonological simplifications**
  - **Part-whole confusions**
  - **Generic/superordinate terms**
- **Verb disagreements (48%)**
  - **Concrete meanings**
 - **Periphrastic constructions**
  - **Scene descriptions**

SUMMARY PART I

- Why do young children 'sound different' from adults in describing the same scenes?

- The difference comes disproportionately from VERBS!!!

- In action naming, children are tied more closely to concrete, specific scenes
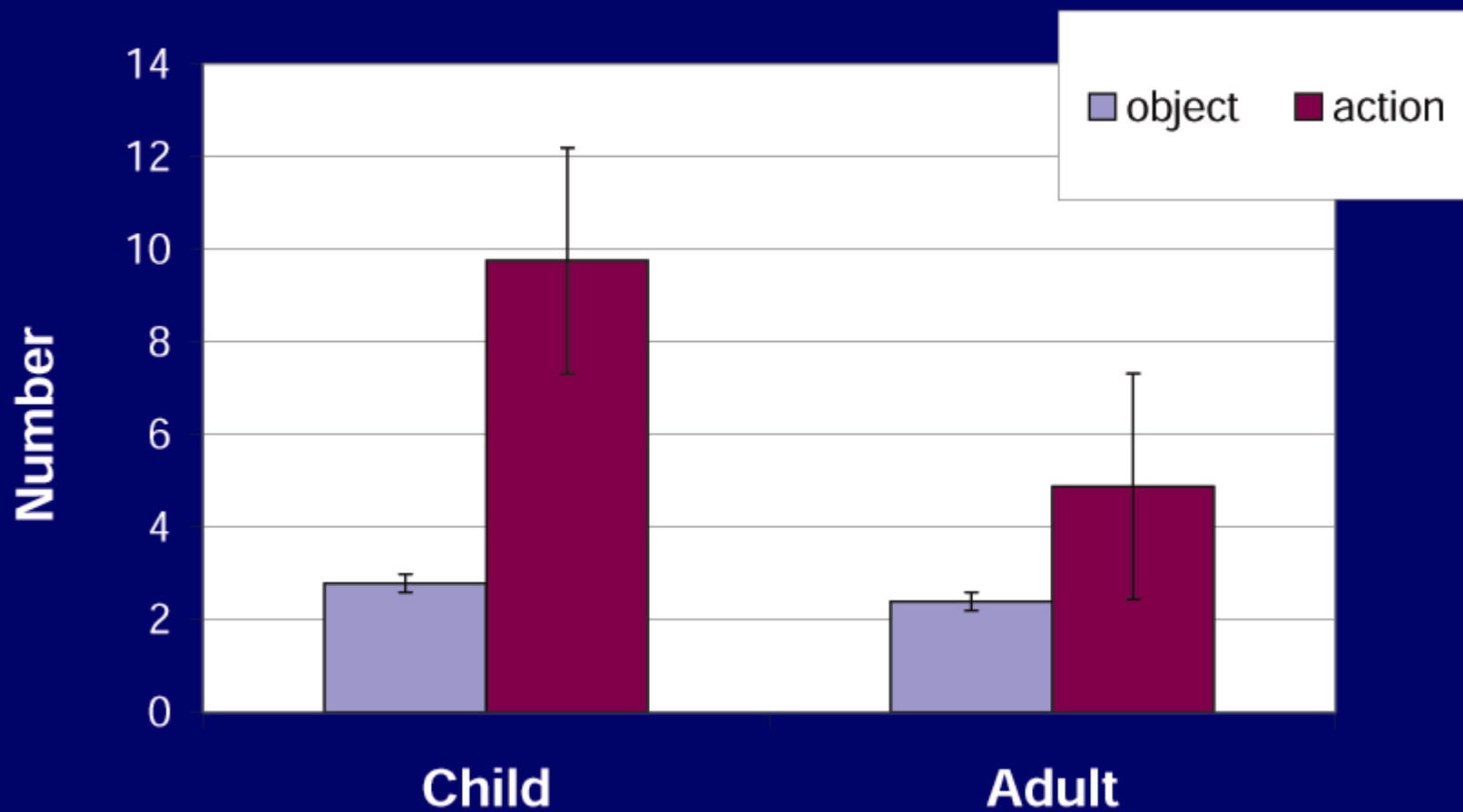
LOOKING ONLY AT ITEMS WHERE ADULTS & CHILDREN PRODUCE THE *SAME TARGET NAME*

- **230 object pictures** (92% of 250)
- **140 action pictures** (52% of 269)
- **Three dependent variables** (for each item)
  - Percent name agreement
  - Number of names given
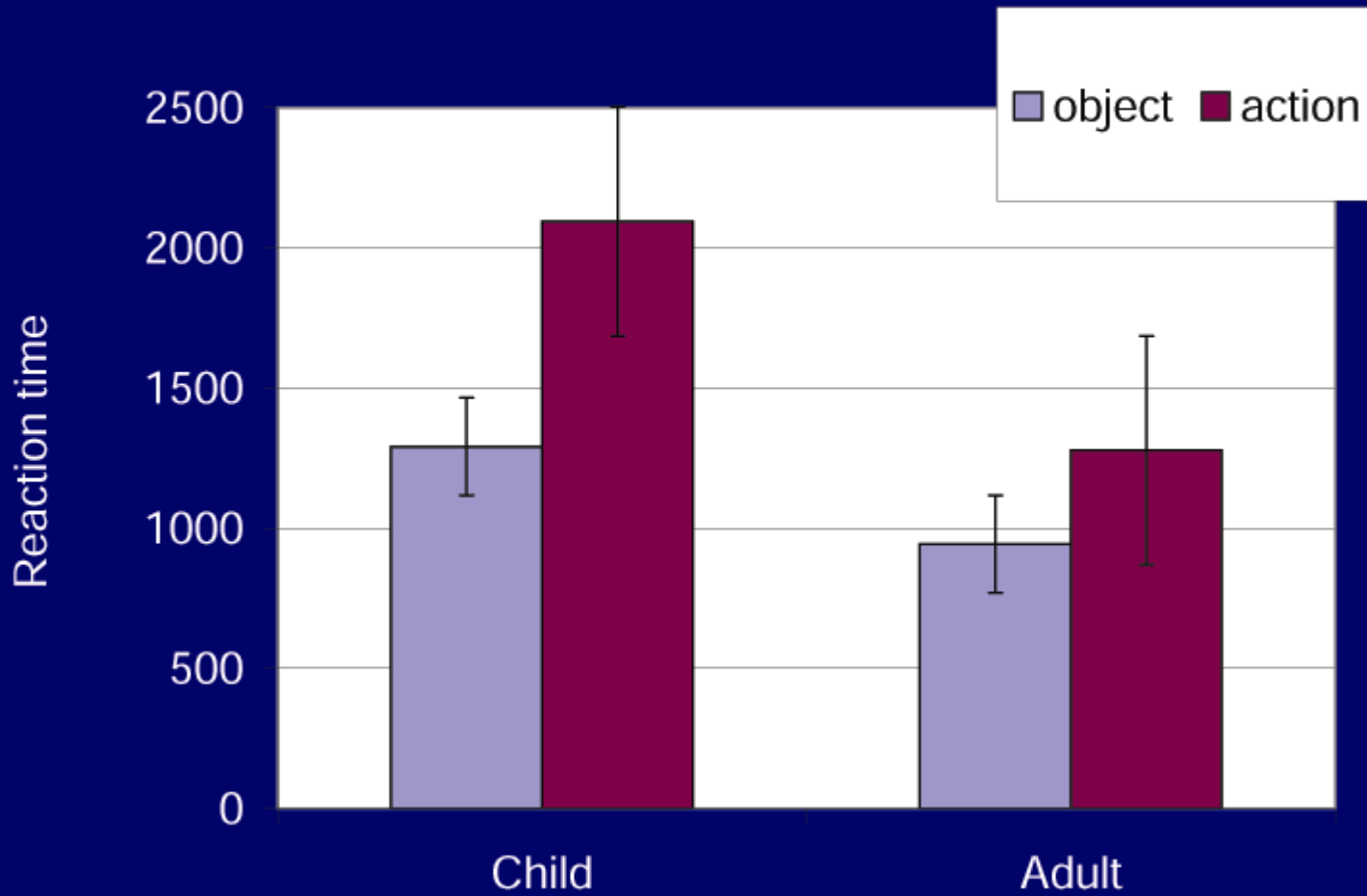 - Mean RT to produce target name

Percent of Agreement on the Target Name
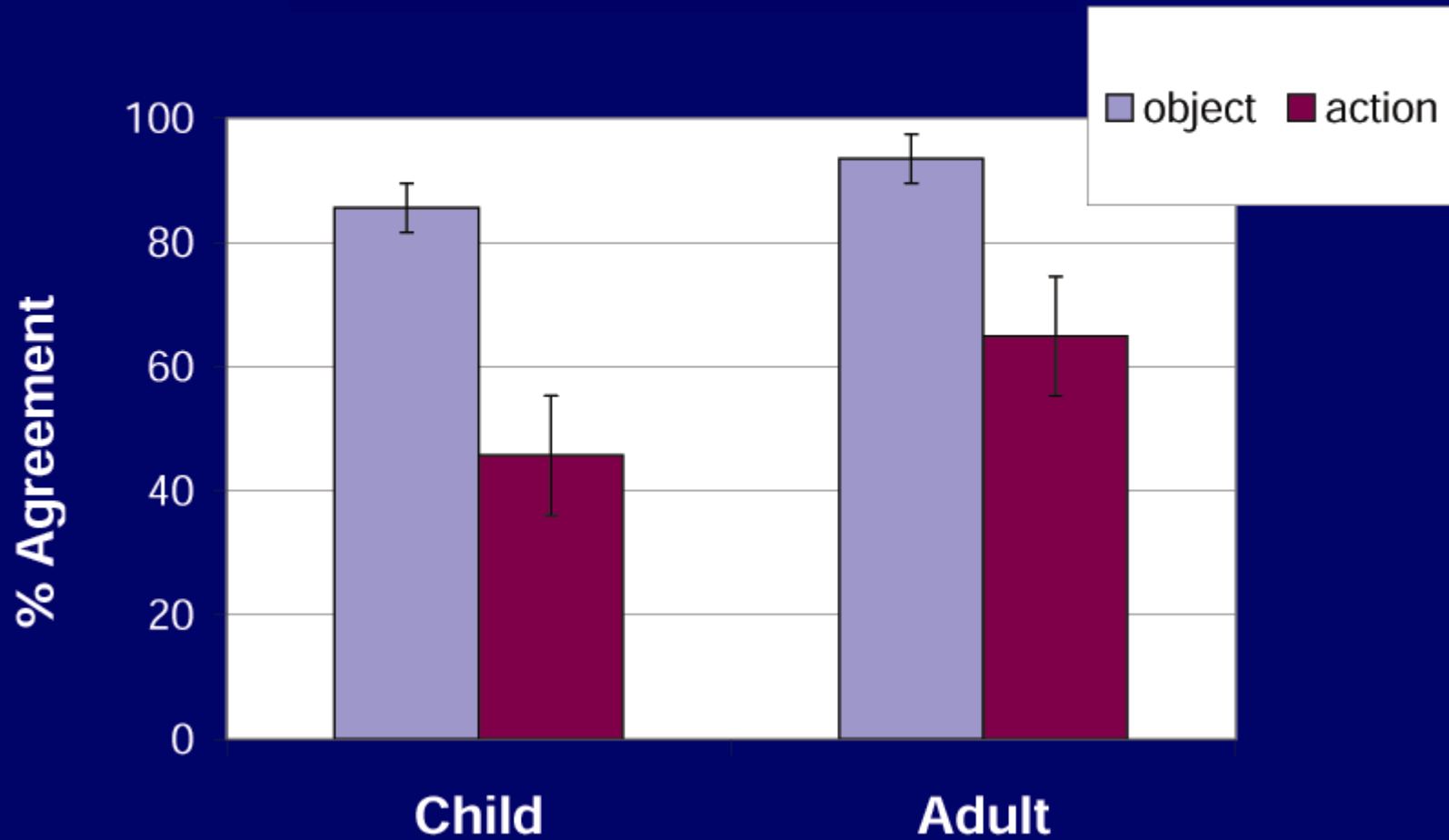
Number of Different Names

Mean Reaction Time to Produce Target Name

SUMMARY PART II

- **Even when children and adults produce the same target name**
  - Overall name agreement is lower for verbs
    - Percent of participants producing target name
  - Number of different alternative names is higher for verbs
  - Mean target-name RTs are slower for verbs
- **Action naming is harder than object naming for young children, even for the words that they know**

QUESTIONS WE ADDRESSED

- **Is this difference restricted to the first stages of lexical development?**
  - **'NO'!**

- **Or is the same verb disadvantage observed in lexical retrieval in a stage after first words are acquired?**
  - **'YES'**

WHY ARE VERBS HARDER TO RETRIEVE THAN NOUNS?

- **Perhaps for the same reasons that they are harder to acquire early on** (Gentner, 1982; Caselli et al., 1995, 1999)

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  - **Verbs refer to moving, disappearing, changing actions and events**
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