The Ohio Regional Dialect Developmental Repository (ORDDR)

Cynthia G. Clopper & Laura Wagner

THE OHIO STATE UNIVERSITY

Acknowledgments

Collaborators

Elizabeth McCullough

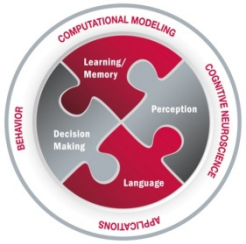
Ellen Dossey, Zack Jones, Qingyang Yan

Research Assistants

Eryn Ahlers, Emily Behm, Lindsay Brown, Anna Coffman, Kelli McGuire, Alyssa Nelson, Liz Nugent, Gabriela Oppenheimer, Kelley Selhorst, Victoria Sevich, Mallory Sharp, Erin Walpole

Funding

CCBS Seed Grant



Variation in the speech signal

The speech signal is highly variable

- linguistic sources: phonological context, lexical properties, discourse context
- indexical sources: speaking style, age, gender, region of origin, native language status

This variability is highly structured

- linguistic information: phonemes, words, meaning
- indexical information: talker, age, region of origin

Perception of regional dialect variation

Adult listeners can:

- identify where someone is from based on their speech (Clopper & Pisoni, 2004)
- group people by regional background based on their speech (Clopper & Pisoni, 2007)
- report social stereotypes associated with people based on their speech (Lambert et al., 1960)
- rapidly adapt to variation in the pronunciation of known words (Maye et al., 2008)

➢ When do children acquire these skills?

Perception of regional dialect variation

Children can:

- identify whether someone is from the local area by 5-6 years old (Kinzler & DeJesus, 2013)
- distinguish people by regional background based on their speech by 5-6 years old (Girard et al., 2008)
- report adult-like social stereotypes associated with people based on their speech by 8-10 years old (Cremona & Bates, 1977)
- rapidly perceptually adapt to variation in pronunciation of known words by 6-7 years old (Nathan et al., 1998)

➢ What do we mean by “acquire”?

Perception of regional dialect variation

Children cannot:

- identify where someone is from based on their speech with adult-like accuracy even by 14-15 years old (Williams et al., 1999)

- When do children acquire these skills?
  - When do children first show measurable success?
  - When do children reliably show adult-like performance?

Research objective

A unified approach to understanding the development of sociolinguistic competence

- sociolinguistic competence assessed through a range of perceptual tasks
    - earliest success
    - adult-like performance

- development assessed cross-sectionally throughout the lifespan (4-86 years old)
    - dense sampling for ages 4-17
    - sparser sampling for 18+

Research approach

1. Between-subjects task validation
   - identification, discrimination, classification, locality
   - language attitudes (status, solidarity)
   - speech intelligibility
   - speech production

2. Within-subjects data repository (ORDDR)
   - classification, locality
   - language attitudes (status, solidarity)
   - speech intelligibility
   - speech production

Research approach

earliest success

1. Between-subjects task validation
   - identification, discrimination, classification, locality
   - language attitudes (status, solidarity)
   - speech intelligibility
   - speech production

adult-like performance

2. Within-subjects data repository (ORDDR)
   - classification, locality
   - language attitudes (status, solidarity)
   - speech intelligibility
   - speech production

Tasks

1. Ad-hoc identification
2. Place discrimination
3. Free classification
4. Locality ratings

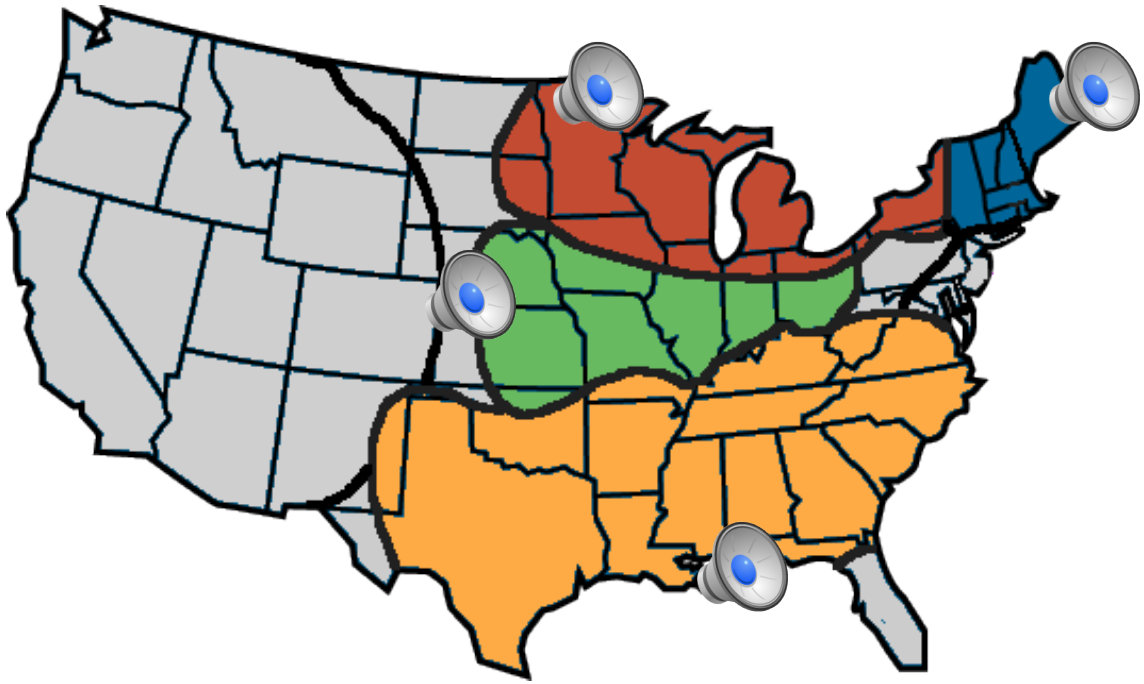
5. Status ratings (smart, rich)
6. Solidarity ratings (friendly, honest)

7. Phrase intelligibility in noise
8. Color naming
9. Story-telling (Goldilocks, Little Red Riding Hood)

Materials

12 female talkers from the TIMIT corpus (Fisher et al., 1986)

- 3 per dialect: New England, North, Midland, South
- *She had your dark suit in greasy wash water all year*



Data collection

All ORDDR data were collected in the Language Sciences Research Lab (“Language Pod”) at COSI

Participants

Age group (years)	Identification & discrimination	Free classification		Locality, status, & solidarity ratings
4-5	72	40		24
6-7	72	44		24
8-9	72	45	48	24
10-11	72	41	52	24
12-13	72		43	24
14-15	72		34	24
16-17	72		23	24
18-34	72			24
35-49	72		200	24
50+	72			24
Total	**720**	**170**	**400**	**240**

Ad-hoc identification

Dialect pairs were assigned to colors

- training on what orange and blue talkers sound like
- identify new talkers as orange or blue

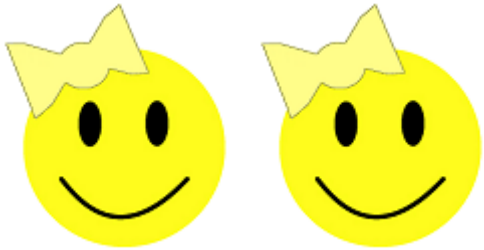
Earliest success: 6-7 years old (New England vs. Midland)

Adult-like performance: 14-15 years old (all dialect pairs except North and Midland)

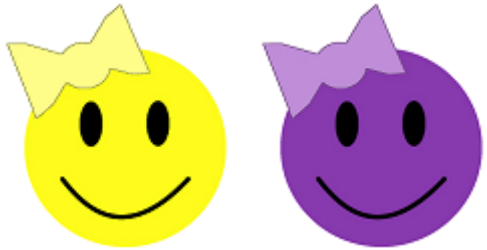
Place discrimination

Pairs of talkers presented on each trial

- indicate if the talkers are from the same or different places



SAME



DIFFERENT

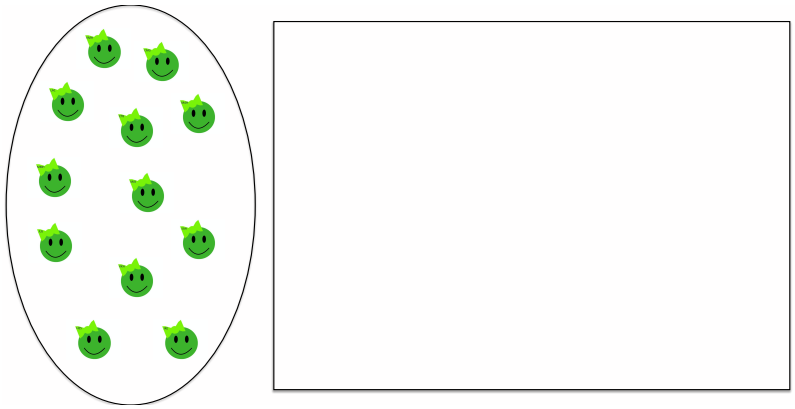
Earliest success: 4-5 years old (New England vs. Midland, New England vs. North)

Adult-like performance: 12-13 years old (all dialect pairs except North and Midland)

Free classification

Group the talkers by where they are from

- make any number of groups with any number of talkers in each group



Earliest success: 4-5 years old (New England grouped separately from North, Midland, and South)

Adult-like performance: 8-9 years old (grouping: New England, South, North/Midland), but 16-17 years old (accuracy)

Locality ratings

How much does this person sound like she's from Ohio?

very much - a little - maybe or maybe not - not really - not at all

Earliest success: 4-5 years old (New England less local than North, Midland, and South)

Adult-like performance: 8-9 years old (New England less local than South, which is less local than North and Midland)

Status ratings

How smart/rich does this person sound?

very much - a little - maybe or maybe not - not really - not at all

Earliest success: 4-5 years old (New England less smart than North, Midland, and South)

Adult-like performance: 12-13 years old (New England and South less smart/rich than North and Midland)

Solidarity ratings

How honest/friendly does this person sound?

very much - a little - maybe or maybe not - not really - not at all

Earliest success: 6-7 years old (New England less honest than North, Midland, and South)

Adult-like performance: n/a (adult performance highly variable)

When do children acquire these dialect perception skills?

Age group (years)	Measurable success	Adult-like performance
4-5	place discrimination free classification locality ratings status ratings	
6-7	ad-hoc identification solidarity ratings	
8-9		free classification grouping locality ratings
10-11		
12-13		place discrimination status ratings
14-15		ad-hoc identification
16-17		free classification accuracy

When do children acquire these dialect perception skills?

The fundamentals of these skills are in place by 4-5 years old

- children can perceive variation in the speech signal and explicitly link that variation to notions of place

Development of adult-like sociolinguistic competence is protracted over childhood and adolescence

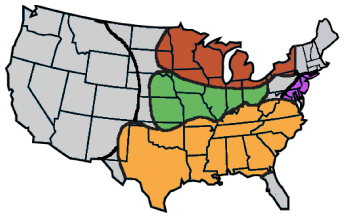
- tasks that assess accuracy reveal later stages of development
- social stereotypes develop after place-based judgments

ORDDR Data

Within-subject tasks

1. free classification
2. locality ratings
3. status ratings (smart)
4. solidarity ratings (friendly)
5. word intelligibility in noise
6. color naming

12 female talkers from the NSP corpus: Mid-Atlantic, North, Midland, South (Clopper & Pisoni, 2006)



240 participants (24 in each age group)

Repository coming soon!

Visit: http://u.osu.edu/orddr

- summary of the results of the between-subject studies
- data repository and associated summary coming soon!

ORDDR Materials

12 female talkers from the NSP corpus (Clopper & Pisoni, 2006)

- 3 per dialect: Mid-Atlantic, North, Midland, South
- *These take the shape of a long round arch, with its path high above and its two ends apparently beyond the horizon*