Approaches to the study of Language Regard

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INTRODUCTION

This chapter treats recent work in the study of language regard (Preston 2010; Preston and Bakos 2012), a term we prefer to 'attitude' since it includes a much wider range of non-linguist perceptions of, beliefs about, and responses to languages and varieties than those restricted to an evaluative dimension (e.g. Eagly and Chaiken 2005). Knowledge of ordinary speakers' regard for language is, we believe, absolutely essential to the study of language variation and change in general and particularly relevant when the focus is on changing standards and norms in speech communities, the specific target of the SLICE program of research.

For us the study of language regard is most appropriate to linguistic interests when it confirms, explains, or provides parallel evidence for the specific content of research findings in the more general program of variation and change. If a vowel system, or syntactic form, or lexical item, or entire variety is changing or exhibits only stable variation, what is the relationship between the linguistic forms involved and regard for them? In classic work that lies behind much of the SLICE enterprise, for example, Kristiansen (2009, and see below) has shown that speakers from all over Denmark like their local varieties best when asked directly about such preferences but like the emerging, modern Copenhagen variety best when presented with examples of it in contrast with other varieties, including their own, in a format that elicits a more implicit judgment (i.e., a matched-guise experiment). Similarly, a vowel system change in the large cities of the Northern Great Lakes region of the United States has made considerable progress in an area where regard for conservative language values, thought to be upheld by local speakers, is very strong. Regard research has shown that a local inability to notice the ongoing change stems from speakers' high opinion of their own variety, resulting in some cases in an inability for speakers to even hear the specific vowel changes when they think the speaker is local (Niedzielski 1999).

Our bias in the research examples given here will be towards the experimental, but we will conceive of 'experiments' rather broadly, sometimes suggesting means of study that might not qualify under stringent experimental design conditions. We will not, however, outline or discuss more general issues concerning qualitative, usually discoursal, data, although we do not wish to exclude them from approaches to the study of language regard. We also do not provide here a general outline of experimental design; a number of such works are available, some specifically directed towards linguistic and language variation research.[1]

We begin with a general outline of what we think are some of the most important considerations involved in language regard research and follow it with a discussion of these concerns and then examples of research that illustrate them.

A TAXONOMY OF LANGUAGE REGARD RESEARCH

A: *Setting*
      1. **Actual** – home, laboratory, etc…
      2. **Contex**t – contextualized vs. non-contextualized

B: *Stimulus*
      3. **Priming** – primed vs. non-primed
      4. **Presentation** – video, written stimulus, pictures, etc…
      5. **Size** – global vs. specific
      6. **Status** – stigmatized, prestige, neutral, etc…
      7. **Access** – direct vs. indirect
      8. **Authenticity** – native vs. imitated
      9. **Naturalness** – natural vs. (re)synthesized
      10. **Presence** – provided vs. not provided

C: *Respondents*
      11. Non-targeted vs. targeted

D: *Response*
      12. **Behaviour** – respondent activity or task (rate, read, observe, perform, etc…)
      13. **Mode** – fixed (Likert scale, forced choice, etc…) vs. open-ended (discoursal, eye-tracking, etc…)
      14. **Timing** – present vs. absent
      15. **Awareness** – unaware (subconscious) vs. aware (conscious)

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[1] E.g. Baayen (2008); Butler (1985); Gries (2009); Hatch and Lazaraton (1991); Johnson (2008); Tagliamonte (2006); and Woods, Fletcher and Hughes (1996).

Setting

In language regard research, perhaps particularly when the respondent is called upon to provide an imitation of a variety under consideration, a sample of their own variety, or even a spoken comment to an investigator, the setting must be taken into consideration. Are others present? If so, are they investigators or others who are well-known to the respondent? Is the respondent on home ground, in a neutral place, or in a laboratory of the investigator? What is a neutral place? Is it one that might suggest to the respondent that any stigmatized variety of a language was out of place (e.g. a school), or is it one that might suggest the opposite (a playground, a bar or pub)? Considerations such as these (as are many to follow) are both warnings and opportunities. They are warnings since they may influence responses, but they are opportunities as well since just such features of setting might be built into experiments as conditions to be studied, i.e., as independent variables.

The second concern of setting has to do with contextualization. Does a respondent hear a stimulus (sound, word, phrase, sentence, even discourse) that is not integrated into a larger speech event? Contextualization may have a considerable influence on perception and evaluation. In a research sample we outline below, we show that vowel perception (i.e., phoneme classification) was influenced by paying attention to vowels that appeared in material surrounding the stimulus word. We also have no doubt that the topic content of contextualized samples (bland, controversial, etc…) might also influence how a respondent regards the linguistic target of the investigation.

Stimulus

Those concerns about setting highlight the fact that all these and others might be considered as 'primes,' our next consideration. In our discussion of the setting, these primes are perhaps inadvertent, but in a design, they may be considered as a part of the stimulus complex. Will responses to a linguistic stimulus vary if the respondent is primed in some way just before (or while) the stimulus is presented? We will show, for example, that speech samples may be regarded and even processed in very different ways if a respondent is led to believe that the speaker is older or younger, native or non-native, and the like, and we will return to priming as an important feature of the most recent work that seeks to tap subconscious attitudes and beliefs.

The modality (or modalities) of a stimulus presentation needs to be taken into consideration. If we prepare written stimuli (whether flashed on a computer screen or presented on paper), the level of literacy of the respondent is an important issue. It may also be the case that the modality of a stimulus itself (written versus spoken) could produce interestingly different responses.

The size of a stimulus is very important. It can range from a whole language (presented just by name for example) all the way down to the acoustic signal of a single syllable. This is a slightly different concern than that of contextualization (discussed above), for here we want to emphasize the respondent's level of focus. In some folk linguistic work, for example, respondents have indicated that they are aware of a foreign accent but can name no single feature of it (Niedzielski and Preston 2003: 143) while in other studies, respondents in an experimental setting have shown that they are sensitive to a minor difference in the acoustic placement of a diphthong's onset in determining the ethnicity of a speaker (Graff, Labov and Harris 1986).

One might assume, in the context of SLICE studies especially perhaps, that the folk status of a variety is what is to be determined, but we believe it is a mistake to begin studies without some pretty clear account of the folk notions of such status. This is perhaps particularly true of smaller features that may inadvertently trigger a positive or negative response. We know that in some parts of the US South the alveolar (rather than velar) realization of –ing (e.g. walkin' rather than walking) is not so negatively evaluated, perhaps so much less so than in other parts of the country that a speech sample with all velar realizations of –ing might be oddly evaluated by US southerners, as, for example, a 'superstandard' (Wolfram and Fasold 1974: 19). Maps of intended research areas that respondents are asked to rate on a scale of language 'correctness' is a simple way to determine attitudes towards regional varieties (e.g. Preston 1996a), but it does not address the question of specific linguistic elements that may be stigmatized or even excessively valued.

One long-standing aspect of stimulus presentation at least in traditional language attitude studies has to do with directness. In a much-replicated methodology, Lambert et al. (1960) introduced the 'matched-guise' technique. In the strict application, the technique involved speech by one person who was fluent in the two languages or varieties. Samples in these two modes were then separated from others in the stimulus presentation so that the respondent had no idea that the same speaker spoke twice. This was done to insure that other characteristics of the voice of the speaker could not be confounding factors in the re-

search. The respondents gave Likert-scale judgments for a variety of paired opposite attributes (e.g. fast – slow) that had been determined to be appropriate in previous research with the same or similar respondents. This technique, originally done to measure attitudes to French and English in Canada, has been extended to studies of attitudes to varieties of single languages along many dimensions – region, age, sex, ethnicity, status, etc… The intent of the research is to only indirectly measure the respondent's attitude to the variety by making the evaluation appear to be one of the speakers, not the linguistic forms they use. We prefer to refer to this sort of data elicitation as 'indirect' and will reserve the term 'implicit' for other types of experimentation discussed below.

The matched-guise technique has been especially important to the SLICE research effort, particularly because of the interesting findings of Kristiansen (e.g. 2009) with regard to Danish varieties. Kristiansen compared the results of an indirect matched-guise experiment, conducted at several sites in Denmark, with the results of a direct experiment in which respondents were asked to indicate which variety of Danish they liked best, a task he called 'label ranking' (p. 177). In this direct mode, respondents always showed a strong preference for the local variety (p. 179), but in the indirect (matched-guise) research, they all agreed that the Conservative Copenhagen or the Modern Copenhagen variety was preferred in a cluster of adjective descriptors identified as the 'superiority' dimension (e.g. intelligent, conscientious, goal-directed) and that the Modern Copenhagen variety was preferred in almost all cases for the dimension identified as 'dynamism' (e.g. self-assured, fascinating, cool) (p. 188). This is an especially important finding, for it has led to the claim that language change, which in independent work has been shown to be moving in the Modern Copenhagen direction all over the country (e.g. Jørgensen and Kristensen 1994), is guided by and perhaps even allowed to progress more rapidly due to subconscious rather than conscious norms (p. 189).

Although much replicated and modified, the matched guise technique was criticized, for example, for its artificiality (e.g. Knops and van Hout 1988: 8), and other indirect measures were introduced, particularly those that tried to build an action or behavioral element into the research. The earliest of these was perhaps the 'Welsh theatre' experiment (Bourhis and Giles 1976). In one part of this research, Welsh-English bilingual theatre-goers in Wales, on subsequent evenings, were invited to fill out a questionnaire by a voice over the loud speaker at the end of the performance. The invitations were delivered in Standard British English (or 'RP'), heavily accented Welsh English, lightly accented

Welsh English, and Welsh. The percentage of theatre-goers who responded to each invitation was taken as a measure of attitude towards the variety or language in which the request was made. Compliance to the request ranged from 2.5% of the audience on the 'RP' evening to 26.0% on the Welsh language evening (p. 15). Excellent and detailed outlines of the pros and cons of matched-guise research are available in Garrett, Coupland and Williams (2003: 17–18, 51–66) and Garrett (2010: 39–43, Chapters 4 and 5).

Stimuli may be completely authentic, as in the original Lambert et al. experiment, in which the two voices of the matched stimuli were acquired from bilingual speakers of Canadian French and English. In other instances, however, imitations of varieties have been used. Giles (1970), for example, used one male speaker to imitate thirteen regional and foreign influenced accents of English, a technique that was not likely to result in authentic stimuli, and this practice seems to have been discontinued in more recent work, which takes the authenticity of samples to be more important than the requirement that the varieties are all taken from a single speaker.

Perhaps more interesting and effective in recent work is the use of speech resynthesis, a means of returning to the original matched guise model in which a single speaker provide all the varieties under investigation. In the early work by Graff et al. referred to above, for example, a short sentence presented to subjects was entirely in typical Philadelphia African-American English. The sample included the word 'house,' which contains the diphthong /ɑʊ/, a phoneme realized as [ɑʊ] in the African-American speech community but as [æʊ] in the European-American. The original [ɑʊ] pronunciation was resynthesized to [æʊ] for the experiment, allowing the researchers to keep the voice of the stimulus constant except for the part under investigation (Graff, Labov and Harris 1986), and the experiment showed very clearly that, although the same African-American voice was heard in every case, the respondents classified the [æʊ] version as 'European-American'.[2]

Finally, one may be justifiably confused by the suggestion that languages and varieties can be studied when the stimulus is not present at all, and that is impos-

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[2] We cannot resist observing what an ironic turnaround this is; in the US there was once legal (and among many, continuing perceptual) status that 'one drop' of African blood made a person African-American; it's nice to know that one very minor change in the placement of a diphthong onset will mark a speaker as European-American. The history of this 'one drop rule' in the US is at the Wikipedia site http://en.wikipedia.org/wiki/One-drop_rule and specific instances of it can be found at sites linked there.

sible, of course, if one takes it to mean not there in any sense. But in a great deal of work in perceptual dialectology (e.g. Preston 1989, 2000; Long and Preston 2002), which has drawn on much older work from both Japan and The Netherlands (much of it reprinted and translated in Preston 2000), all the linguistic details are accessed internally by the respondent. When, as in the earliest examples of this work, a respondent is asked to draw a connecting line between their own home site and any other surrounding sites where people 'speak the same' (e.g. Weijnen 1946), the linguistic criteria for 'speaking the same' are those of the respondents themselves. We cannot know (unless we ask) what details the respondents had in mind, and asking often triggers vague responses since the linguistic details of varieties are often not available to respondents for conscious comment (e.g. Preston 1996b; Silverstein 1981), a concern in all direct method investigations.

Respondents

In experimental design, consideration is given to who will be accepted in the pool of respondents. While most experimenters may have some general requirements for respondents, such as that they report normal hearing or vision, or that they be native speakers of a given languages, some approaches utilize greater specificity, thus targeting a certain, specific type of respondent. For instance, Williams, Whitehead and Miller (1971) targeted elementary school teachers as respondents in his examination of the effect of primed ethnicity and language assessment of students. Thus, the respondent pool itself can be a concern of various experimental approaches.

Response

Respondents respond, and that is the behavior researchers study, although that is not meant to imply that a behaviorist model of attitudes is adopted in most language attitude research, and we cannot outline here the complex relationship between attitudes and behaviors. Jaccard and Blanton (2005) and Ajzen and Fishbein (2005) are excellent recent discussions. Some respondent behaviors are predicted from other aspects of the research model. Nearly all matched guise research, for example, includes Likert scale ratings often treated to semantic differential or factor analytic groupings (Osgood, Suci and Tannenbaum 1957), but such research models do not necessarily preclude the study of other behaviors.

For example, Preston (1989: 3) criticized a great deal of traditional matched guise language attitude work that focused on regional pronunciation since the investigators did not also ask respondents if they knew what region the voice was from, an easy task addition. Without this additional information, we might conclude that respondents from X had certain opinions of voice samples from Y but thought the voices were from Z. In the investigation of varieties, it seems to us that one ought to take the opportunity to observe multiple respondent behaviors, although it will be important to order direct, indirect, and implicit tasks strategically.

The mode of respondent behavior varies, although it seems fixed in some research models. Again, however, multiple or even innovative practices may emerge. Nguyen (2003), for example, had respondents transcribe two US nonstandard, one US standard, and one English English standard speech samples. Although the standard English English sample was as distant phonologically from the respondents' own US standard as the US non-standards were, the use of 'respellings,' alternative graphic representations of what the speaker said, was much more common for the two US nonstandard (Appalachian and African American) varieties than for the US and English English varieties. In doing fieldwork for Niedzielski and Preston (2003), we became aware of the difficulty in having respondents perform (i.e., imitate) a variety under discussion. Switching to a written mode allowed for a much easier sampling of attitudes to certain varieties and even helped Nguyen identify the specific phonological elements that were most salient to the listener.

Responses may or may not be timed, and, presumably, quick responses are more likely to be ones that are more closely related to the subconscious attitudes and beliefs of the respondent. In some early research, respondents were simply told to 'respond quickly,' but in more recent research, responses are actually timed, particularly in computerized study environments, and long response time performances are culled before treatment and analysis, or the response time itself is treated as an important variable in the experiment's analysis, as described next in our discussion of implicit research designs.

Awareness has been the hottest topic in attitude study for about two decades. Researchers who are serious about achieving insight into the potential for eliciting implicit levels of linguistic attitude and belief should acquaint themselves with the classic and developing implicit measures in social psychology. An excellent place to do so is the recent entire volume devoted to the question: Gawronski and Payne (2010). The book contains not only theoretical and practi-

cal chapters on a variety of implicit models of research but also applications of tests to a variety of areas of interest, but none directly related to linguistics.

Three of the categories in the taxonomy presented in this chapter are relevant to the discussion of the elicitation of implicit or subconscious responses: priming, access, and timing, to which may be added the notion of congruence. The formal observation of a respondent's inaccurate and/or slower reaction to incongruent stimuli are at least as old as the famous Stroop studies (1935), in which respondents were to report what color a word was written in. They were shown, for example, the word 'green' written in green (congruent) and the same word written in red (incongruent). Since the task was to name the color, the word's meaning was irrelevant, but, in fact, when incongruent situation obtained, it was shown to have a considerable negative influence on accuracy and lengthening influence on timing. The timing (or latency of response) was believed to be an indication of the conscious-like processing that was required to resolve the incongruity. Later the semantic priming paradigm arose (e.g. Meyer and Schvaneveldt 1971), in which respondents were asked to indicate whether target strings of letters (all pronounceable) were words or not (e.g. 'duck' 'flot'), and the real word items were primed by either semantically related ('bird') or unrelated ('house') words. The response time was considerably faster when the prime had a semantic relationship to the target. In these experiments respondents were believed to have activated what came to be known as a semantic spreading activation (e.g. Collins and Loftus 1975).

These early experiments incorporated priming, timing, and congruence, but the fuller exploitation of access (indirectness) arose later in studies that focused on associations with the prime rather than the target as the real object of research interest. Fazio et al. (1986) is one of the earliest of these and makes use of the notion of attitude or evaluation. In this study subjects were first asked to identify potential attitude objects for which they have a strong like or dislike.[3] These objects were used as primes, but the apparent primary task of the investigation was for the respondent to indicate whether an adjective (e.g. 'delightful', 'repulsive') had a positive or negative sense. In this second phase, respondents were told that they had to remember a word (the prime) while they were judging a second (the

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[3] In this aspect of the study, as in the next step, reaction time was used not only to identify the most likely candidates but also to identify a set of candidates which, due to slower reaction times, were thought to be more weakly associated with like and dislike. The weak versus strong distinction was then built into the experiments, but that distinction is not summarised here.

target). They then were told to press a key indicating whether the adjective presented was 'good' or 'bad' and recite the prime word. Nonprime items (a string such as 'BBB') were also presented with the same adjectives so that a baseline score could be used for comparison with the positive and negative attitude objects. The congruent pairs (positive attitude object and positive adjective; negative attitude object and negative adjective) showed considerable facilitation of the response time and the incongruent pairs considerable retardation of it.

It did not take researchers in social psychology long to see that, if one did not know the status of the prime, the response timing with regard to negative and positive adjectives would identify the respondent's orientation to it, and Fazio et al. (1995) is a good example of that understanding applied to race. In this case, rather than beginning with a prime that had been tested to reveal its negative or positive meaning for the respondent, photographs of African Americans and European Americans were used as primes. To make sure respondents attended to these primes, they were told that they would be tested later for their memory of the faces presented to them. Baseline data was obtained and initial training carried out by presenting the evaluative adjectives with no primes and asking the respondents to evaluate them as 'good' or 'bad'. The respondents were then shown primes (faces) only, asked to remember them, and given a simple recognition test on facial memory. The respondents were then told that the two tasks would be combined: they were to remember the faces but at the same time perform the adjective evaluation task. Once again, but without preconception of the valence of the prime, potential congruent-incongruent pairings were presented, i.e., Black faces with positive and negative adjectives and White faces also with both. The response time indicated facilitation of correctly specifying positively evaluated adjectives when White faces were shown and facilitation of negative adjective identification when Black faces were shown, so far as White respondents were concerned. Not surprisingly, Black respondents gave opposite responses, allowing Fazio et al. (1995) to conclude that racial attitudes were automatically triggered using this research scenario.

One problem with many of the priming studies was that reliability scores were often not good, calling into question the value of the priming research paradigms for the discrimination of inter-individual differences (Greenwald and Banaji 1995). This led to a slightly different paradigm from previous priming tasks known as the Implicit Association Test (IAT), although many of the details are similar. The seminal work is Greenwald, McGhee and Schwartz (1998), which set off a flurry of such studies, estimated at 450 within the eleven years

after its first publication (Teige-Mocigemba, Klauer and Sherman 2010: 117). Apparently the largely mechanical changes made in the IAT format were responsible for the increased reliability of the measure (*ibid*: pp. 120–121).

Table 1: Example of a Racial Attitude Implicit Association Task (IAT): Task Sequence (Teige-Mocigemba, Klauer and Sherman 2010: 118).[4]

Block	*N* trials	Task	Response Key Assignment	
			Left key	Right key
1	20	Target discrimination	Black	White
2	20	Attribute discrimination	Negative	Positive
3	20	Initial combined task	Black, negative	White, positive
4	40	Initial combined task	Black, negative	White, positive
5	20 or 40[5]	Reversed target discrimination	White	Black
6	20	Reversed combined task	White, negative	Black, positive
7	40	Reversed combined task	White, negative	Black, positive

Table 1 shows the outline of an IAT designed to study racial attitudes, much like Fazio et al. (1995), described just above. Respondents are first trained to associate race with the left and right keys, then adjectives with negative and positive senses with left and right keys. They are then given a mixed list of items (blocks 3 and 4) in which the key assignments match the training. Neither item is the prime, but the race and adjective identifications are associated with a particular key assignment. In block 5 the respondents are trained to switch keys for racial identification, but the adjective valences remain assigned to the same key. Blocks 6 and 7 present the new list of items with the configuration trained in block 5. If respondents think more favorably of whites than blacks, then blocks 3 and 4 should show faster response times and fewer inaccuracies. If they think better of blacks, then blocks 6 and 7 should be facilitated. Exemplary IAT studies are online at www.implicit.harvard.edu/.

Linguists, speech scientists, and researchers in the social psychology of language have responded with increasing sophistication to these developments in more recent social psychological experimentation and, in some cases, have led the way in developing new techniques. In what follows we will outline in greater

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[4] In this particular study, even greater indirection was achieved than in Fazio et al. (1995) by training the respondents in block 1 to recognise typically African-American (e.g. Tashika) and European-American (e.g. Heather) women's names (at least for the US when the study was done).

[5] Some researchers have suggested increasing the numbers of retraining samples to 40 (e.g. Nosek, Greenwald and Banaji 2005).

detail a selected number of experiments, many relevant to the study of standard and nonstandard varieties, that incorporate varieties of the considerations outlined in the taxonomy presented above.

SAMPLE DESIGNS IN LANGUAGE REGARD RESEARCH

Experimental approaches to the study of language regard have seen a rapid increase in the past decade, thanks in part to the availability of software and hardware which facilitates not only acoustic analysis, but also the ability to create and control experimental procedures and to measure a wide variety of respondents' reactions to stimuli, such as eye movement and reaction time. In this section, we present some examples of these recent approaches, discuss how some of the considerations presented in the first section are demonstrated in each, and comment on their relevance to the study of language variation and change in general and to standards and norms in particular.

We start with one of the most direct methods of data elicitation – imitation studies. In these studies, often conducted in a laboratory setting, subjects are asked to imitate language varieties that are not their own. For instance, Evans (2010) challenged the assumption that speakers are unable to accurately imitate certain features of a dialect that is not their own by asking a non-Southern US English speaker to imitate this dialect; subsequent acoustic analysis revealed that the subject in fact demonstrated several features of the Southern Shift in his imitation. The acoustically accurate ability seems clearly related to the fact that many US respondents feel that Southern American English is the 'least correct' variety of the entire country (e.g. Preston 1996a), making specific features of it particularly salient. In some areas (e.g. Oklahoma) this regard knowledge plays an important role in language change; younger, better-educated, urban Oklahomans appear to be adopting a variety that shows the avoidance of Southern features (Preston and Bakos 2010).

Brunner (2010) asked native speakers of English to imitate specific non-native varieties of English, first 'unmodeled,' and then once again after hearing an authentic speaker of the non-native variety, to determine which features were salient, again as revealed by acoustic analysis of the imitation, a study that involves regard investigation in the increasingly important area of immigrant varieties and the degree to which that are perceived as 'standard' by local native speakers. Both Evans' and Brunner's studies included an additional component:

they used imitations created by the initial subject(s) as stimuli in a follow-up experiment, designed to reveal whether the imitations were accepted as authentic by a much larger subject pool.

The next set of studies was designed specifically to examine the effect of priming on subjects' responses. Strand and Johnson (1996) tested the effect that priming subjects to expect male versus female voices would have on the perception of vowels and sibilants produced by a voice that was, without the primes, ambiguous for gender. Thus, visually presented photographic primes were shown to influence aurally presented stimuli. Hay and Drager (2010) presented visual primes as well, although they merely had stuffed toys present in the subjects' field of vision while the stimuli were presented. What is particularly remarkable about experiments such as these two is that although the language feature was quite detailed (in both cases, the stimuli contained resynthesized tokens of vowels or fricatives), the effect of the primes on the perception of the stimuli was significant.

Podol and Salvia (1976) used targeted subjects in their work, whereas the subject pools for the former studies were non-targeted. They targeted speech-language pathologists and used photos of children with and without facial abnormalities as primes. Their study revealed that responses to stimuli (in this case, global stimuli such as 'impaired speech' versus 'non-impaired speech) were influenced by the primes. The relationship of impairment to community norms may be better understood through such work.

Pantos (2010) used the IAT method discussed above to demonstrate implicit attitudes about non-native versus native speakers of US English in a legal setting. The stimuli were phrases taken from legal testimony and were produced by either a native or non-native speaker of US English. The IAT test revealed that while respondents viewed the native US speaker more favorably, this was in contrast to the subsequent direct (thus, more explicit) experiment that followed, where a pro-non-native bias was shown. Pantos uses these findings to argue that implicit and explicit attitudes are possibly contradictory and should thus both be part of a more general language attitudes discussion. Like Brunner's work, Pantos' suggests a complex regard setting for non-native speakers, one that will doubtless prove important in concerns over immigrant adaptation to local norms in general and to linguistic norms in particular.

Newer experimental methods are being developed to reveal not only implicit attitudes about variation but also implicit knowledge. Koops and Niedzielski (2011) used photographic priming, resynthesis, and targeted respondent pools in

a body of research designed to test the knowledge that respondents have of language variation, knowledge they do not reveal in more direct studies. They showed respondents photos of Black and White 'speakers' as they listened to resynthesized tokens and asked the respondents to categorize the words they perceived. They demonstrate that respondents did in fact correctly categorize specific stimuli (in this case, word-final glottalisation) according to the primed ethnicity, and the degree of exposure to African-American English was significant as well. Thus, even though knowledge of, in this case, glottalisation patterns, is not revealed explicitly through direct methods, this type of experimental approach provides evidence for the implicit knowledge of such variation.

Koops, Gentry and Pantos (2008) also reveals implicit knowledge of the correlation between variation and age, using photographic priming and eye-tracking. In Houston, Texas, older Anglo speakers merge high front lax vowels before nasals; however, these vowels are not merged in younger Anglos. Direct measures of language attitudes do not reveal knowledge of this variation; however, Koops et al. shows results that suggest that respondents are in fact implicitly aware of this variation. When primed with a photo of an older speaker, respondents fixate longer on words that are homophonous in the merged (but not the unmerged) dialect.

Finally, reaction times (RTs) are used in experimental approaches as well and can also reveal implicit knowledge. For instance, Eberhardt (2006) primed ethnicities for respondents by telling them that they were listening to a Black speaker or a White speaker, or did not prime them at all. She found that priming itself had an effect on reaction times, particularly for words that were variable in African-American versus Anglo-American varieties (e.g. 'wreath/reef'), suggesting that respondents' awareness of the variation slowed down their RTs. Koops (2011) showed that reaction times were slower in incongruent matches between photos and aurally-represented stimuli, compared to when the matches were congruent. Specifically, he showed that if words containing Southern-shifted vowels were shown with a younger face, RTs were longer than if they were shown with an older face. Since this correlation is in fact accurate regarding changes taking place in Houston English, again implicit knowledge about language variation is revealed.

In these last examples the importance of knowledge of and reaction to specific features of varieties is highlighted. We believe that such studies sophisticate studies of variation in change from the language regard perspective by focusing not on varieties in general but on the specific elements of them that are most sa-

lient (whether in a conscious or unconscious sense) and by correlating them to such important social concerns as apparent identity, brought about in these experimental settings by priming with pictures or other sorts of clues.

CONCLUSION

Our exemplary designs, outlined just above, are weighted towards more recent studies and therefore more recent research practices, but we have tried to set these within a broader outline of older and by no means unproductive approaches to the study of language regard. To ignore such factors, often relegated to linguistically ancillary areas such as anthropology and the social psychology of language overlooks, we believe, the motivating and explanatory roles they play in the study of variation and change.

In SLICE efforts we believe there are numerous opportunities for the implementation of such work and that it will be rewarding. As we understand it, the goals of SLICE are to determine the status and shape of standard varieties in Europe: Are they changing? If so, is the old standard being demoted in status and replaced with a new one, or is it being relegated to a much narrower set of domains of use? Is the traditional standard itself maintained so far as its status is concerned but being chipped away at with new features? If so, what parts are changing and at what rate and in what social circumstances? What is the source of the new features? Do they come from other social or regional varieties or are they external?

One might take a purely production and distribution approach to these questions. Data from varieties may be collected, and real- and apparent-time studies can be done to determine change or lack of it. Demographic sophistication can be added to these real- and apparent-time studies to determine the social flow of change – from below, from above, urban to rural, led by male or female speakers, etc... While essential, it would be a mistake to limit this investigation to such language use data, for it often lacks the essential information for explanation. Why do Danes love their local varieties so much but turn them in for the emerging Modern Copenhagen standard? As Kristiansen (2009) has shown, Danish love for the emerging standard is covert, unconscious knowledge while love for the local variety is overt. The two cognitive locales of these regard characteristics make the rapid change in Danish varieties understandable, just as the belief among Michigan speakers that they are the most standard speakers in

the US (e.g. Preston 1996a) allows them to develop a new vowel system and not even hear it (Niedzielski 1999).

At every turn in the investigation of the change in status and distribution of varieties, the regard of local users will prove important, in some cases explanatory. Perhaps newer, implicit designs will reveal a 'deeper' unconscious level of regard, one that goes beyond the sort uncovered in such earlier research paradigms as matched-guise and illustrates a continuum of consciousness with respect to varieties and change or perhaps a tri-partite rather than dual notion of consciousness. We do not pretend to know the answer to those deeper social psychological questions, but we believe we have given enough research samples to warrant investigation of the productive and essential knowledge one gains from discovering the language regard held implicitly and explicitly by speakers.

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