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LANGUAGE, PEOPLE, SALIENCE, SPACE: PERCEPTUAL DIALECTOLOGY AND LANGUAGE REGARD

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Abstract

This paper explores the not novel idea that popular notions of the geographical distribution and status of linguistic facts are related to beliefs about the speakers of regional varieties but goes on to develop an approach to the underlying cognitive mechanisms that are employed when such connections are made. A detailed procedural account of the awakening of a response, called one of *language regard*, is given, as well as a structural account of an underlying *attitudinal cognitorium* with regard to popular beliefs about United States' Southerners. A number of studies illustrating a variety of research tools in determining the connections, the response mechanisms, and the underlying structures of belief are provided.

Keywords
language regard, language attitudes, attitudinal cognitorium, perceptual dialectology, implicit and explicit attitudes

1. Introduction

It is important to people whose major interest is in language variation to know where the land lies and how it is shaped and filled up — the facts of physical geography — because such matters have an influence on language. Sarah Thomason notes, for example, that Swahili will probably borrow no linguistic features from Pirahã (2001: 78) because speakers of the two languages are widely separated geographically and unlikely to run into one another. Introductory linguistics commonplaces about blocking (mountains, rivers, etc.) and facilitating (passes, rivers, etc.) geographical elements with regard to language and variety contact are also well known. There has even been suspicion that physical facts about geography are directly, even causally, related to

language, although the alleged enormous Eskimo vocabulary associated with snow is completely discredited (e.g., Pullum, 1991: Chapter 19), and the theory that mountain areas contribute to consonant shifts due to the greater volume of breath resulting from increased activity of the lungs was dismissed by Jespersen in *Language* in 1921 (cited from the Norton Library Edition of 1964: 256-57).

I want to suggest that people are much more important to the distribution of language in space than mountains, cities, roads, and waterways, etc. But I do not mean this in an obvious way — the structures of the language variety among the people of a certain area, how those structures came to be that way, and how the structures of one area are related to those of contiguous areas are central to dialectology and area linguistics, and the search for such facts has long been rightly regarded as an important branch of human or cultural geography. Such studies have, however, been prejudiced in the direction of linguistic performance, and, to a lesser extent, linguistic competence — the brain/mind capacity that lies behind the shape of language.

I want instead to discuss perception, and what lies behind it. I will be especially concerned with perceptual strategies that arise from underlying beliefs and presuppositions about language, particularly language and space, and I want to show that such matters are important to the most basic questions of language variation and change, in some cases even providing explanations for otherwise puzzling events.

To accomplish this I will deal with the basic cognitive distinction of *salience*, but not the sort that refers only to what is conscious or declarative knowledge nor the sort that one might safely say arises from linguistic facts alone. In fact, I want to look at avenues or language change from the point of view of both relatively subconscious and relatively conscious activity, and I will not elaborate on these being matters of degree, although there is considerable agreement in current accounts of dual processing that the two are at least linked or interactive (e.g., Baumeister, 2005; Paivio, 2007; Sun, 2002).

Based on the above, I will ask the following questions:

1) How can we show that linguistic facts are linked to geographical ones in the popular mind?

2) How do such facts get linked to geographical ones in the popular mind?

(In both 1) and 2), by “facts” I mean those of any size — from an entire language down to a phonetic detail.)

3) What good does it do linguistics to know any of this?

2. How are linguistics facts linked to geographical ones?

This is the easy part. Nonlinguists know not only that people in different parts of the world speak different languages but also that people in different regions speak the same language differently; one may confirm that by simply listening in on frequent public conversations, and linguists have accessed that knowledge in various ways. Perhaps the first systematic attempt in this area or study, which has come to be known as perceptual dialectology (PD), was by P. Willems in the late 19th century, who asked respondents about the similarity of dialects of surrounding areas across the large territory of Low Franconian varieties (Willems, 1886), although before him, Ch. de Tourtoulon used respondent perceptions in his work on the major dialect boundaries of France (de Tourtoulon and Bringuier, 1876). The approaches of Willems and de Tourtoulon were picked up in the mid-20th century in both The Netherlands and Japan, where questions about the similarity and/or difference of one's own speech from relatively nearby places dominated for some time and where the primary research target was to uncover the degree to which nonspecialist perceptions of dialect areas did or did not correspond to professionally determined ones. To oversimplify, the Japanese did not often find a good correspondence between folk and professional accounts, but the Dutch did, and the interested reader can find a full account of this Sino-Dutch work in Preston (1999a) (Chapters 1-9, Parts I and II). In all these studies and in some inspired by them in other places, respondents were asked to indicate the degree of difference or similarity between their home site and nearby ones, and maps of various sorts were constructed to reflect the data.

In the 1970's the Japanese scholar Fumio Inoue began a more statistically sophisticated study of what he called "dialect images," although his predecessor Yoshio Mase had devised a numerically oriented system of producing maps based on the earlier method of asking respondents to rate the similarities and differences of surrounding areas (e.g., Mase, 1964). Borrowing techniques from the study of language attitudes, Inoue identified variety descriptors (e.g., *snobbish, crisp, plain, funny*) and used these to characterize the speech of different areas, but without voice samples (e.g., 1977/8, 1978/9, and see Inoue 1995 for an example in English of this work in both Japan and Great Britain). Although he often converts the results of these studies to maps, he also points out that multidimensional scaling and other statistical representations are sorts of

cognitive maps of the perception of speech of different regions and may be more revealing than those that transfer research results to a geographical realization (1996: 159). Inoue's research, and much work to follow, asked respondents to characterize speech differences for large regions, extending beyond those in the immediately surrounding areas. Even more importantly, his work recognized the independent, social psychological importance of PD, not just its contrast with professionally drawn dialect borders (1996: 159).

In 1981 Preston began a series of studies in PD that made use of the following techniques:

1) Draw-a-map. Respondents draw boundaries on a blank (or minimally detailed) map around areas where they believe regional speech zones exist; a technique developed by Preston and Howe (1987) allows computerized generalizations to be compiled from individual responses to this task. Although respondent hand-drawn maps were well known in cultural geography (e.g., Gould and White, 1974), there does not appear to be a long-standing tradition for the use of this technique in the study of dialect perceptions.

2) Degree-of-difference. Respondents rank regions on a scale of one to four (1 = 'same,' 2 = 'a little different,' 3 = 'different,' 4 = 'unintelligibly different') for the perceived degree of dialect difference from the home area… [essentially the Dutch and Japanese methods].

3) 'Correct' and 'pleasant.' Respondents rank regions for 'correct' and 'pleasant' speech; such ratings are common in other areas of cultural geography (e.g., Gould and White, 1974) and reflect principal findings from language attitude studies (e.g., Ryan, Giles, and Sebastian, 1982), although, in the latter, respondents judge actual voice samples rather than their internal representation of speech differences when confronted simply with a regional label.

4) Dialect identification. Respondents listen to voices on a 'dialect continuum,' although the voices are presented in a scrambled order. The respondents are instructed to assign each voice to the site where they think it belongs.

5) Qualitative data. Respondents are questioned about the tasks they have carried out and are engaged in open-ended conversations about language varieties, speakers of them, and related topics (Preston, 1999a: xxxiv).

These various techniques, and some related ones, including those of previous research, might be classified as follows:

1) Voice samples are either:
    a) Given, or
    b) Not given
2) Tasks involve:
    a) Evaluation, in which
        i. Evaluative labels are given, or
        ii. Not given
    b) Identification, for which
        i. Sites are given, or
        ii. Not given
    c) Respondent production (i.e., imitation) is
        i. Requested, or
        ii. Not requested
3) Modes of response are:
    a) Specified (e.g. rating scale), or
    b) Discursive
4) Awareness of the research target by the respondent is
    a) (Relatively) conscious, or
    b) (Relatively) subconscious

The earliest work in PD did not make use of sample voices and was critical of the language attitude matched guise technique for submitting regional voice samples and concluding that attitudes to a region were thus-and-so when the respondents were not asked where they thought the voice was from (Preston, 1989: 3). Later work, however, as in the "Dialect identification" task outlined above, made voice sample research an important part of the subfield and led to the suggestion that "… any study of responses to regional speech is an integral part of the perceptual dialectology enterprise" (Preston, 1999a: xxxviii), blurring the lines between language attitude research and PD. Recent work has presented resynthesized speech samples that vary along only one dimension so that the regional impact of specific linguistic features can be assessed (e.g., Plichta and Preston, 2005).

It may also be confusing to "Respondent production" listed above as one of the enterprises of PD, but several studies have shown the value of respondent imitation of varieties (their own and others). Some have even presented voice samples of regional imitations to respondents for authenticity judgments (Evans, 2002; Purschke, to appear), making a full circle: perception (the source of the imitation) – production (the imitation) – perception (the response to the imitation).

I will not explore every combinatorial possibility from the above outline, and perhaps the outline itself will invite others to see just what has been missed in previous work and lay out a new research agenda. I also cannot provide the low-level details of each category; they are too numerous. In just the first, "Voice samples"…, the possibilities are considerable: ones that are simply typical of the region might be presented, or ones carefully resynthesized to reveal only a single regional phonetic feature might be used, with all possible gradations between, and even this continuum does not exploit all the possibilities. For example, regional voice samples that have some part of the signal masked (e.g., segments, intonation) may be presented (e.g., Gooskens, 2005).

A word about "Discursive" research may also be in order. In PD one may ask respondents to carry out various tasks (map-drawing, evaluations, voice placement, etc.), or one may simply talk to nonlinguists about language or listen to them speaking to one another on the topic. Recent work, for example, has analyzed and classified the results of focus group discussions about local varieties and languages (Iannàccaro and Dell'Aquila, 2004), and attempts have also been made to make use of more linguistically sophisticated analytic procedures (e.g., the study of inferences and presuppositions) in the analysis of such talk (e.g. Preston, 2004).

A survey of previous work that makes use of many of the possibilities in this outline can be found in Preston (1999a) and Long and Preston (2002). Bibliographies of work in PD and related areas (up to 2000) are available in Preston (1999a) and in Canobbio and Iannàccaro (2000), although a great deal of work has gone on since then, and an updated bibliography is needed.

It will not do, however, to talk about how PD has made use of and elicited regional linguistic folk knowledge without showing a few results. Since in the next section I will focus on US varieties, I apologize for overloading it with US maps and data, but the aim here is to show styles of research used in this enterprise. A

considerable variety of research types from the earliest to more recent efforts from many regions can be seen in Preston (1999a) and Long and Preston (2002).

Figure 1 shows a typical hand-drawn map by a respondent who was asked to draw boundaries around regional speech areas in the US and indicate characteristics of the speech (and speakers) within, a technique borrowed directly from cultural geographers' mental maps (e.g., Gould and White, 1974).

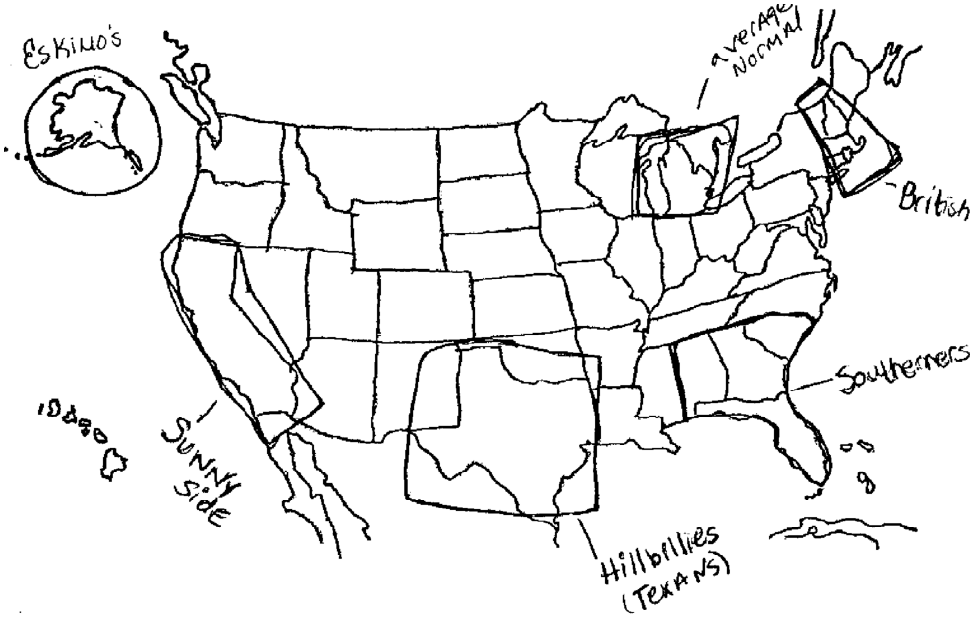


Figure 1. A Michigan respondent's hand-drawn map of US dialect areas

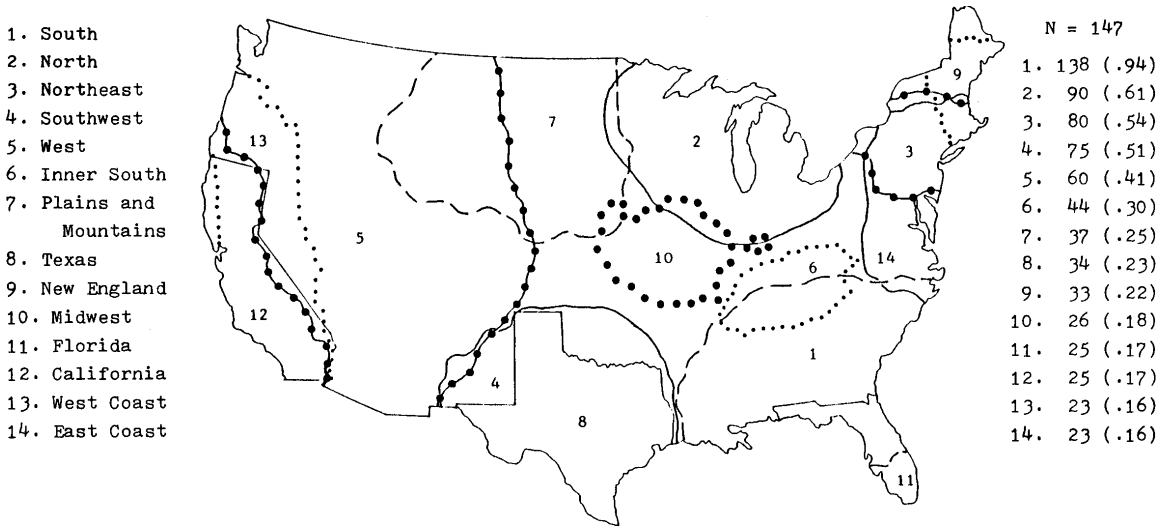


Figure 2. A computer-generated composite map of 147 Michigan respondent hand-drawn maps of US dialect areas (Preston 1996: 305)

Also following the lead of cultural geographers (e.g., Gould and White 1974), attributes of preset regions (In Figure 3, primarily the US states) can be mapped.

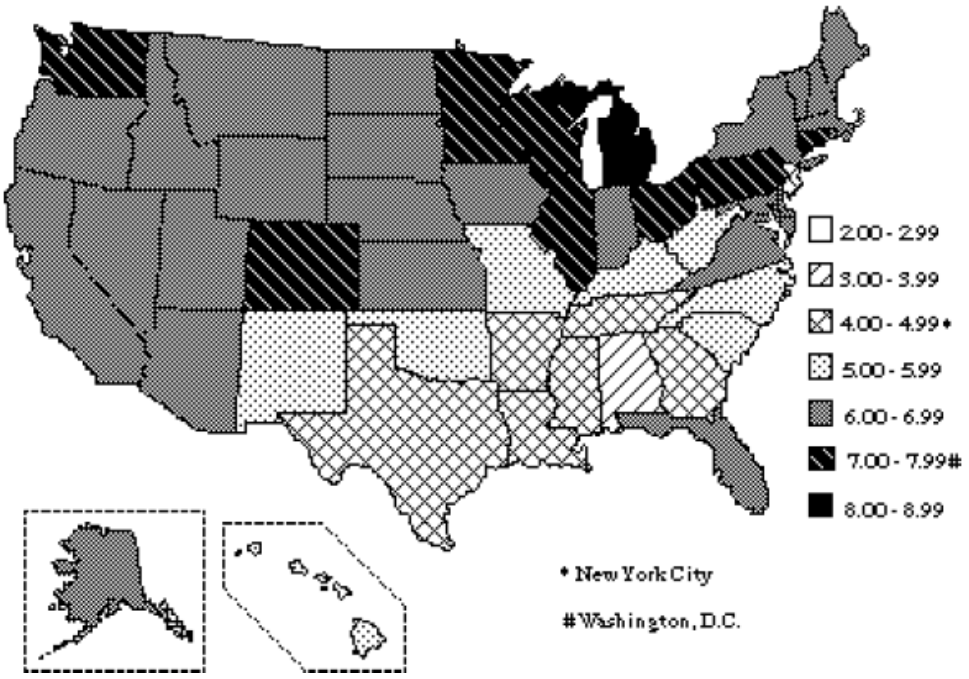


Figure 3. Mean scores of southeastern Michigan respondents' ratings of the fifty states, New York City, and Washington DC for "correctness," where 1 = least correct and 10 – most correct (Preston 1996: 312)

These maps are obviously geographical, but recall Inoue's suggestion that images derived from the statistical treatment of these data might be even more revealing. Figure 4 shows a multidimensional scaling representation of British university students' evaluations of several sites derived from a number of evaluative opposites ("fast-slow," "correct-incorrect," etc.). The two axes represent a rural/urban split on the vertical and what Inoue calls an "accentedness-standard" scale on the horizontal. In this representation, Liverpool is slightly farther from Cambridge than Australia, and a map of these rankings, even one with shadings or colors, would not be as revealing of such dimensions as this statistically derived one is, one that surely also deserves the label "mental map."

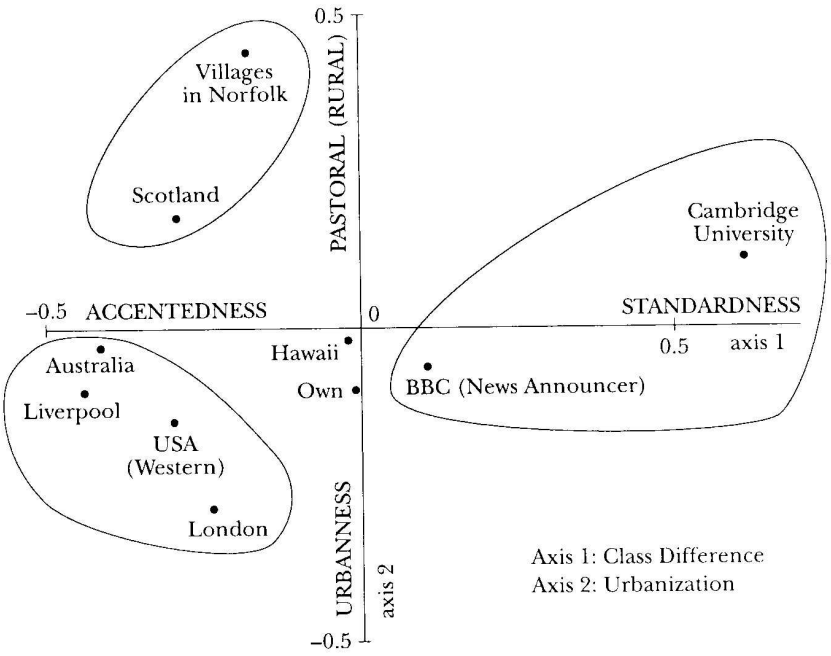


Figure 4. Multidimensional distribution of selected dialects as seen by British university students along several Likert-scale evaluative opposites (Inoue 1996: 146)

Figure 5 shows nine sites that respondents were told were the hometowns of nine, middle-aged, well-educated European American males, whose voices were played in random order. There were no grammatical or lexical clues in the samples as to region, and the respondent's task was to associate a voice with a site.

Figure 5. Nine sites along a north-south line in the US that respondents were asked to associate with voice samples (Preston 1996: 322)

Figure 6 shows a cluster analysis (Euclidean distance, single linkage method [“nearest neighbor”]) of the results of this task.

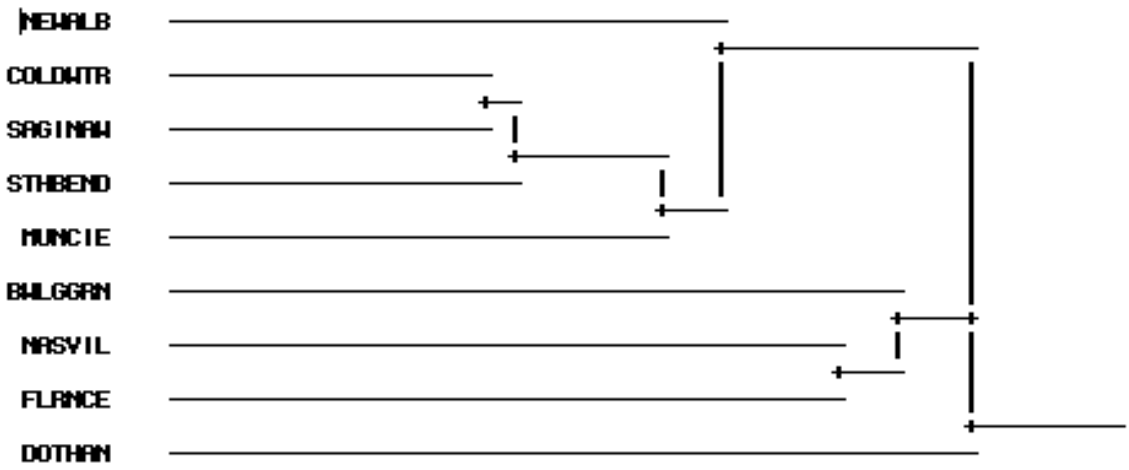


Figure 6. Cluster analysis (Euclidean distance, single linkage method [“nearest neighbor”]) of the results of voice assignments to sites shown in Figure 5

These results might at first suggest considerable dialect acuity. The northernmost voices (Coldwater and Saginaw) are linked first (joined with a “+”, farthest to the left in Figure 6); they are then next linked to South Bend, the next voice to the south, then that group to Muncie, but then all those to New Albany. In a professional dialect geography, although Muncie might be linked first to the three sites north of it, New Albany would first be linked to sites south of it (Bowling Green and perhaps Nashville) before it would be linked to this large northern configuration.

There is also a southern grouping, although it is not as strong as the northern one, as revealed by the fact that the linkages are farther to the right. First Nashville and Florence are linked; then they are tied to Bowling Green, although, as suggested above, professional dialect studies would first link New Albany, Bowling Green, and Nashville and perhaps then those three to Florence. The striking fact for students of US regional varieties in this cluster representation, however, is that Dothan, the southernmost voice, is not linked to the southern cluster of Bowling Green-Nashville-Florence. That southern cluster is linked first to the large northern group before all eight are finally linked to Dothan. Perhaps Dothan is phonetically so southern (it is the only /r/-less voice, although only variably so) that all other southern varieties are linked to

everything to the north before it is included. That would not satisfy professional dialectologists, since many southern features (e.g., /ɑɪ/ monophthongization, /ɪ/-/ɛ/ conflation before nasals) would be shared by all the voices from New Albany to Dothan. The perceptual grouping teaches us something else — perhaps which features are salient and perhaps how very distinct the southernmost variety of US English is for nonlinguists.

Figure 7 shows an even more unusual case of mental mapping, combining social and geographic features in one task and representing the results in one graphic. Kristiansen (2004) asked children, adolescents, and adults from Naestved, a small city on the southern tip of Zealand, the Danish island where Copenhagen is located, to place themselves linguistically in a triangle, the three tips of which were represented by voice samples: 1) at the top of the triangle, a typical small town or countryside Zealand voice ("Zealand"); 2) at the lower right corner, a speaker of the conservative Copenhagen standard "high Cph standard"), and 3) at the lower left corner, a speaker of the modern, youth-oriented Copenhagen variety ("low Cph").

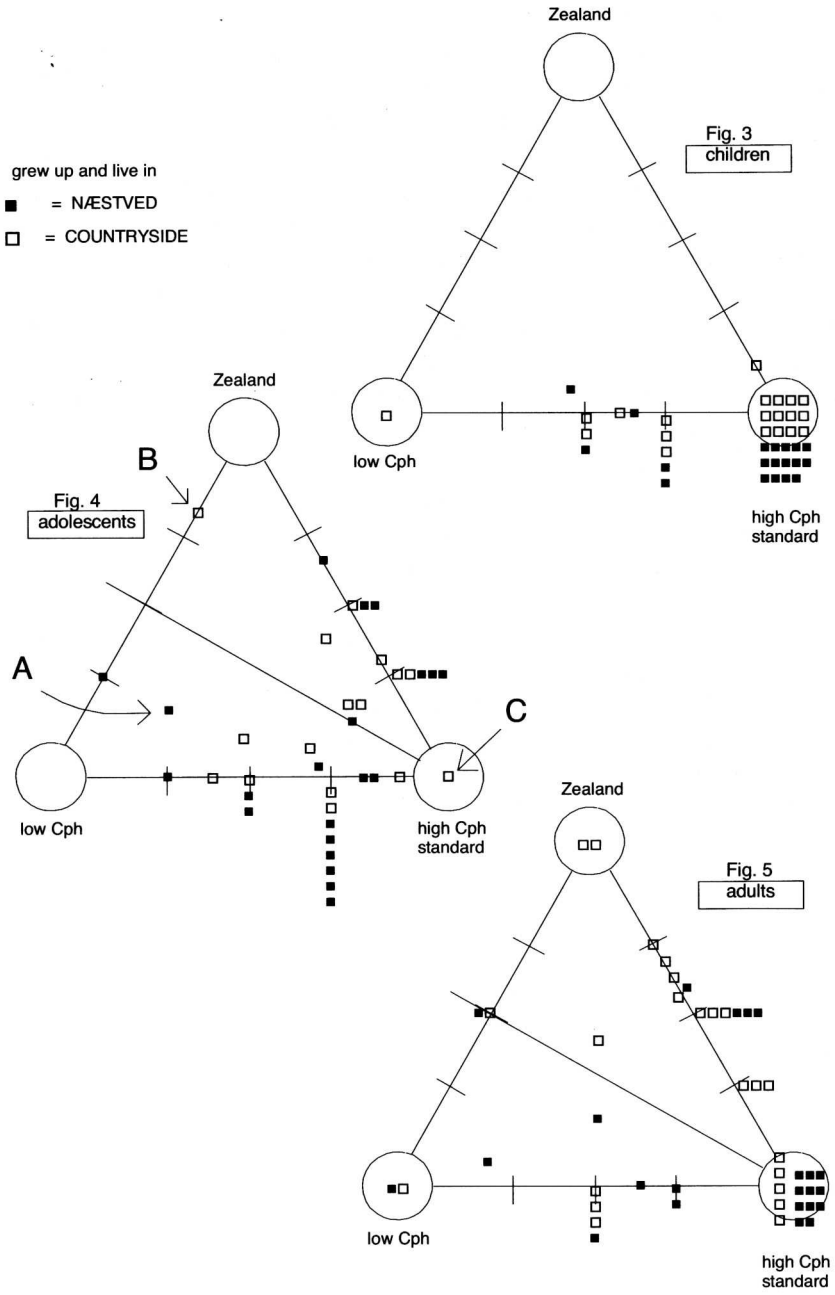


Figure 7. Linguistic self-evaluations by Naestved residents (Kristiansen 2004: 175)

Children all orient to the old standard but apparently do not really distinguish among varieties and are not considered in this work. The important distinction is that between adolescents and adults. Most adults orient themselves to the local (Zealand) variety and the conservative Copenhagen one (high Cph standard). In contrast, fewer adolescents orient toward the local variety, and many begin to locate themselves along the bottom of the triangle towards the modern Copenhagen variety (low Cph). Such

cognitive maps as these are sensitive not only to the internal demographics (here age and almost certainly linguistic change) but also to a set of coordinates that involve both geographical (urban Copenhagen versus smaller town and city and rural areas) as well as social facts (conservative versus low Copenhagen).

Figure 8 shows the results of respondent location of pronunciations of just one word (*guide*) on the map in Figure 5 (Plichta and Preston, 2005). Male and female voice samples of the word were presented to respondents, but the vowel was increasingly monophthongized in seven steps (through resynthesis) so that the respondents heard both voices twice, in random order, pronounce a fully diphthongal version of the vowel, five increasingly monophthongal versions (i.e., ones with a glide that ended at an increasingly lower target), and a fully monophthongal one. The study depended on the well-known US caricature of southerners as /ɑɪ/ monophthongizers.

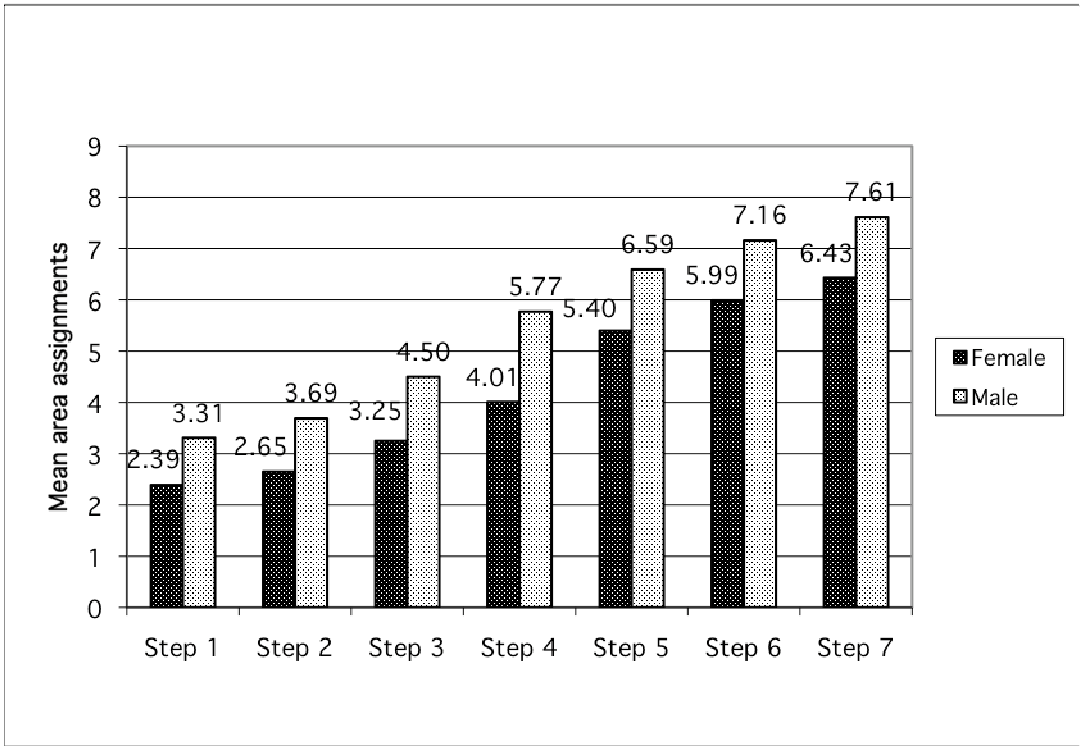


Figure 8. Respondent location of male and female pronunciations of the word *guide* on a north-south dimension (see Figure5); mean scores: 1 = northernmost, 9 = southernmost; step 1 = fully diphthongal, step 7 = fully monophthongal (Plichta and Preston 2005: 121)

Although Figure 8 is just a graphic representation of scores, it is also a mental map of sorts since it reveals that these respondents do not respond to only two or three

levels of monophthongization: the greater the monophthongization, the more southern, at every step along the continuum. Like Kristiansen's work, however, it adds a social dimension (sex); women's voices, although resynthesized to exactly the same degree of monophthongization at each step, were consistently identified as more northern than the male sample at the same step (or the male samples were identified as more southern). This map suggests that region and sex are related in some way in the US. Women are more northern? Men are more southern? I will answer this question below.

All this work indicates that there is a link between region and language in the public mind, perhaps a more subtle one than we might have guessed. To date three international conferences and their proceedings have focused exclusively on this linkage: Che cosa ne pensa oggi Chiaffredo Roux? Percorsi della dialettologia percezionale all'alba del nuovo millenio, Bardonecchia, May, 2000 (Cini and Regis, 2002), Percezione dello spazio, spazio della percezione: La variazione linguistica fra nuovi e vecchi strumenti di analisi, Palermo, March, 2001 (D'Agostino, 2002), and perceptual dialectology: Neue Wege der Dialektologie, Kiel, May, 2008 (Hundt et al., to appear). These publications also contain numerous further examples of mental dialect mapping techniques and important discussions of methodological and interpretive concerns

3. Where does the linkage come from?

Since nonlinguist respondents draw maps of regional speech and are aware of the regional bases of variation that they hear or call up from internal awareness on the basis of a variety of stimuli, we may ask now how these linkages are formed, how they persist, and how they are activated in folk perception.

To approach this I will refer to what I call *language regard* (Preston, 2010), a term I prefer since some beliefs about languages, their distribution, and their speakers are not necessarily evaluative, although it may be the case that all attitudes are an evaluative subset of beliefs (e.g., Kruglanski & Stroebe, 2005: 327). Figure 9 places language regard matters within an overall framework.

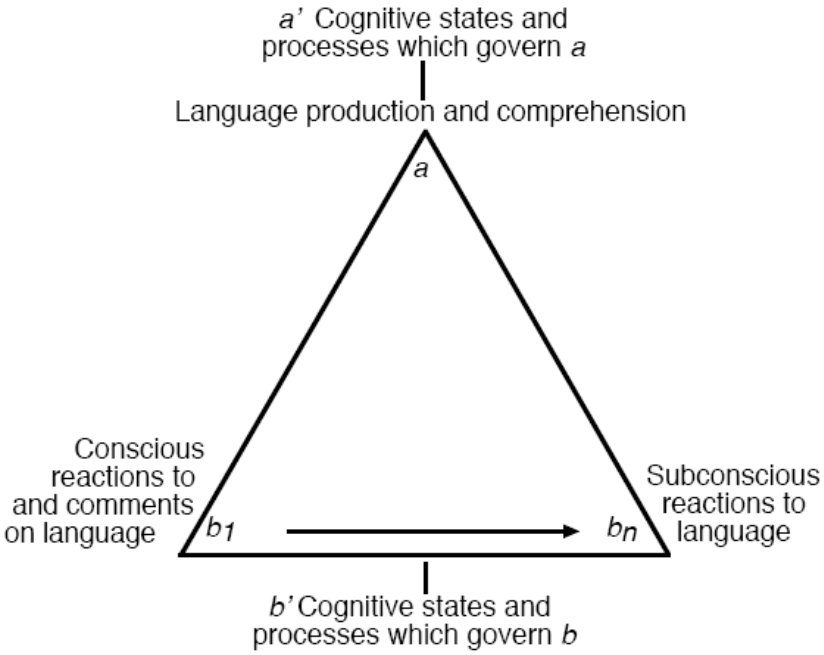


Figure 9. A first attempt to relate production, regard, and their cognitive underpinnings (Niedzielski and Preston, 2003: xi)

Beginning at the top of this triangle, one might ask how to get from production (*a*) to any expression of regard, conscious or subconscious (*b*). Why notice anything in language that would bring such regard mechanisms into play? The Japanese sociolinguist Takesi Sibata is surely right when he says that "…the average language user is so involved with communicating that he [sic, et passim] is usually not conscious of the words he uses" (Sibata [1971] 1999: 375), nor, I would add, "of the words others use either." I am not sure why Sibata excludes subconscious notice of language, and I will continue here with the understanding that both modes are possible. I call this observation *The Communicative Mandate.*

Since language is sometimes noticed, however, Sibata also observes that "It appears to be natural for forms which differ from those which one usually uses to attract one's attention" (Sibata [1971] 1999: 374). I would offer another slight modification: "… usually uses *or which one expects to hear* to attract one's attention," again assuming that this noticing may be conscious or subconscious. I call this notice-empowering observation *The Contrastive Mandate.*

Although there will be reason to refine this generalization, here I will assume that there is nothing in language itself (the *a* material of Figure 9) that intrinsically triggers

regard and assume that, after noticing, regard details are formed by an association between the noticed language features (from any linguistic level) and nonlinguistic caricatures of speakers. Figure 10 shows that path.

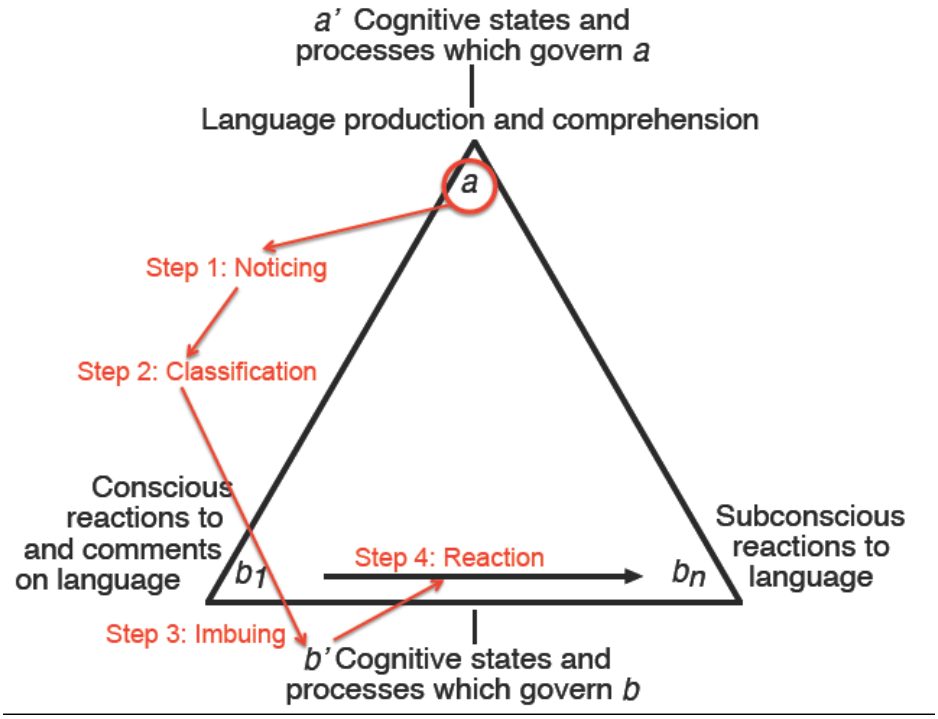


Figure 10. A procedural account of language regard — production, noticing, classifying, imbuing, and responding (modified from Niedzielski and Preston 2003:xi)

Here is a detailed example:

Speaker produces an [ɪ] in "pen" (at "*a*").

Step *1:* Hearer notices *a*, since their own pronunciation is [ɛ].

Step *2:* Hearer classifies *a* as "Southern US."

Step *3: Hearer* retrieves caricatures of "Southerners" from *b'* and imbues fact *a* with them.

Step *4:* Hearer responds (b_1).

This process must be slightly modified, for similar responses might arise even though the classification step is of a very different character. That is, there is the possibility of an "*a*" having been imbued so often that one may get characteristics for it

directly (without appeal to the speakers that provided them in the first place), a process Irvine calls "iconization" (2001:33). The connections are as follows:

Speaker produces an [ɪ] in "pen."

Step *1:* Hearer notices it, since their own pronunciation is [ɛ].

Step *2:* Hearer classifies this *a* as "ignorant," (having imbued it with this identity so often that any group caricatures from *b'* are no longer necessary).

Step *3:* Hearer accesses associated beliefs about "ignorant language."

Step *4:* Hearer has folk response (b_1).

Whether this imbuing short-cut is at work or not, social psychologists note that objects to be regarded are presented within specific *eliciting conditions*, and this raises an interesting possibility for all regard research — that of multiple sources of variability. Figure 11 provides a more cognitively sophisticated model of what I have in mind.

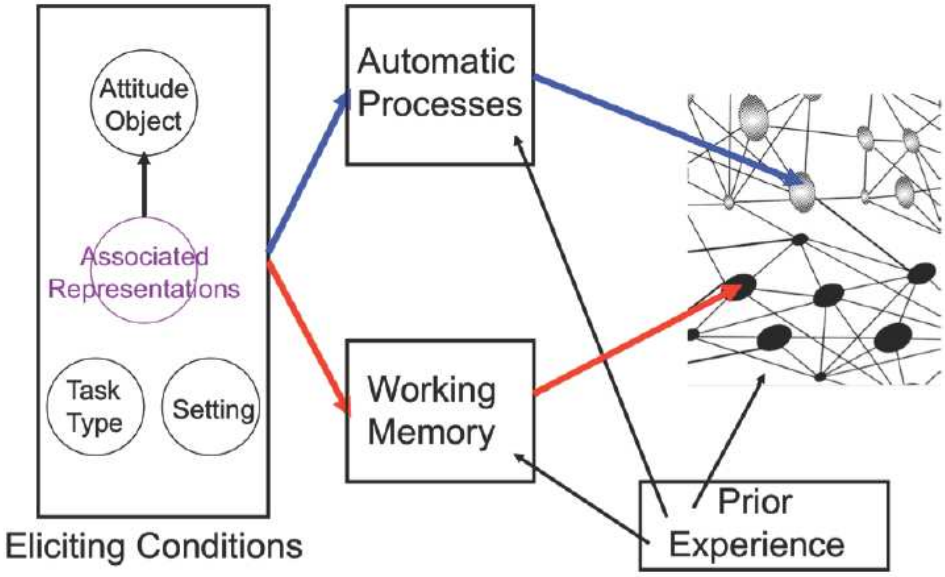


Figure 11. A comprehensive view of the mechanisms involved in regard (modified from Bassili and Brown, 2005: 554)

The earliest stage of the process, known as the *construal* (Bassili and Brown, 2005: 553), accounts for how the perceiver has begun to process the *attitude object* in terms of

1) the *elicitation conditions* it has been presented in,
2) the perceiver's procedural capacities,
3) the perceiver's pre-existing knowledge, and
4) the perceiver's underlying conceptual structure, here shown as a connectionist model (e.g., McClelland & Rumelhart, 1986).

That model is characterized by the following:
i. strong vs. weak items,
ii. strong vs. weak vs. no vs. inhibiting connections,
iii. all formed by experience/frequency

Figure 12 illustrates all these possibilities.

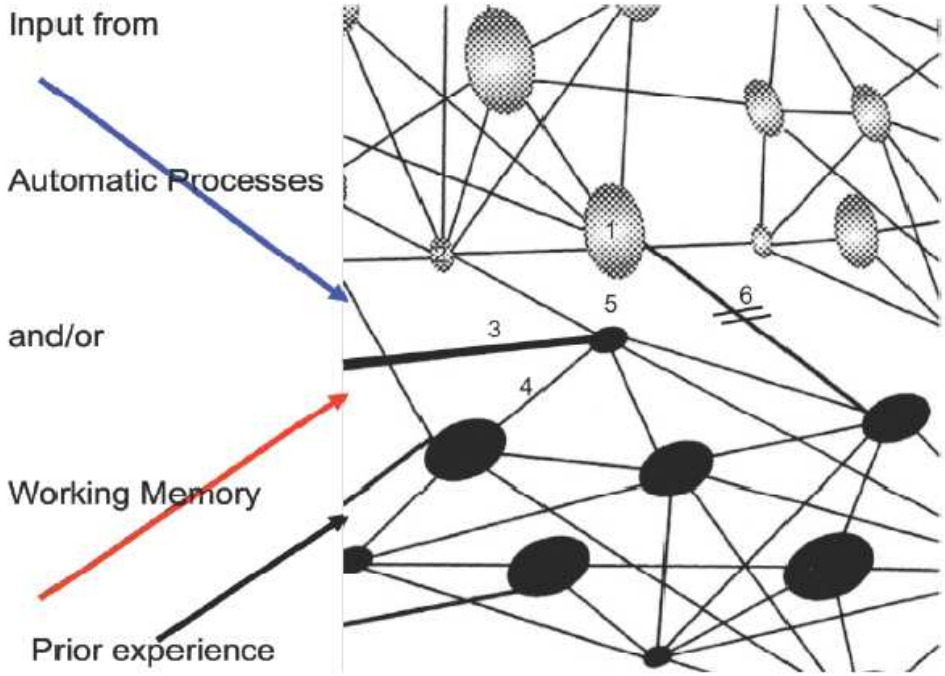


Figure 12. Nodes and pathways in a connectionist network (modified in part from Bassili and Brown 2005:554), showing 1) a strong node, 2) a weak node, 3) a strong connection, 4) a weak connection, 5) no connection, and 6) an inhibited connection

Once construed, activations take place within a subset of such a general network called the "attitudinal cognitorium" (Rosenberg, 1968), and a response emerges, either an implicit one or an explicit one. An implicit one is shown in Figure 13.

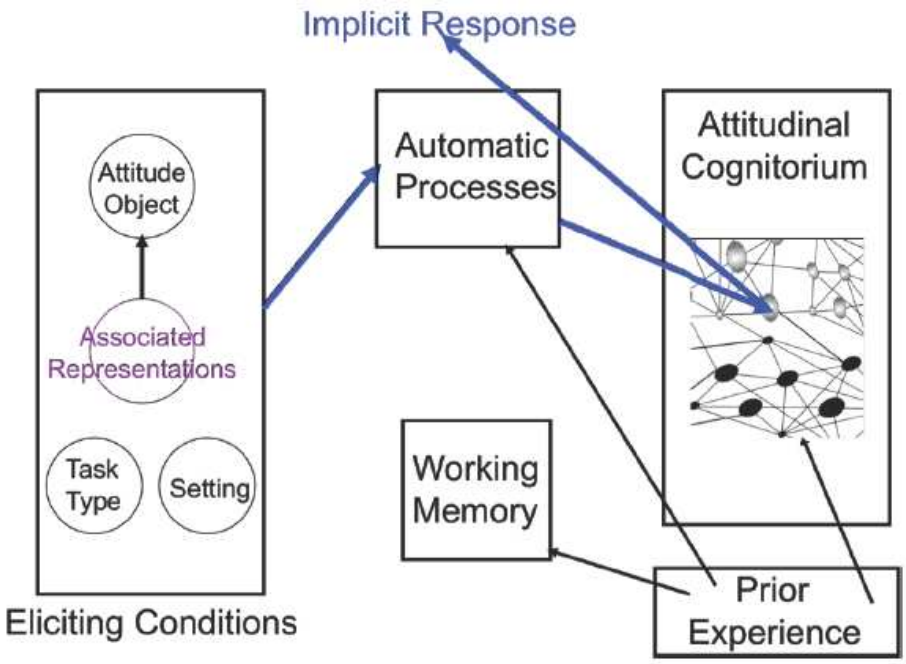


Figure 13. The pathway for an implicit response (modified from Bassili and Brown, 2005: 554)

A similar path could have been drawn from the *Eliciting Conditions*, through *Working Memory*, to the *Attitudinal Cognitorium*, then back through *Working Memory* to an *Explicit Response*, but this representation, particularly the strong separation between explicit and implicit responses, is lacking, for it ignores the possibility of simultaneous and even interconnected dual processing.

In Figure 14, for example, the automatic processes are strongest throughout (thick, blue, implicit connections; thin, red, explicit ones), suggesting that the unconscious input to the eventual response is major, but the arrows could have been of equal or opposite thicknesses.

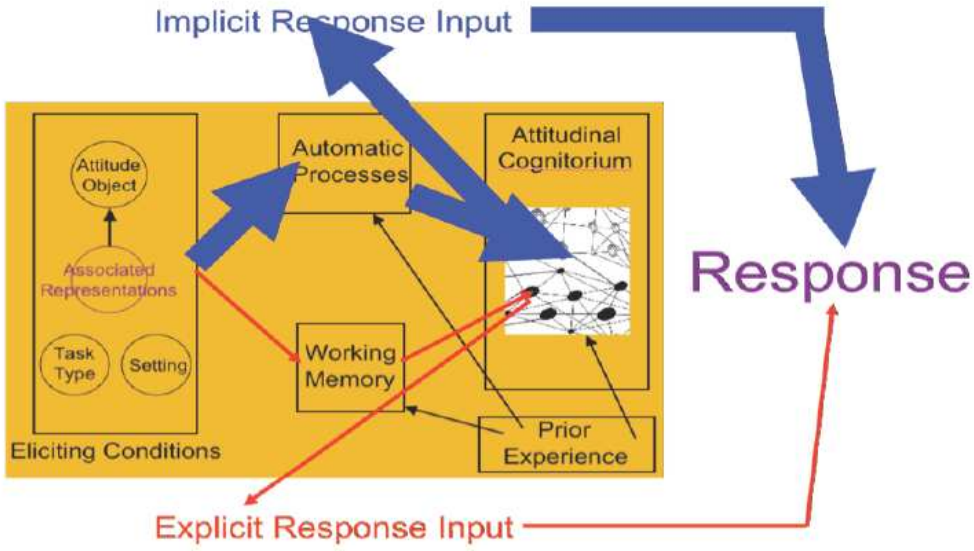


Figure 14. Weighted inputs to the attitudinal cognitorium (modified in part from Bassili and Brown 2005: 554)

In this model, the output of the cognitorium is not the response; it is a weighted input to the response, allowing for even more complexity. For example, the arrows could have been of unequal thicknesses at different stages of the process, as shown in Figure 15.

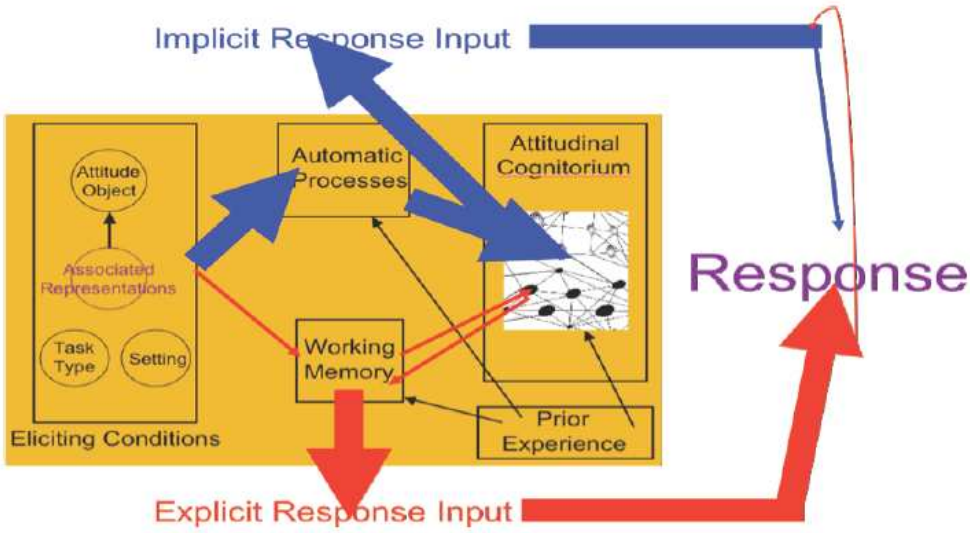


Figure 15. A change in weights during the regard process (modified in part from Bassili and Brown 2005: 554)

In Figure 15, Working Memory, having received input from the cognitorium, has reminded one (relatively consciously) of a prior experience in which a response of the sort about to be activated has caused one to be criticized, etc. A more powerful explicit controller emerges at the last minute and overwhelms other parts of the process, allowing a significantly different response.

We should be careful, then, to speak of what is explicit/implicit at every step of the procedure and the response. There is an enormous variety (and even contradictory forces at work) in this entire process, and the major sources of this variation lie in both the array of nodes (beliefs, etc.) in the cognitorium and the variability with which (e.g., eliciting conditions, processing mechanisms) they may be activated.

Such variety is an important fact in the study of regard and its relationship to other linguistic processes, but many sociolinguists seem to have the understanding that perceptual norms are more stable than those of production and have used this putative stability to help define such concepts as the speech community. Labov, for example suggests that the

> [evaluation of /r/] is typical of many other empirical findings which confirm the view of New York City as a single speech community, *united by a uniform evaluation of linguistic features*, yet diversified by … stratification in … performance. (Labov, 1972: 117, italics mine)

Given the above model of how language regard mechanisms work, let's return to the US South as a regional (linguistic) fact for respondents and try to place responses to the awakening of that link within this framework. Figure 16 is a partial model of a network (as suggested in Figure 12) that might represent what underlies the potential of a northern US response to an activation of a southern identity, with solid lines connecting the most directly related concepts and dashed ones others.

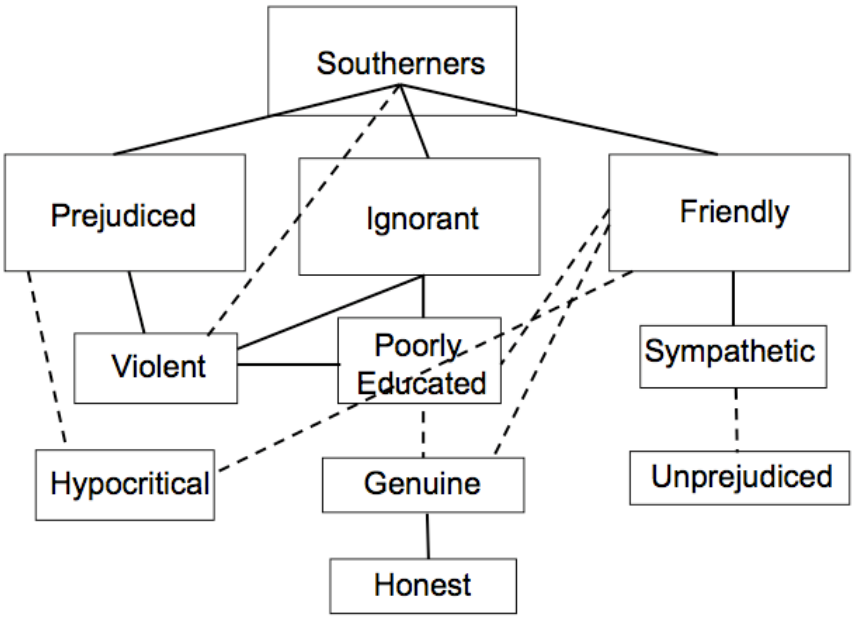


Figure 16. A hypothetical (partial) US regard network (or "attitudinal cognitorium," see Figure 12) for a southern identity

I will not outline here the historical and cultural facts and beliefs about the US south that lie behind these concepts (an important step), but Figure 3 allows us to add to these stereotypes at least one relevant linguistic feature, shown in Figure 17.

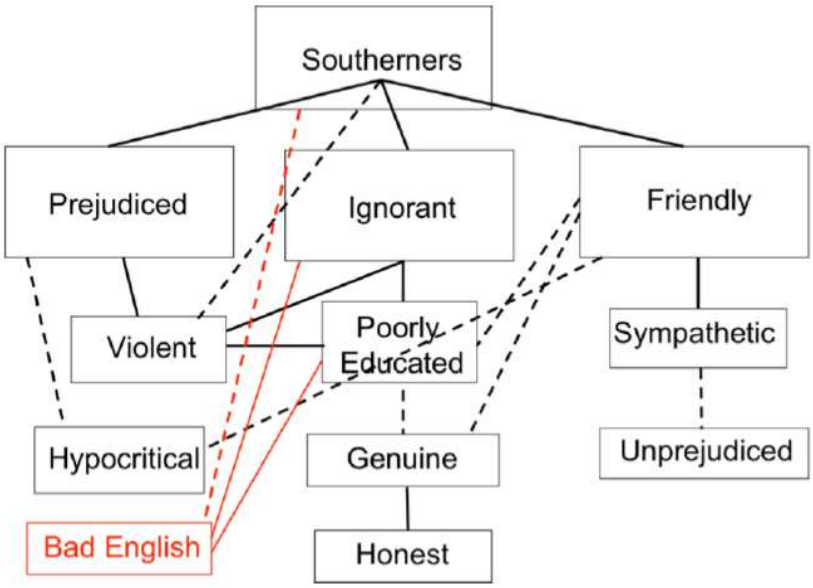


Figure 17. A hypothetical (partial) US regard network (or "attitudinal cognitorium," see Figure 12) for a southern identity, with the addition of the evaluative notion "Bad English" (see Figure 3)

The direct connections between "Ignorance" and "Poorly Educated" and the concept "Bad English" are strong, as they might be in any speech community, but, as Figure 8 shows, the poor English of the US South is somewhat more specific, as shown in Figure 18.

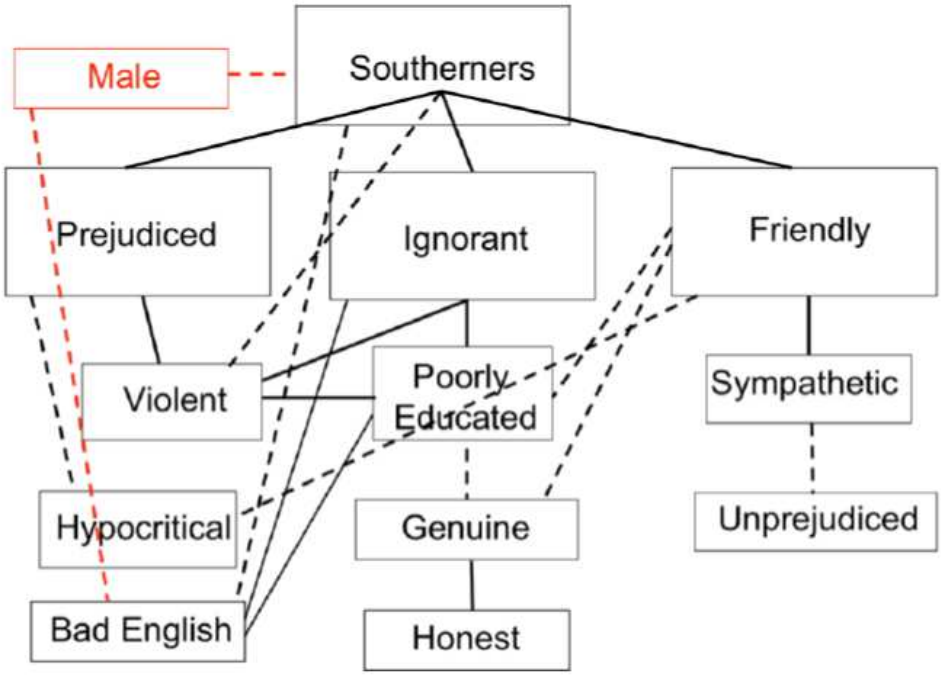


Figure 18. A hypothetical (partial) US regard network (or "attitudinal cognitorium," see Figure 12) for a southern identity, with the addition of "Male" (see Figure 8)

Although it would be demographically absurd to suggest that there are more men in the south, it is perhaps not so silly to assert that the typical southerner is male and that the same stereotypes that are shown in the cognitoria in Figures 16 and 17 are the ones that lead to the fuller, sex-specific association shown in Figure 18; even outside this network, many of the attributes listed here might be independently connected to "Male."

So far, however, we would appear to have no perceptual correlates to the more positive attributes of southern shown on the right side of Figure 16-18. Can these be confirmed?

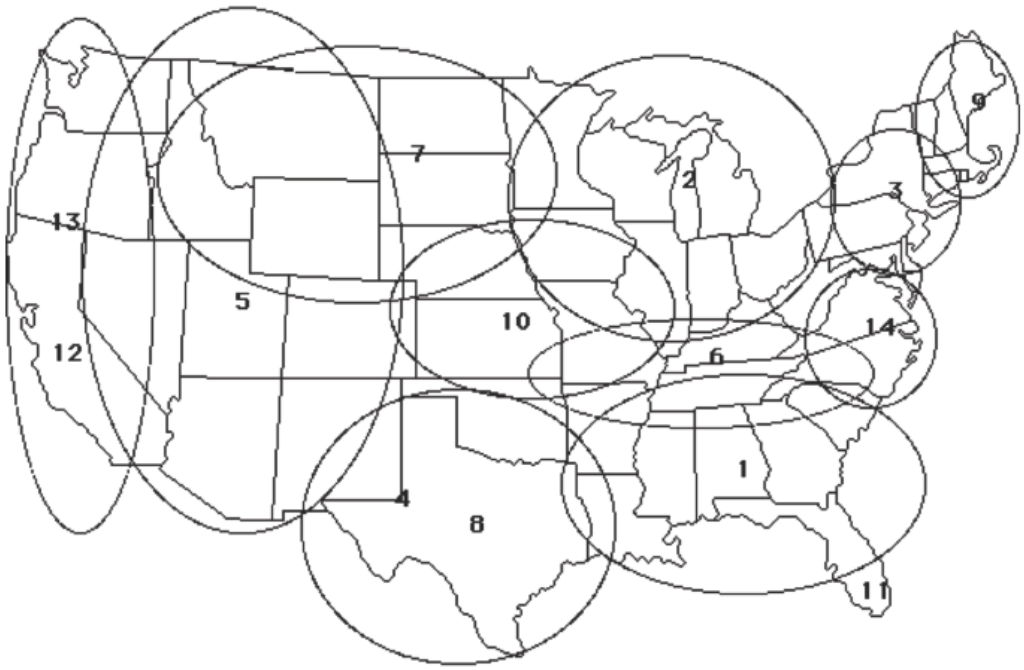


Figure 19. A simplified map of southern Michigan hand-drawn areas of US dialect differences for trait evaluation (derived from Figure 2)

The map in Figure 19 was shown to a number of southeastern Michigan respondents (from the same region where the hand-drawn maps on which the generalization in Figure 2 was based), and they were asked to name attributes of the varieties of English in these circled areas. The most common descriptors (with some opposites supplied by the researcher) were the following:

slow — fast
polite — rude
snobbish — down-to-earth
educated — uneducated
normal — abnormal
smart — dumb
formal — casual
bad English — good English
friendly — unfriendly
nasal — not nasal
speaks with — without a drawl
speaks with — without a twang (Preston, 1999b: 363)

The map was then shown to yet another group of similar respondents from southeastern Michigan, and they were asked to rate each of the areas shown in Figure 19 on six-point Likert scales for the twelve attributes listed just above. Figure 20 shows the results for areas 1 and 2 in Figure 19, the home area of the respondents and the US south. Recall that these were the areas most frequently drawn by the respondents who carried out the hand-drawn map task, as documented in Figure 2.

South			North		
Rank	Attribute	Mean	Rank	Attribute	Mean
1	Casual	4.66	1	No drawl	5.11
2	Friendly	4.58	2	No twang	5.07
3	Down-to-earth	4.54	3	Normal	4.94
4	Polite	4.20	4	Smart	4.53
5	Not nasal	4.09	5	Good English	4.41
		*	6	Down-to-earth	4.19
6	Normal [Abnormal]	‡3.22	7	Fast	4.12
7	Smart [Dumb]	‡3.04	8	Educated	4.09
8	No twang [Twang]	‡2.96	9.5	Friendly	4.00
9	Good English [Bad Eng.]	‡2.86	9.5	Polite	4.00
10	Educated [Uneducated]	‡2.72	11	Not nasal	3.94
11	Fast [Slow]	‡2.42	12	Casual	3.53
12	No drawl [Drawl]	‡2.22			

Figure 20. Ratings for speech in the north (Area 2 in Figure 19) and South (Area 1 in Figure 19) for twelve attributes (Preston, 1999: 366)

These Michigan respondents, themselves northerners, rate several attributes associated with the standard (or "good") English of their home area above 4.00 and only a few at 4.00 and under. Those attributes are exactly reversed in their ratings of the south and are lowest rated, as shown in the crossover patterns in Figure 20. Other respondent-provided categories, however, awakened just the elements of the associative network described earlier (Figures 16-18). In other words, given the right eliciting conditions, here perhaps dependent on the use of their own descriptors, even linguistically secure southeastern Michiganders can have a bit of insecurity awakened in their responses to language variety when exposed to the notion "southern" by having attributes of friendliness, casualness, sincerity, and the like triggered.

One important upshot of this foray into the underlying conceptual structure of information that may relate itself to regional significance of speech is that we need to be ready for variety in what surfaces in perception studies as well as in production work, variation that has its source in the contradictory but culturally and historically understandable content of respondent cognitoria and in the features of the elicitation setting.

4. What good is it?

While we may connect cognitively sophisticated explanations of the etiology, storage, and application of conceptual material that relates language and space in the folk mind, how does all this help linguists? I believe it does, but I will limit myself here to a few illustrations, and I will stay with the north of the US at first.

How might we use this variability in language regard to help account for the onset and progress of regional variation? For example, how might language regard factors interact with what might be viewed as purely linguistic motivations for sound change? Figure 21 shows a case in which the low front short-a vowel (/æ/) F1-F2 territory (the TRAP vowel of such words in US English as “bat” and “rag,” shown in shaded circles) contains a single case of a speaker’s intended short-o vowel (/ɑ/, the US LOT vowel of such words as “hot” and “sock,” shown in white squares). The normal territory for /ɑ/ is farther back in the vowel space than this one example, and the F2 mean is shown in the center of that territory (the black square, at 1550 Hz).

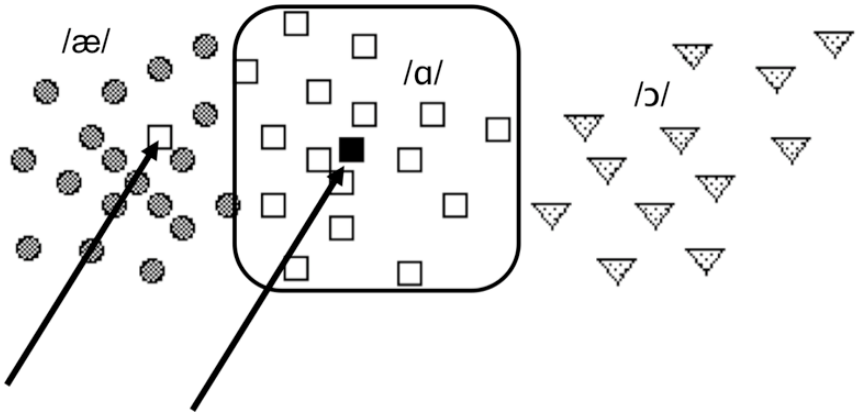


Figure 21. Distribution of tokens of the English low vowels (adapted from Labov, 2002)

If hearers do not perceive the fronted outlier as an example of /ɑ/, then the speaker's intended "sock" is misunderstood as "sack," and the system is not influenced, and there is considerable evidence that a great deal more misunderstanding like this goes on than was once thought in, e.g., Peterson and Barney (1952) or Hillenbrand et al. (1995). In a study of cross-dialectal comprehension Labov and associates (reported in Labov, 2005), for example, played a contextualized token of the word "socks" for speakers of different ages and from different areas, including native speakers from the same area as the sample (Chicago). In the first presentation, the word was given in isolation; in the second, a slightly longer phrase ("had to wear socks") was presented, and in the final, the entire sentence was heard ("You had to wear socks, no sandals"). Figure 22 shows the comprehension rates for the various groups and presentations.

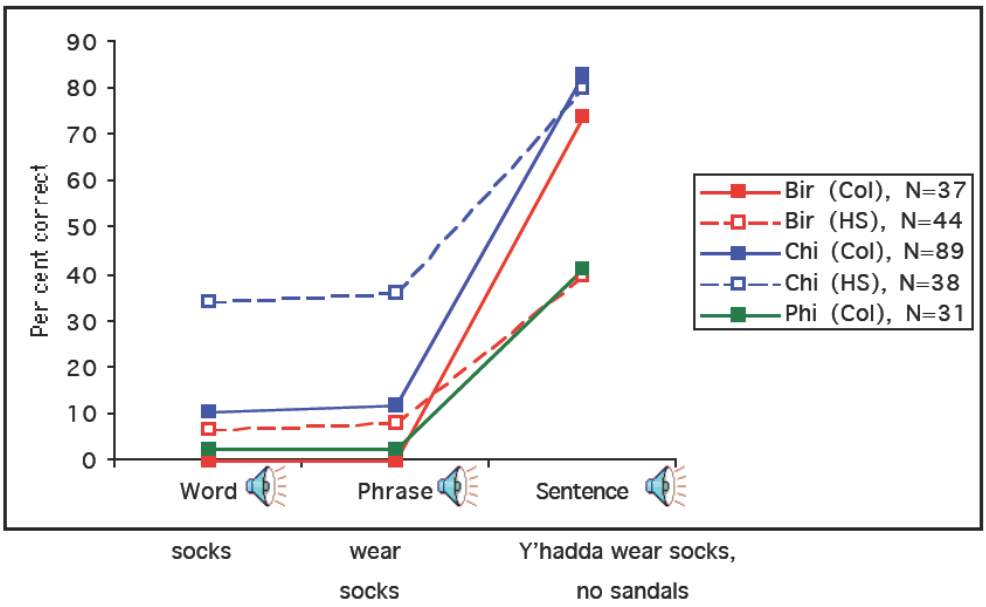


Figure 22. Comprehension rates for "socks" in word, phrase, and sentence settings for five respondent groups (Labov, 2005)

Although the Chicago high school age respondents, whose responses are shown in the top dashed line with open squares in Figure 22 and who are closest in their own speech to the norms of the sample, were best in comprehending the word and phrase presentations, even they understood "socks" to be "sacks" at a rate of over 60% until they heard the entire sentence.

It is surprising to find how bad young speakers from the US inland Northern Cities area (e.g., Rochester and Buffalo, New York; Cleveland and Toledo, Ohio; Detroit, Michigan; Chicago, Illinois; Milwaukee, Wisconsin) are at understanding their own vowels when they are those involved in the vowel rotation known as the Northern Cities Shift (NCS) e.g., Labov (1994: 177-200).

In another study from the same NCS area (Detroit, Michigan and suburbs), in which only young, local respondents participated and only single-word tokens were presented, similar findings emerged, as shown in Figure 23.

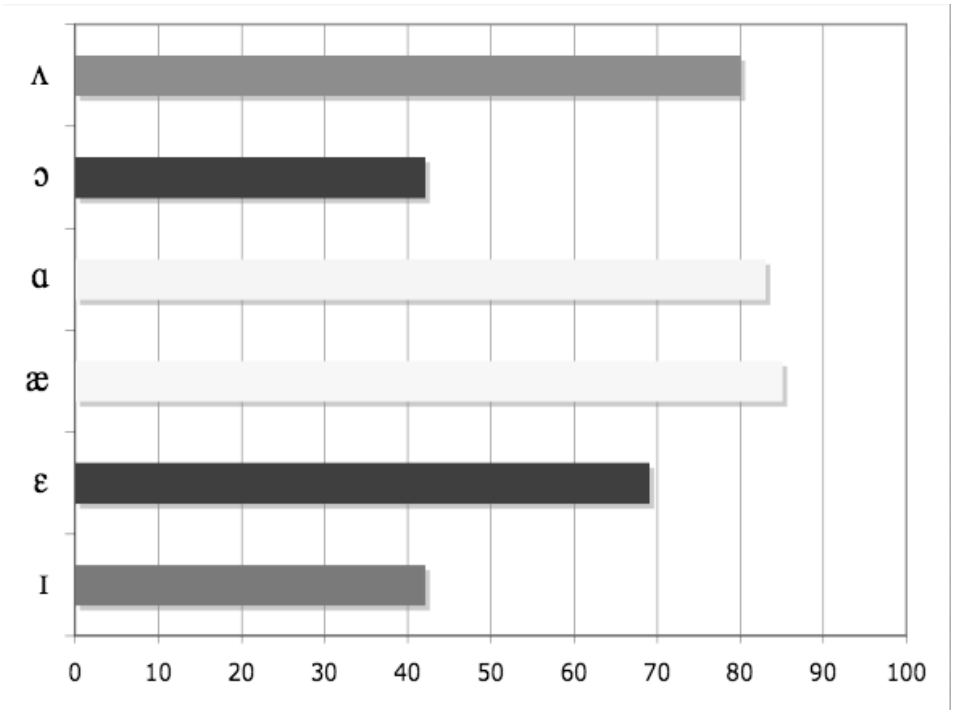


Figure 23. Comprehension rates of the five most shifted vowels in the NCS (percentages derived from Preston, 2005: 138)

Vowels that shifted earliest in this rotation (/æ/ and /ɑ/) show the best overall comprehension, but those that shifted later (/ɪ/, /ɔ/, and /ɛ/) are much worse (the first two well under 50%), although /ʌ/, a late shifter, is somewhat out of order.

Figure 24 shows how the /æ/ tokens of Figure 21 have been fronted in the NCS, leaving the one fronted /ɑ/ token behind. Now removed from new, shifted /æ/ territory, that token is much more likely to be correctly understood as /ɑ/, as the respondents in Figure 23 have done more than 80% of the time; this token is now a contributor to a new F2 mean score of 1571, a value for /ɑ/ more in line with the NCS.

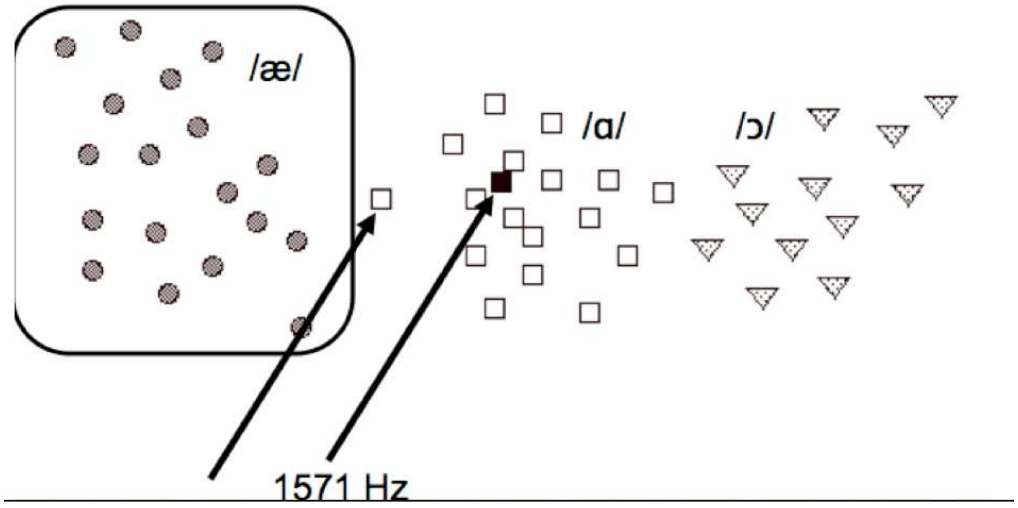


Figure 24. The first stage of the US NCS for low vowels, showing the fronting of /æ/ and the new central area for /ɑ/ (adapted from Labov 2002)

What role has language regard played in this shift? It is a classic case of *change from below* (i.e., language change outside conscious awareness), so any notice of it should be subconscious. Previous PD work in the Detroit area and southeastern Michigan in general has shown that locals feel that the dialect of (white, middle class) Michiganders is standard American English. This absolute linguistic security in Michigan (and in much of the Upper Midwest of the United States) is well-known and documented above in, for example, Figures 1, 3, 8, and 20. The respondent (and there are many like him) who drew Figure 1 believes that Michigan should be singled out for "average" or "normal" English. Given the representation in Figure 3, Michiganders are in considerable agreement that their state is at the top when it comes to language correctness.

However, young, white, middle class Detroiters use features of the NCS that would not be widely recognized as standard. How can it be, then, that they have not noticed the emerging vowel changes in their own speech and that of those around them? Will the answer to that question allow us to suggest that rapid change in the direction of the shift is in part due to the regard Michiganders have for their own speech?

Niedzielski (1999) reports on forty-two Detroit-area residents who took part in a test in which they were asked to listen to the tape-recorded speech of a local Michigan speaker (whose Michigan identity was indicated on the answer sheet); they were told to

concentrate on the vowel they heard in particular words. Next, they were asked to compare that vowel to a set of three resynthesized vowels (from the same speaker's data) and to choose the one that best matched the one they heard in the original. The ordinary vowel space of that speaker is shown in Figure 25.

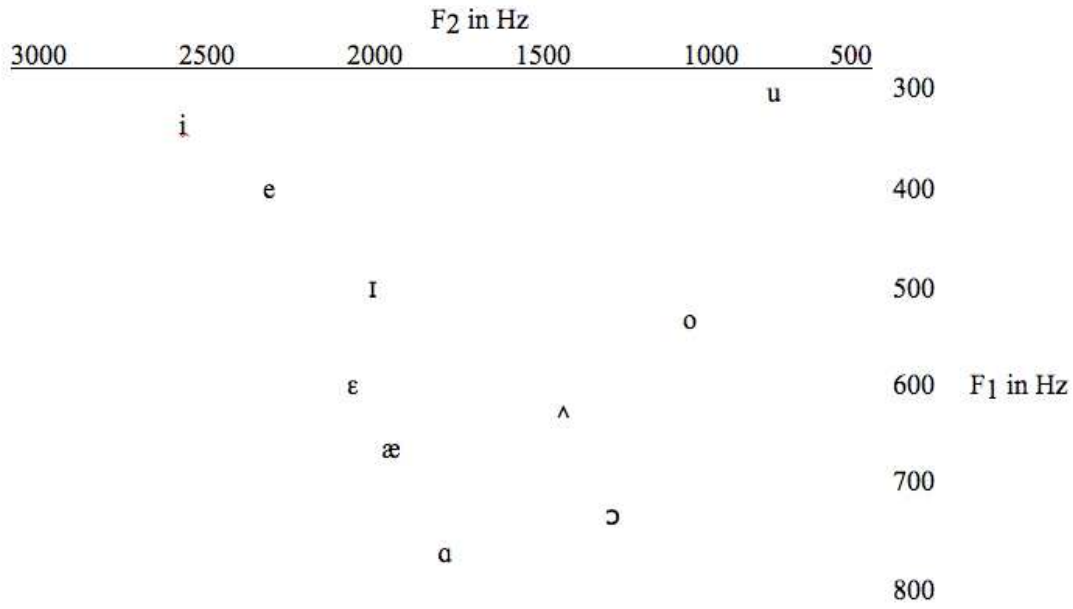


Figure 25. Vowel space of the Detroit female speaker on the test tape (modified from Niedzielski, 1999: 65)

This speaker is influenced (although not dramatically) by the NCS; the F1 for her /æ/) is at about 700 Hz while the norm for female speakers of American English (according to Peterson and Barney, 1952: 183) should be around 860 Hz. Her /ɑ/ is also fronted to F2 1775 Hz, while the Peterson and Barney norm is 1220 Hz. The raising of /æ/ and fronting of /ɑ/ are usually considered the first two steps of the shift (Labov, 1994: 184).

Niedzielski examined the respondents' classification of the /æ/-word "last." The formant frequencies for the three resynthesized tokens that the respondents were given to choose from in the matching task are shown in Table 1.

Token #	F1	F2	label
1	900	1530	hyper-standard
2	775	1700	canonical
3	700	1900	actual token (see Figure 25)

Table 1. Formant values of tokens offered to respondents to match with the vowel in the speaker's pronunciation of "last" (Niedzielski, 1999: 74)

The results of this matching experiment are shown in Table 2.

token	1 hyper standard	2 canonical /æ/	3 actual token	Total
	10%	90%	0%	
N=	4	38	0	42

Table 2. Respondent matching results for the vowel in "last" (adapted from Niedzielski, 1999: 72)

Not one of the respondents chose token #3, the variant the speaker actually produced. Instead, they overwhelmingly chose the lower, more central token, #2. A few respondents (4=10%) even chose the hyper-standard token, one actually approaching the norm for canonical /ɑ/.

The same general results held for /ɑ/. The formant frequency values for the three tokens of /ɑ/ that respondents were given to compare to the original speaker sample are displayed in Table 3.

Token #	F1	F2	label of token
1	770	1050	hyper-standard
2	900	1400	canonical
3	700	1600	actual token (see Figure 25)

Table 3. Formant values of tokens offered to respondents to match with the vowel in the speaker's pronunciation of "pop" (Niedzielski, 1999: 72)

Table 4 displays the results for matching the speaker's vowel in "pop" with the three tokens shown in Table 3. Only two respondents chose the fronted variant that the speaker actually produced. Again, the respondents overwhelmingly chose token #2, the vowel with the canonical /ɑ/ formant shape suggested for female speakers in Peterson and Barney. Exactly as before, 10% even chose token #1, in this case closer to canonical /ɔ/.

token	1 hyper-standard	2 canonical /ɑ/	3 actual token	Total
	10%	85%	5%	
N=	4	36	2	42

Table 4. Respondent matching results for the vowel in "pop" (adapted from Niedzielski, 1999: 70)

In this work, there is a considerable mismatch between perception and acoustic reality. The respondents heard a fellow Michigan speaker (importantly identified as one) use what Niedzielski calls the canonical (or "pre-shift") forms of vowels rather than the shifted ones actually used. Of course, people in Michigan do not hear any worse than people in other parts of the United States. What explains why these respondents are so inaccurate in this task?

These results suggest that when a respondent is presented with data from a speaker who they think is a fellow Michigander, the stereotype of Michigan English as the standard emerges, and the respondent selects a canonical vowel in a matching task. In itself, this might be considered an insignificant language regard fact, but, when coupled with the rapidity with which the shift has swept through southeastern Michigan and the well-attested fact that this is *change from below*, Niedzielski's experiment and associated language regard work take on explanatory significance.

How could such linguistically secure speakers as those from southeastern Michigan allow sweeping changes in their vowel system? How could they not notice it? It might appear only speculative to suggest that the linguistically secure are easily influenced since they cannot conceive that their own performance (or that of others like them) would stray from a standard (i.e., their norms), but Niedzielski's work solidly

anchors that attitudinal speculation: Michiganders are so linguistically secure that they seem to recalibrate the vowels of those around them and avoid notice of change.

Preston (1997) shows, in a related experiment, that there is little ambiguity in self-reports on /æ/ in Michigan. In this study, about 1,400 native Michiganders performed an assonance detection task. They were asked to match several words which contained vowels involved in the shift with words that they felt had similar-sounding vowels. The stimuli were presented in written form only. The words to be matched were ones from phonetic environments in which the shift's effects have taken place early and most dramatically, and the words with which they were to be matched were ones with very conservative environments, i.e., ones in which the shift's effects have been observed to take place very late and with less dramatic formant change. For example, the respondents were given the word "man" (in which the /æ/ vowel occurs before a nasal, an environment which causes dramatic raising) but were given the words "black" and "flap" to match it to — words in which the environment of the vowel (after an obstruent-plus-liquid cluster and before a voiceless stop) has been shown to resist the shift's effects. The young southeastern Michigan respondents who took the test all had /æ/ vowels in such words as "man" with F1 values considerably raised and fronted. Although they were given the opportunity to match "man" with "black" and "flap" or "bet" and "neck," the latter with vowels in the acoustic territory their own /æ/'s were raised to, they nearly all chose the "black/flap" option. Table 5 shows the numeric results.

æ	ɑ	ɛ	i	ɪ	ɔ	ʌ	u	ʊ	None
1,220	0	6	0	2	3	6	2	2	174

Table 5. Vowel matching task for "man" (Preston, 1997: 42)

Although the fact that 174 respondents found no match whatsoever for "man" suggests some instability, the phonemic picture is very clear. Whatever is taking place phonetically is having little or no phonemic repercussions. In other words, the language regard effect is so great that a large phonetic shift has taken place with no phonological disruption. Raised and fronted tokens of /æ/ count as tokens of /æ/, at least in this task.

Why did Niedzielski's respondents identify one allophone as another, one presumably less representative of the center of that vowel in their system?

Figure 23 revealed considerable misunderstanding of NCS vowels, and, to help answer the question posed just above, the final step in this NCS excursion asks what these vowels were misunderstood as. Figure 26 shows this vowel rotation in greater detail. The ellipses are the conservative US norms (e.g., like those proposed in Peterson and Barney 1952); the arrows point to the new positions of NCS vowels, represented in this study by the raw tokens presented to the respondents (from various young, European-American female speakers from southeastern Michigan.

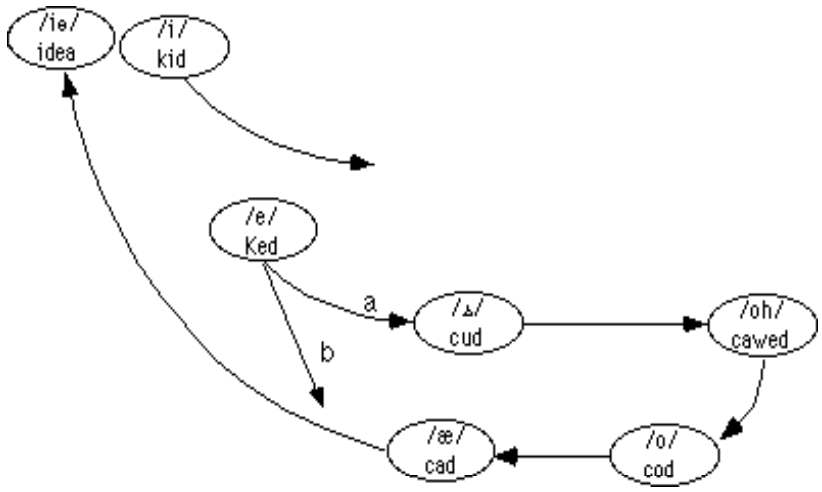


Figure 26. The conservative (base of arrow) and NCS shifted (point of arrow) positions of the vowels involved in the NCS (adapted from Figure 1, Labov 1996); NB: in this figure "i"=/ɪ/, "e"=/ɛ/, "o"=/ɑ/, and "oh"=/ɔ/

If these respondents have difficulties in understanding, one might reason that the phonetic proximity of two new vowel spaces might be the source. For example, if one traces path b of /ɛ/ and the path of /ɑ/, the new spaces of those vowels are very close and ought to have caused that misunderstanding; i.e., the name "Ned" should be understood as the word "nod," and words like "nod" should, by this reasoning, be misunderstood as "Ned." Similar reasoning suggests the following:

1) When /ɛ/ follows path a, it is again closest to the new vowel space of /ɑ/; "Ned" should again be misunderstood as "nod" and "nod" as "Ned."

2) During its path to becoming a high-front inglide, /æ/ crosses the territory of the lowering /ɪ/ vowel and vice-versa; "bad" should be understood as "bid" and "bid" as "bad."

3) Both /ʌ/ and /ɔ/ move into areas that have been vacated by the movement of the NCS; predictions of misunderstandings on that basis are either difficult to make, or there should be no difficulties.

As Figure 27 shows, none of these predictions is accurate.

Item	Total	short o	wedge /ʌ/	short a	short e	open o	short i	other
short o /ɑ/	431	357	0	**72**	*1*	0	0	0
wedge /ʌ/	331	*6*	287	4	6	**21**	0	3
short a /æ/	432	0	0	366	**66**	0	*0*	2
short e /ɛ/	429	*0*	**111**	**10**	298	0	1	7
open o /ɔ/	432	**216**	16	8	0	183	1	8
short i /ɪ/	288	1	0	3	**162**	0	122	0

Figure 27. Errors and error types in the single-word comprehension test given to NCS speakers when the vowels presented are NCS shifted; the shaded area indicates that the correct choice was made; bold numbers indicate that the conservative (i.e., "pre-shift") choice was made, and italics indicate that a shifted item was chosen (Preston, 2005: 142)

The search for italicized numbers (the predictions made above) is disappointing — a total of seven.

The bold numbers, on the other hand, are robust, in two cases, even larger than the correct answers, and, in every case, the misunderstanding is between the NCS-shifted vowel and the vowel space of the pre-shift system. To take only one example,

short-o (/ɑ/) has moved into the territory of the new, shifted site for short-e (/ɛ/), but, as Figure 27 shows, that mistake was made only once. On the other hand, short-o was misunderstood as short-a (/æ/) seventy-two times. What system could be appealed to here?

I believe perceptual and attitudinal studies supplement what is known about the emerging NCS vowel system in this part of the United States. In general, I would say that regard and comprehension studies combined offer a convincing explanatory base for the rapid progress associated with change from below. Let's return to our exemplar-based low vowel territory for this shift and see what else can be suggested about the detail of this process.

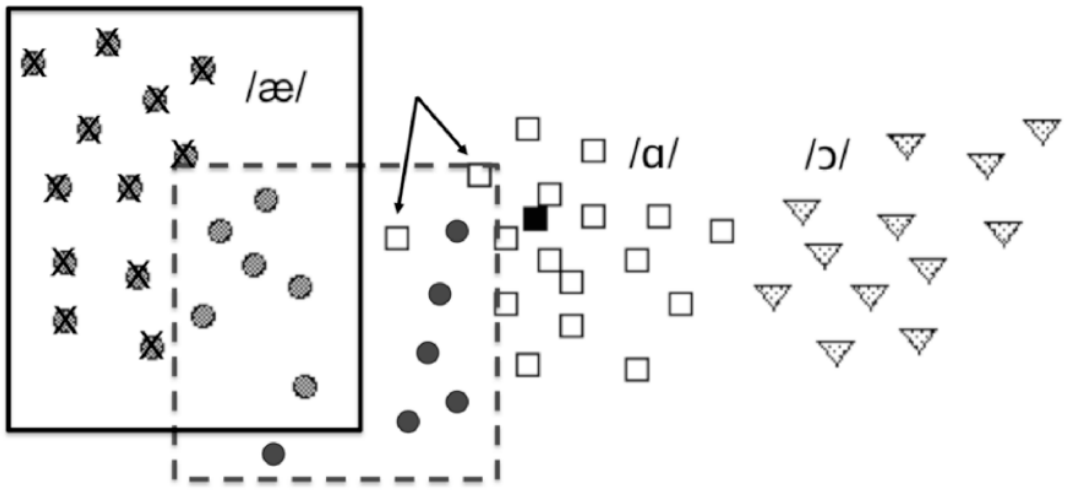


Figure 28. A hypothetical conservative /æ/ vowel territory for NCS speakers (adapted from Labov, 2002)

In Figure 28, the rectangle to the left shows the shifted territory for /æ/ in production (see Figure 24) and in comprehension (see Figure 23). But what of perception? Why do young Michiganders hear no difference between their radically shifted /æ/ (in such items as "man") and their more conservative tokens after obstruent+liquid onsets (e.g., "black"), as shown in Table 5? One might say that the raised tokens of /æ/ are simply new allophones and that they are ranked with the more conservative samples of /æ/, just as aspirated initial, unaspirated /st/-cluster initial, flapped medial, and unreleased final /t/ are all examples of /t/. If the Figure 23 and Table 5 results were our only evidence, we might be satisfied with this phonemic

explanation, but perhaps the eliciting conditions of those experiments were insufficient to bring strong regard mechanisms into play. In Niedzielski's experiment, Michiganders were directly challenged to match the pronunciation of a Michigan speaker, and they did so by choosing a norm that was not at the center of their shifted tokens but at the center of their pre-shift tokens, i.e., at the center of the broken line square in Figure 28, one backer and lower in the vowel space and typical of conservative US systems (e.g., Peterson and Barney, 1952).

If syntacticians had not stolen the term years ago, I would call such secondary phonemic spaces *chômeur* areas, since they are demoted to secondary status after a new area has been established. They remain effective as classificatory matrices, however, since 1) evidence of them is still around in older speakers, in the speech of speakers from other areas, in media language, and even in some conservative environments of a shifted speaker's own system, and, much more importantly, I think, 2) they represent symbolically a "correct" norm system that these speakers are still attuned to. Looking just at /æ/, as in Niedzielski (1999) and Preston (2005), when they were either told (Niedzielski's study) or surely thought (Preston's) that the tokens they were presented with were from local speakers, the norm involved (i.e., Michiganders speak standardly) was subconsciously triggered and the errors reported in those two studies emerged as the respondents referred to the conservative (older) center of /æ/ (i.e., the dashed-line square of Figure 28). This allowed them to be able to prune actual tokens of shifted /æ/, (Xed out in Figure 28), substituting acoustic memory tokens in the dashed-line square (the darker shaded circles), and also allowed for the misunderstanding of /ɑ/ as /æ/, the major result shown in the first line of Figure 23 (and indicated by the unfilled squares pointed to in Figure 28).

In Preston (1997), since no jarring acoustic data were actually presented, the respondents were able to operate on their own internal representations of the vowel, and the matching was very successful.

This sensitivity in regard is equally important to large-scale linguistic change and to global as well as detailed linguistic features. Tore Kristiansen, in association with the LANCHART ("Language Change in Real Time) project in Denmark, has found that covert, implicit, unconscious attitudes are the ones that agree with the directionality of linguistic change in the country. Figure 29 shows where this research was conducted.

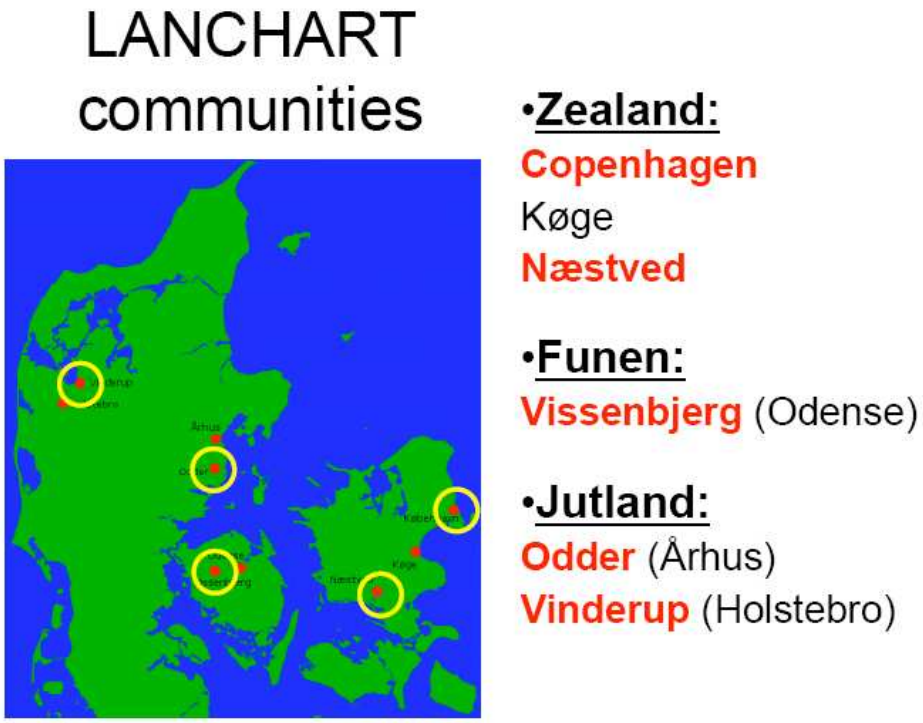
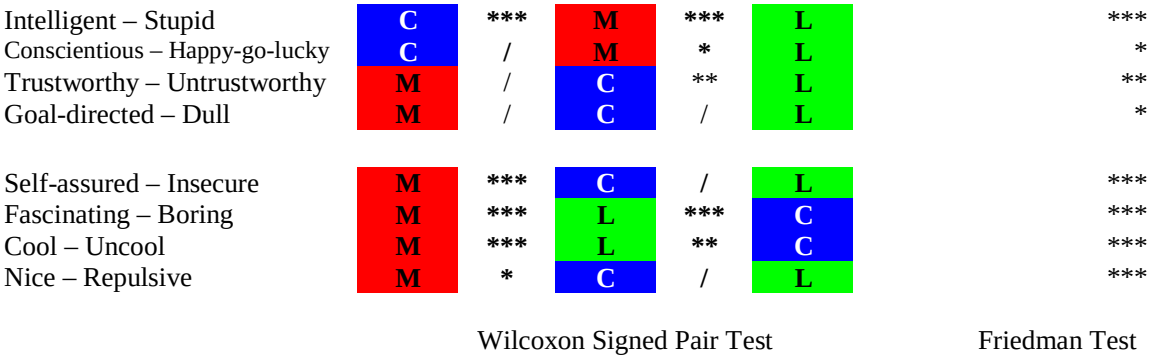


Figure 29. LANCHART language attitude research sites (Kristiansen, 2007)

The results when respondents are asked which varieties they prefer (with no voice samples) are as follows: in Jutland and Funen (i.e., in Odder, Vinderup, and Vissenberg) the preference is Local > Rigsdansk > Københavnsk; in Naestved it is Naestved > Københavnsk > Rigsdansk, and in Copenhagen itself it is Københavnsk > Rigsdansk. In spite of the fact that Københavnsk has been shown to be the variety that has considerable and growing influence on the speech of the entire country (e.g., Kristensen, 2003), respondents still prefer their local variety.

But Figure 30 shows the results of a matched guise test in which language regard was not the target of the investigation (in which Rigsdansk is called "Conservative Copenhagen" = "C" and Københavnsk is "Modern Copenhagen" = "M," and "L" stands for the local variety of the respondents). Modern Copenhagen, the most rapidly advancing variety in the entire country, is preferred to the local variety in seven out of eight cases (and is equal in the last). It is also preferred to Conservative Copenhagen in four out of eight cases, equal in three, and dispreferred in only one — "intelligence". Note too that Modern Copenhagen is preferred over the Conservative and Local varieties in all four of the characteristics that are associated with more interpersonal or affective dimensions.



*** = p<.001 ** = p<.01 * = p<.05 / = n.s.

Figure 30. Matched-guise test of attitudes towards varieties of Modern Danish (Kristiansen, 2007)

This work also suggests that if there is extensive variation in regard as a result of manipulation of the construal (in this case the contrast between conscious and subconscious processing), the stability suggested by Labov for evaluative norms may be suspect.

In conclusion, I believe that studies of language regard are absolutely essential to our understanding of the relationship of language and space, not only in terms of the folk beliefs that are channeled into such concerns but also in terms of facilitating (and impeding) conditions on variation in change that have spatial importance, some that may even allow us to explain. Hammerström (1961: 167) suggests that

> …[I]f "subjective boundaries do not coincide with "objective," one can say, fine, too bad for the latter. Similarly, if one came to know that the subjective boundaries moved and the objective ones did not, I repeat, too bad for the latter (quotation marks in the original, translation mine).

Perhaps I will not go as far as Hammerström, but I am tempted to.

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