Perceptual dialectology

GIS Mapping for Linguistic Research
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What is perceptual dialectology?

It is a branch of folk linguistics that has its focus in what non-linguists say about language and linguistic variation, including

- where non-linguists believe variation comes from
- where non-linguists believe variation exists
- why non-linguists believe variation happens

In many traditional dialectology studies, there is a lack of inclusion of non-linguists’ attitudes and beliefs about linguistic varieties and variation

- Perceptual dialectology fills this gap
- Contrasts with Bloomfieldian (structuralist) perspective that only production data counts as “real” data
Why Perceptual Dialectology?

“Without knowledge of the value-ridden classifications of language and language status and function by the folk, without knowledge of where the folk believe differences exist, without knowledge of where they are capable of hearing major and minor differences, and, most importantly, without knowledge of how the folk bring their beliefs about language to bear on their solutions to linguistic problems, the study of language attitudes risks being: 1) a venture into the investigation of academic distinctions which distort the folk reality or tell only a partial truth or, worse, 2) a misadventure into the study of theatrically exaggerated speech caricatures.”

(Preston 1993a: 252)
History of Perceptual Dialectology

1930s-1950s – Dutch and Japanese traditions of understanding where people are perceived to speak similarly and where people are perceived to speak differently
   Little arrow method (Dutch), ‘difference boundaries’ (Japanese)
   Perception ≠ Production = Big controversy!

1960s – Hoenigswald incited interest in the beliefs of the folk
   Language as production AND perception

1980s-present – Dennis Preston and ‘modern’ folk linguistics
   Switch from ‘folk’ to ‘perceptual’ because ‘folk’ can be understood to mean ‘false’
   Tools developed in this tradition are still used today but have been undergoing advances
The following tools have been used variously in the Prestonian tradition of Perceptual Dialectology:

- **Hand-drawn mental maps**
  
  *People are asked to draw dialect areas on maps and provide labels*
  
  *Results in composite maps*

- **Degree-of-difference task**

  *Ranking states on how different its speech is from one’s own*

- **Pleasantness and correctness evaluations**

  *Ranking states on how pleasant or correct its speech is*

- **Placing voices**

  *Given a voice and a map with a list of cities, place the voice*

- **Qualitative analysis**
What is a mental map?

Map drawn by Hawaiian, Preston (1989: 27)

Non-linguists draw areas that they perceive as dialect areas

Of course we don’t ask them to draw “dialect areas” – why?

Note that in this particular research project, the researcher chose to give the respondent a map of the United States
Cramer (2016) – Rural vs. Urban Kentucky
Cramer (2016) – Variation within the state
What is a composite map?

What do we do with those mental maps?

We create composite maps, a combination of those individual maps, that can give a broader understanding of how a community sees the dialect landscape.

Composite map of United States as seen by Hawaiians, Preston (1989: 32)
Cramer (2016) – Appalachian composite
Cramer (2016) – 50% agreement composite
How do we get from...

THESE...

TO THESE?
What we used to do...

Initial computer generalizations (Preston and Howe 1987)

- Trace map onto digitizing pad (?) that feeds shapes into a program connected to a base map
- Program records one hit for each pixel enclosed in or touching the respondent’s boundaries
- Creates unwieldy maps like this one; need patterns of agreement

Southeastern Michigan respondents’ computer-generalized map, showing where even one respondent outlined a South (Preston and Howe 1987)
What we used to do...

Southern Indiana (outlined — 53 of 106) and southeastern Michigan (shaded — 69 of 138) respondents’ generalizations of the US South at the 50% level (Preston and Howe 1987)
What we used to do...

Perceptual Dialect Quantifier (PDQ) for Windows 1995 (!) (Onishi and Long 1997)

After digitizing the maps, PDQ was used to analyze dialect areas and reveal areas of agreement (just like in the previous technology)

Calculates maps by counting pixels but makes areas that were encircled most often a darker color

Montgomery (2007) – simplified percentage shaded map in PDQ
Why we don’t do that anymore...

Reasons why we need to find other ways of creating aggregate maps, to better understand the perceptions of people in a place:

1. The technologies (software and hardware) used in these methods are now obsolete
2. These approaches utilized graphical approaches to the data (that is, they considered the data to be separate from the map underlying it), thus neglecting the spatial dimension
3. Recent advances in Geographic Information Systems (GIS) products and (possibly) the resurgence of tablet-type technologies
What many of us do now!

To create composite maps using GIS,

- Each individual map is scanned (using any scanner) as a PDF
- PDF must be converted to individual TIFF files
- Typically, the map you use for data collection (i.e., print out, give to respondents to draw on) has been created using a GIS, which uses geographic databases to connect data to real world coordinates
- This original map will be used as the base layer in aggregating the hand-drawn maps
- Hand-drawn maps must be georeferenced to the base map so that they overlay exactly
  
  *Can be accomplished most easily by creating points beforehand but can also be done otherwise*
What many of us do now!

This is where it gets ugly...

At this point (though we’re working on this), individual areas that have been drawn must be digitized by hand

> That is, using the computer mouse, one must select the editing tool and manually click around the circle/shape to connect the regions to the original map

> ArcGIS has some tools to make this easier (semi-automatic), but it is still tedious

What you create are called ‘polygons’, which are the kinds of objects that can be aggregated to create heat maps, composite maps, etc.

> Tools in ArcGIS allow you to connect all kinds of information to these polygons (i.e., info about participants, name of region, category)

> Can create composite maps based on this information
Others using GIS

![Map of Washington State with GIS usage data]

Number of Times a Respondent (n=178) Identified an Area

- 0 - 40
- 41 - 50
- 51 - 60
- 61 - 70
- 70 - 86

WASHINGTON

Evans 2010
http://depts.washington.edu/folkling/
Others using GIS


http://depts.washington.edu/folkling/
Others using GIS

Where are we going?

Some of the tedious nature of digitizing may be remedied by advances in tablet technologies.

- iPads and other tablets are very common now.
- But there are some questions:
  - *Are people ready for it?*
  - *Will people do as much drawing on these surfaces?*
  - *How will these interact with ArcGIS?*
Demo maybe?

Depending on time/status of my work computer, I will show you a little of what this looks like in ArcGIS.

Mostly so you can see that it’s quite different than the point data we’ve seen.

Also so Ben’s demo of the cool new tools on Tuesday will seem like a move in the right direction!

If we can’t get to it today, perhaps we can look at it tomorrow.

I have some step-by-step instructions that I am willing to share.

Or perhaps we can meet individually to walk though it.
That’s all for today

Some reminders

Do your discussion board assignment in Canvas before next class

We’ll do the hands-on activity on Tuesday

*We’ll be doing QGIS again, so don’t lose it!*

You will also need to collect some data:

Using the Word file in Canvas, you need to have **three people** rate KY and the states that touch it on level of pleasantness and correctness

Add that data to the Google Drive document here:

https://drive.google.com/open?id=1d17muHAzav0O1AEKy8LLsV90BjykgeAA8vvRDeeKero

Enjoy the weekend! Go see some cool Kentucky stuff!