

## **Social Salience and the Sociolinguistic Monitor: A Case Study of ING and TH-fronting in Britain**

### **ABSTRACT:**

This article examines the role of social salience, or the relative ability of a linguistic variable to evoke social meaning, in structuring listeners' perceptions of quantitative sociolinguistic distributions. Building on the foundational work of Labov and colleagues on the *sociolinguistic monitor* (a proposed cognitive mechanism responsible for sociolinguistic perception), we examine whether listeners' evaluative judgments of speech change as a function of the type of variable presented. We consider two variables in British English, ING and TH-fronting, which we argue differ in their relative social salience. Replicating the design of Labov et al.'s (2006, 2011) studies, we test 149 British listeners' reactions to different quantitative distributions of these variables. Our experiments elicit a very different pattern of perceptual responses than those reported by Labov et al. In particular, our results suggest that a variable's social salience determines both whether and how it is perceptually evaluated. We argue that this finding is crucial for understanding how sociolinguistic information is cognitively processed.

**KEYWORDS:** social salience, sociolinguistic monitor, ING, TH-fronting, British English

The concept of social salience is central to the study of language variation and change.

Broadly defined as the relative availability of a form to evoke social meaning (Labov 2001: 25-28; see also Kristiansen 2010), social salience has been understood to influence how language innovations originate and spread (e.g., Trudgill 1986; Kerswill and Williams 2002) and to moderate patterns of structured variation across speakers and speech contexts (Labov 1994: 78). In this paper, we consider the role that social salience plays in structuring listeners' reactions to variable linguistic production. Specifically, we focus on how the relative social salience of a variable impacts on listeners' evaluations of quantitative differences in that variable's distribution. In doing so, we aim to contribute to a more accurate model of how social information is perceived in interaction and to the development of a better understanding of the cognitive processes that underlie such perceptions.

Our arguments build upon the foundational work by Labov and colleagues (Labov et al. 2006, 2011) on what they term the *sociolinguistic monitor* – a cognitive mechanism that

“tracks, stores and processes” (2011: 435) socially salient quantitative linguistic distributions. The idea is that this monitor is an integrated component of linguistic processing that serves to “control the effect of the frequency of sociolinguistic variables on social judgments and social behaviour” (Labov et al. 2006). Put somewhat more simply, the sociolinguistic monitor is conceived of as that aspect of language processing that is not only sensitive to the presence of socially salient forms but also to how often those forms occur in a given stretch of speech. The hypothesis is that sociolinguistic perception is not categorical in nature (i.e., all or nothing), but rather a gradient phenomenon whereby social judgments of language are based on a more global tally of the frequency of occurrence of socially meaningful forms. While not a focus of much of the variationist research on perception (though cf. Podesva 2011), the fact that differences in the quantitative distributions of variables can affect listeners’ evaluative judgments was noted as early as Labov’s (1966) study of New York City speech. In perception tests that he conducted as part of that project, Labov found a monotonic increase in listeners’ judgments of the competence of a speaker for those samples in which the variable /r/ in coda position was consistently realized as a rhotic approximant (the prestige variant) as compared to those samples in which it was less consistently so (i.e., where rhotic tokens alternated with vocalized ones). The postulation of a sociolinguistic monitor is thus an important innovation in sociolinguistic theorizing that attempts to account for an empirical fact about speech perception that has been mostly unaddressed in the variationist literature to date.

Our goal in the current paper is to test the generalizability of Labov et al.’s (2006, 2011) claims regarding the sociolinguistic monitor by investigating the proposed monitor’s interaction with a variable’s social saliency. In their original study (which we describe in detail below), Labov et al. focus on one variable: ING, or the systematic alternation between a velar ([ŋ]) or alveolar ([n]) realization of the unstressed verbal suffix *-ing* in English.<sup>1</sup>

ING is a highly stable sociolinguistic variable that shows regular social and stylistic stratification across a range of English varieties (Houston 1985; Labov 2001; Hazen 2008). In the US, ING is also a perceptually very salient variable, with [ɪŋ] associated with percepts of “education” and “intelligence” and [ɪn] with “casualness” or “informality,” that is often subject to explicit discussion and meta-commentary (Campbell-Kibler 2007, 2009).<sup>2</sup> In contrast, there is evidence that the social salience of ING in Britain is characterized somewhat differently than it is in North America. While research in the UK has clearly demonstrated the presence of both social and stylistic stratification of the variable along the same lines found in the US (particularly in southern varieties of British English; e.g., Trudgill 1974), the alveolar form appears to attract less evaluative attention for British speakers and there is a qualitative difference in the kind of meta-commentary it evokes (Jespersen 1961; Houston 1985; Tagliamonte 2004; Watts 2005). In saying this, we do not mean to suggest that British speakers are unaware of ING. On the contrary, the existence of “dialect commodities” (Johnstone 2009) such as T-shirts printed with the phrase *you’re ‘avin’ a laugh* attests to the fact that speakers are familiar with the variable and associate it with particular speakers and/or styles of speech. Nevertheless, we maintain that ING lacks the sort of social prominence in Britain that it has in the US (see below for further details). We therefore replicate Labov et al.’s (2006, 2011) research on ING but in a British context in an effort to determine whether this difference in the social salience of the variable influences the operation of the proposed monitor.

We combine this replication of Labov et al.’s study with a second experiment that examines listeners’ reactions to another variable in Britain: TH-fronting, or the realization of the interdental fricatives as their labio-dental counterparts (e.g., *fink* for *think*; Wells 1982; Foulkes & Docherty 2007). Unlike ING, TH-fronting is a relatively recent innovation in British English, having emerged in London and Bristol in the early nineteenth century and

only spreading to the rest of the country more than a century later (Kerswill 2003). Today, TH-fronting is a robust presence in most British varieties of English, though it is sharply stratified socially with fronted variants occurring most frequently in the speech of young, working-class speakers (and particularly young men; Kerswill 2003; Stuart-Smith and Timmins 2006; Schlee and Ramsammy, *fc*). Perhaps given its relative recency and its prominence in working-class speech, TH-fronting is also commonly the subject of explicit meta-discourse (in published Letters to the Editor, for example; e.g., Daily Telegraph 2010; McGilliard 2012), in which fronted variants are generally negatively evaluated as evidence of the decline of English among young people today. In contrast to ING then, we suggest that TH-fronting is a highly socially salient variable in Britain that evokes a very clear set of social and evaluative meanings for British listeners. By examining ING and TH-fronting together, we aim to identify how the difference in the relative social status of these variables in Britain may affect listeners' reactions to their quantitative distributions, and so investigate the role of social saliency in sociolinguistic processing more generally.

We begin in the next section with an overview of the goals, methods and principal findings of Labov et al.'s (2006, 2011) research, and discuss their characterization of the monitor in relation to prior research on evaluation in both linguistics and social psychology (e.g., Preston 2010). We then go on to detail the two experiments we ran to test the generalizability of Labov et al.'s findings before turning, in the last section, to a discussion of the broader ramifications of our results.

## EVALUATING LANGUAGE

Labov et al. (2006, 2011) propose the existence of the sociolinguistic monitor in an effort to provide a cognitive model to account for a well-known pattern of structured variation in language. The pattern in question involves the quantitative differentiation of variation as a

function of attention-paid-to-speech (Labov 1972) that exists independently from differences in a variable's distribution across speakers. Take, for instance, Labov's (1966) study of the variable realization of coda /r/ in New York City. There Labov found that while working-class speakers, for example, showed higher rates of /r/-vocalization than middle-class speakers overall, all New York City speakers used progressively lesser amounts of /r/-vocalization as the formality of the speech context increased. More specifically, Labov found that working-class speakers vocalized nearly 95 percent of their tokens in casual speech, but only 80 percent when reading a short passage. Similarly, upper middle-class speakers vocalized 80 percent of their tokens in casual speech, but only 65 percent when reading. These findings together indicate that there are two independent constraints on the variable realization of /r/ in Labov's data. One of these is a significant pattern of stratification by social class, which is responsible for the differences observed across groups (e.g., working-class versus middle-class). The second effect is one of contextual style whereby all speakers, regardless of social class, moderate their own use of /r/-vocalization according to the specific linguistic task in which they are engaged (e.g., casual speech versus reading). The discovery of these two independent effects of social class and speech style in Labov's New York City data was by no means an isolated finding, and has since been replicated in a variety of social, cultural and linguistic settings (e.g., Cedergren 1973; Trudgill 1974).

Within the variationist literature, the existence of an independent effect of speech style that applies across all social groups within a community has traditionally been understood to reflect uniform adherence to a set of shared evaluative norms by community members (i.e., the Principle of Uniform Evaluation; Labov 2001:214). This understanding is, in fact, very closely linked to Labov's definition of the speech community itself, which he characterises as "not defined so much by any marked agreement in the use of language elements, so much as by participation in a set of shared norms" (Labov 1972: 120-21; see

also Patrick's 2002 discussion of this definition). The idea is that, because of this uniformity of evaluation, speakers in a community all alter their variable production similarly across speech contexts regardless of the objective differences that exist in overall rates of use. In other words, even though working-class speakers in New York, for example, consistently vocalize coda /r/ more often than middle-class speakers, both working- and middle-class New Yorkers use progressively less /r/-vocalization as the formality of the speech context increases because both of these groups of speakers share a common evaluation of vocalized /r/ as the less "prestigious" variant and so less suited for use in more formal contexts. It is for this reason that Labov et al. (2006, 2011) postulate the existence of a monitor that "control[s] the effect of frequency ... on social judgments and social behaviour." In doing so, Labov et al. aim to provide the cognitive "missing link" in the aforementioned theory- a link that would account for how different quantitative distributions of variants are perceived and how these perceptions subsequently influence linguistic practice.

It is important to note, however, that the standard analysis of "uniform evaluation" upon which the proposed sociolinguistic monitor is based is itself reliant on certain potentially problematic assumptions. The first of these is that there is a direct and transparent relationship between evaluation and behaviour. According to the uniform evaluation account, it is possible to infer evaluations through an observation of behaviour such that similarity in practice is indicative of similarity in evaluation (Kristiansen 2010). Yet a great deal of research in both linguistics and social psychology over the years has demonstrated that the link between evaluation and behaviour is highly complex and dependent upon a range of individual, social and contextual influences (e.g., Fazio 1986, 1990; Ajzen & Fishbein 2005; Preston 2010). It is therefore unclear the extent to which it is possible to take observed behaviour as reliable evidence for a particular underlying evaluation (e.g., Olson & Stone 2005). Related to this, the second assumption of the uniform evaluation account is that

evaluations themselves are unitary and stable. What we mean by this is that evaluation is assumed to be a fixed and stable property of a variant within a community that is accessed (and accessed in the same way) for all speakers and in all speech contexts. Yet once again, this assumption is inconsistent with the findings in the literature on evaluations in social psychology. There, scholars have demonstrated that the relationship between an object and its evaluation is a dynamic one, which varies both within and across individuals and is sensitive to a host of social and contextual factors (e.g., Bassili & Brown 2005; Fazio 2007). Assuming evaluative stability, and building a cognitive model based on that assumption, therefore runs the risk of being unable to capture certain important empirical facts about evaluation and perception (for a recent discussion of this point in relation to language, see Preston 2010, 2011).

These critiques of the assumptions underlying the proposed sociolinguistic monitor will be central to our discussion of our own research below. Before we get to that, however, we first outline the work presented in Labov et al. (2006, 2011) and so motivate the direction of our investigation to follow.

### The Sociolinguistic Monitor

As we note above, Labov et al. (2006, 2011) postulate the existence of a sociolinguistic monitor, which they conceptualize in accordance with the assumptions of the “uniform evaluation” model. In their initial discussion of this monitor, Labov et al. (2006) report on a series of experiments they conducted to test three primary characteristics of the monitor’s functioning. These are:

- its **temporal window**, or the length of time over which the monitor is operative;
- its **sensitivity**, or the just noticeable differences in frequency to which it is attuned;

- and the shape of its **response pattern**, or the extent to which subsequent occurrences of a variable form affect evaluative output.

To do so, Labov et al. designed an experiment that examines perceptual reactions to alternating distributions of the ING variable in the context of a professional news broadcast. A simulation of a news broadcast was chosen since previous research (e.g., Labov 1966) has shown this to be a reliable context for priming overtly prestigious sociolinguistic norms and thus for eliciting judgments of speaker “competence” and/or “professionalism.” A simulated news broadcast passage was constructed, which contained 10 tokens of verbal ING. Labov et al.’s original passage is presented in (1):

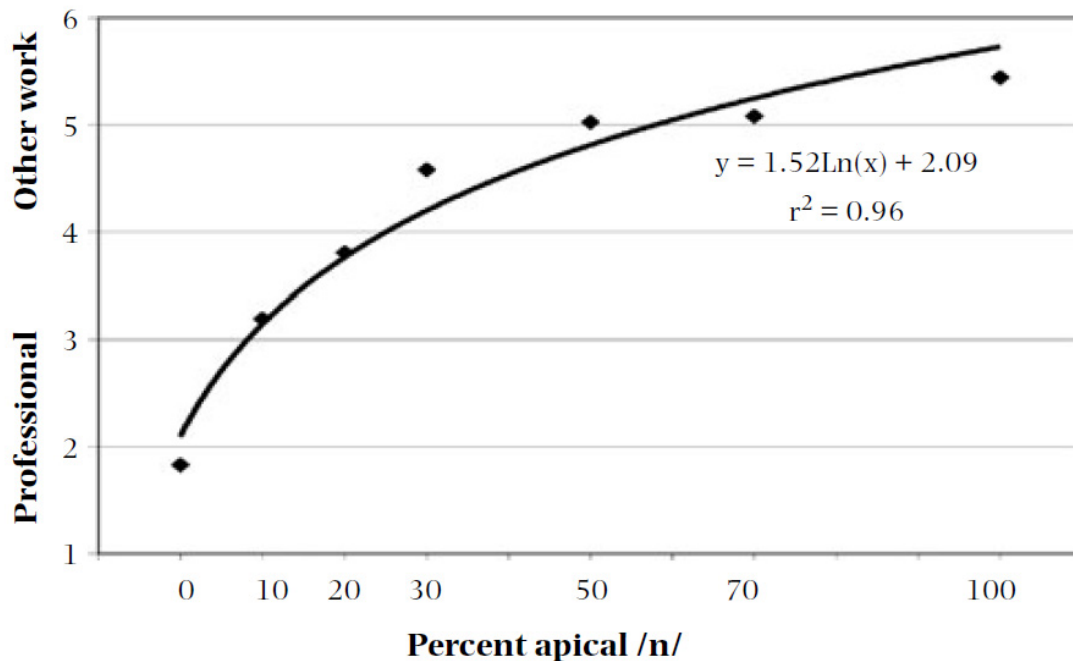
(1) Labov et al.’s (2006) Newscast Passage

- President Bush announced tonight that he was *putting* all available White House resources into support of the new tax cut bill.
- Democratic leaders of the House and Senate are *preparing* compromise legislation.
- Republican spokespersons predicted that record numbers of *working*-class Americans would be *receiving* tax refund checks before the end of the year.
- Senator Edward Kennedy’s staff announced that the tax cuts are *creating* a new elite who are excused from *paying* their fair share of the cost of government.
- At the Office of Management of the Budget, officials are *trying* to estimate the size of the deficit that will be produced by the new legislation.
- Federal Reserve Board chairman Alan Greenspan states that he was not *confirming* that tax cuts would lead to a change in prime interest rates, nor was he *denying* it.
- The Washington Post is *publishing* today a list of all members of Congress who will receive tax refunds greater than \$1,000 as a result of the proposed tax cuts.

Labov and colleagues recorded a female speaker from Chicago reading the passage in (1) twice: first with 100 percent velar realizations of the 10 target tokens, and then with 100 percent alveolar realizations of these same tokens. From the two recordings, Labov et al. constructed a series of seven experimental stimuli that differed in the relative frequency of the alveolar realization as follows: 0 percent alveolar (that is, entirely velar), 10 percent



alveolar, 20 percent alveolar, 30 percent alveolar, 50 percent alveolar, 70 percent alveolar and 100 percent alveolar.<sup>3</sup> Stimuli were constructed by cutting velar realizations of the target tokens out of the original recording and replacing them with the analogous alveolar realizations from the second recording. These stimuli were then presented to groups of listeners in Philadelphia (N=36), Columbia, South Carolina (N=55) and Durham, New Hampshire (N=51). Listeners were told that they were going to hear 7 recordings made by a journalism student who is applying for a job to be a newscaster. Listeners were asked to judge how “professional” each of the recordings sounds, purportedly to help the journalism student to decide which recording to submit with her application. Listener judgments were elicited on a 7-point Likert scale whose extreme values were labelled “Perfectly professional” and “Try some other line of work.”<sup>4</sup>



**Figure 1.** Average listener ratings of “professionalism” as a function of frequency of alveolar variants in Labov et al.’s Newscast experiment (reproduced from Labov et al. 2011: 442). Though ratings were elicited on a 7-point scale, average scores did not exceed a score of 6 and so a truncated version of the scale is represented.

Labov et al.'s findings are presented in Figure 1. (Note that Figure 1 displays the findings from Philadelphia listeners. Listener judgments in all research sites were roughly comparable – see note 4; only the results from Philadelphia listeners are shown for ease of presentation.) In Figure 1, we see that listeners are indeed perceptually aware of quantitative differences in the distributions of alveolar variants, judging those recordings with more alveolar realizations (on the right side of the figure) as less “professional”-sounding than those with fewer alveolar variants (on the left side of the figure). In addition, we observe that listeners begin altering their judgments of the speaker in response to differences in frequency as small as 10 percent (for 0 percent alveolar variants, the average rating is just below 2; for 10 percent, the average rating jumps up to over 3, while for 20 percent alveolar variants, the average rating is nearly 4). Finally, it is clear from Figure 1 that listener ratings do not follow a straightforward linear progression as the number of alveolar variants rises. Rather, we see that low frequency occurrences of the alveolar variant have a significant impact on listener ratings, but that that effect quickly attenuates at about the 30 percent threshold. Quantitative tests reveal that listener ratings are best modelled by a logarithmic curve.

Given the findings presented in Figure 1 (and the fact that these findings were replicated in all three test sites), Labov et al. (2006) claim that the monitor's temporal window is apparently quite large, able to accommodate sociolinguistic information throughout the approximately 45 second *Newcast* passage. They also argue that the monitor is highly sensitive, able to provoke different reactions to a voice where differences in frequency of the alveolar variants are only 10 percent. Finally, they note that this sensitivity to frequency is not linear in nature but instead is more attuned to low frequency occurrences, which have a relatively higher impact on evaluative reactions than higher frequency ones.

**Table 1.** Individual patterns identified for Labov et al.'s Newcast experiment (derived from Figure 17 in Labov et al. 2011: 453)

	No Pattern	Linear Pattern	Logarithmic Pattern	Total
Younger Listeners	44%	19%	37%	100%
Older Listeners	0%	62%	38%	100%
All Listeners	31%	31%	38%	100%

In a more recent presentation of their work on this topic, Labov et al. (2011) take a closer look at the intra-group consistency of the patterns initially uncovered. When they examine individual listener ratings and compare them to the group-wide pattern, Labov et al. discover that only approximately 38 percent of listeners manifest the group-wide logarithmic progression. Of the remaining 62 percent of listeners, half of them follow a linear progression in their evaluations (i.e., where higher frequency occurrences of the alveolar variant have the same evaluative impact as lower frequency ones) and half show no significant evaluative pattern at all (i.e., where frequency of the alveolar variants appears to have no impact on listener judgments). In other words, the group-wide logarithmic pattern is only replicated in just over one-third of the individual scores with the other two-thirds of the scores evenly split between a linear pattern and no pattern whatsoever. In addition, an age-linked difference is apparent among the listeners. While all of the “older” listeners in Labov et al.’s sample (i.e., those over 23 years old) manifest either the group-wide logarithmic pattern (38 percent of older listeners) or a linear pattern (62 percent of older listeners), nearly half of the “younger” listeners (those between 18-23 years old) show no pattern whatsoever.<sup>5</sup> This is not to say that younger listeners showed no evidence of evaluative sensitivity. 56 percent of the younger listeners displayed either the linear (19 percent) or the logarithmic (37 percent) pattern. The point that Labov et al. (2011) make, however, is that those listeners who showed no sensitivity to evaluations of “professionalism” in the experimental task (i.e., 31 percent of the listener sample) were all under the age of 23 (see Table 1).

In an effort to examine this possible age effect further, Labov and colleagues replicated their original experiment in three Philadelphia-area high schools and elicited reactions from an additional 110 listeners. The goal in doing so was to investigate whether listeners who were younger than those originally tested would behave differently from their older peers. In addition, Labov et al. (2011) also examine the potential for perceptual variation along social class lines by running the experiment in lower-, working- and middle-class schools (N=11, N=35 and N=64, respectively). Interestingly, Labov et al. (2011) found that none of the younger listeners they tested displayed the logarithmic progression illustrated in Figure 1. Rather, all of the younger informants either only showed a linear reaction to increased frequencies of alveolar ING or showed no reaction at all. This divide between those subjects who reacted linearly versus those who did not react at all fell, moreover, across social class lines. Middle-class listeners penalised the speaker significantly more heavily for using alveolar variants than either the working- or lower-class listeners did. Labov et al. (2011) interpret this finding as possible evidence that the logarithmic sensitivity of the monitor may be developmental in nature, and thus that it may need to be acquired at some point in late-adolescence. They support this assertion by pointing to the apparent-time difference between the university- and school-age respondents, arguing that this difference may be evidence of age-grading whereby younger subjects have not yet acquired the community-wide norm that underpins the monitor's logarithmic character. In addition, they highlight the fact that there is class stratification in the judgments of the school-age respondents – a pattern that they claim is consistent with previous research on the developmental acquisition of sociolinguistic norms (e.g., Labov 1964). Note, however, that this proposal would require further elaboration to account for the variability in evaluations observed among university-age respondents (as depicted in Table 1). In particular, it is not immediately clear how a developmental explanation would capture the fact that a sizable

proportion of the “younger” listeners in their original experiment (37 percent) display the logarithmic pattern while an even more consequential proportion of older listeners (62 percent) do not.

In fact, Labov et al. (2011) recognize that an alternative interpretation of their findings among school-age respondents is possible: namely, that the ING variant is not sufficiently “salient” for these younger and/or working- or lower-class listeners. This lack of salience could mean that the sociolinguistic monitor is not sensitive to ING for these listeners, and hence accounts for the lack of the characteristic logarithmic pattern. Labov et al. (2011: 457) clearly state that “further trials with less salient sociolinguistic variables would be required to determine the generality of the logarithmic response pattern.” We would add that testing the functioning of the proposed monitor on variables that differ in their relative social status would also provide important insights into the monitor’s overall sensitivity to different types of variables and thus to the way in which social salience is cognitively encoded.

### Encoding Salience

In order to investigate Labov et al.’s (2011) suggestion that a variable’s salience may impact on the functioning of the proposed monitor, it is first important to situate a definition of social salience within current theorizing on language and social cognition more generally. Above, we define social salience as the relative ability of a linguistic variant to evoke social meaning. In doing so, we claim that social salience is a crucial component in the development of what Preston (2010, 2011) has termed *language regard*, or the attribution of “non-specialist belief about and reaction to language use, structure, diversification, history and status” (Preston 2011: 10).

In his theory of regard, Preston proposes a processual model of how a listener moves from encountering a linguistic variant to producing a reaction to that variant (see also Niedzielski and Preston 2003). The first step in this process is what Preston terms *noticing*, and reflects the fact that in order to react to a particular linguistic form a listener must first become aware of it (whether consciously or not). The noticed form is then *classified* according to various social, linguistic and/or contextual criteria, and is in a sense categorized as belonging to “casual speech” or “Southern American English,” for example. Once classified, the linguistic form is then *imbued* with attitudinal and other evaluative information drawn from a listener’s stored cognitive representations of the relevant classification (for example, an evaluative association between “Southern American English” and “friendliness”). Finally, this imbuing gives rise to a *reaction* (again, whether conscious or not) that is the output of the language regard process.

Crucial to Preston’s framework is the contention that the early steps in the process (i.e., *noticing* and *classifying*) are dynamic in nature, such that whether and how a form is noticed and how it is subsequently classified depends on certain properties of individuals, situations and tasks. This dynamism is what allows Preston to account for observed patterns of variation in language regard, and to explain why, for example, a listener may evaluate the monophthongization of [aɪ] by a Southern American English speaker positively in one situation and negatively in another. The notion that variation is possible in both *noticing* and *classifying* is not new to sociolinguistics. In terms of the former, scholars of language have long discussed differences in the relative ease with which a form is perceived (i.e., whether and how it is noticed) under the rubric of *salience*. In this body of work, salience has been primarily understood to be a fixed property of a variant – a function of its phonetic discreteness (Kerswill 1985; Preston 1996), its semantic transparency (Silverstein 1981; Mufwene 1991), its prosodic and/or pragmatic prominence (Yaeger-Dror 1993; Cheshire

1996), or its distinctiveness with respect to a listener's native variety (Sibata 1999; Preston 2010). The importance of Preston's (2010, 2011) research is to argue that a form's salience is not (or at least not only) determined in this fixed and stable fashion. Rather, Preston draws on relevant work in cognitive and social psychology (e.g., Fazio 1986; Bassili & Brown 2005) to claim that salience, and hence progression through the language regard process, is also determined by the situation in which the linguistic form is encountered (what psychologists term the *eliciting conditions* of an evaluation), the amount and kind of other tasks in which a listener is engaged (as a measure of cognitive load), and a listener's prior experience with a linguistic form (including previous evaluative reactions that are stored in memory). In other words, Preston maintains that we cannot give a full accounting of a form's salience outside of the social and interactional context in which the form occurs (see also Kerswill and Williams 2002).

Like variation in noticing/salience, variation in the ease with which a form is *classified* has also been a common topic of discussion in the sociolinguistics literature, where it has been treated under the domain of *social salience*. These discussions have for the most part also understood social salience to be a stable and fixed property of a linguistic form. The most widespread model of social salience is Labov's (1994) delineation of three variables types, defined in terms of speakers' "awareness" of their existence. The first of these types, *indicators*, are those variables that are distributed differently across groups in society but which show no evidence of intra-speaker stylistic variation. This lack of stylistic stratification is taken to be indicative of a general lack of awareness of variation and social meaning of the relevant form among the speakers in question. *Markers*, in contrast, are those variables that display differentiation across both groups and styles. Here, stylistic variation serves as evidence that speakers are on some level "aware" of a form's social meaning and so moderate their use of the form across contexts accordingly. Finally, *stereotypes* are variables that

display both social and stylistic stratification and have also risen to the level of overt social awareness, such that they are subject to explicit meta-commentary and discussion.

In contrast to the standard Labovian model, we propose that in the same way that individual, social and contextual factors impact upon a form's saliency, they also help to determine its social saliency. In other words, we argue that variation in the classification of a form is moderated by factors such as eliciting conditions, situational cognitive load and prior experience with the variant in much the same way that variation in noticing it is. In adopting this position, we are not claiming that the Labovian taxonomy of indicator/marker/stereotype is never a useful one. Rather, we suggest that its utility in modelling listeners' evaluative reactions to language may be limited, and that a more nuanced understanding of social saliency is required to capture the facts of variation in language regard (Preston 2010, 2011). It is therefore with a more dynamic definition of social saliency in mind that we approach Labov et al.'s (2011) suggestion to test the functioning of the proposed sociolinguistic monitor on less socially salient variables. Of principal interest to us in this regard is variation in terms of listeners' prior experiences with a linguistic form. In what follows, we operationalize this dimension of social saliency by considering variables whose social histories and distributions are distinct from that of ING in the US.

## ING IN BRITAIN

We begin with an experiment designed to examine listeners' sensitivity to quantitative distributions of the ING variable in a British context. As we state above, it is instructive to investigate ING in Britain given the different sociolinguistic profile of the variable in the UK as compared to the US. While the ING variable is certainly present throughout British varieties of English, evidence suggests that its pattern of diffusion across the UK is unique (Visser 1966; Houston 1985; Tagliamonte 2004). Historically there has been a major



North/South divide for the variable, where Northern varieties of British English show more frequent use of alveolar [ɪn] as well as less social and stylistic stratification. This difference is most likely due to the early merger in southern England of the Middle English present participle form *-inde* (from which [ɪn] arises) with the nominal form *-ynge* (from which [ɪŋ] arises) (Moore, Meach & Whitehall 1935; Houston 1985; Watts 2005). In northern England, in contrast, the conservative Middle English participle form *-inde* was preserved for much longer. As a result, the alveolar realization of the ING variable remained the dominant form for speakers across the social spectrum- a pattern that, to a greater or lesser extent, holds true today. Tagliamonte (2004), for example, found only very minor social stratification of verbal ING in her study of the variable in contemporary speech in York, in the north of England (see also Labov 1972; Houston 1985; Watts 2005).

In Southern varieties of British English, in contrast, repeated investigations have found robust social and stylistic stratification of the ING variable (e.g., Trudgill 1974; Houston 1985; Schlee, Meyerhoff & Clark 2011). Yet even for these varieties, there is evidence to suggest that, due to various historical reasons, the socio-symbolic value of ING is not as clear-cut as it is in the United States. While variation was present for centuries beforehand, the association of prestige with [ɪŋ] did not emerge until the mid- to late-nineteenth century. Jespersen (1961: 365) refers to the [ɪn] variant as “fashionable” in eighteenth-century Britain, and Tagliamonte (2004) cites numerous cases of rhyming patterns in prestigious British literary sources from the eighteenth and nineteenth centuries that are dependent on the alveolar realization. Bailey (1996), moreover, convincingly argues that the alveolar realization was used by both the working-classes and the landed gentry well into the nineteenth century, and that it was only the urban middle-classes who objected to the pronunciation (see also Watts 2005). And while it is certainly true that [ɪŋ] is the prestigious form in Southern varieties today, there are certain fossilized remnants of [ɪn] as an upper-

class realization. The most well-known of these is the stock phrase *huntin', shootin' and fishin'*, which is used to describe the activities of the landed gentry on their country estates (Wells 1982). Importantly, the phrase always appears with the alveolar realization and is used as a sort of shorthand for upper-class Britishness (as, for example, in a 2003 episode of the popular television show *Absolutely Fabulous* itself entitled “*Huntin', Shootin' and Fishin'*”).

### Current Study

These facts about ING in Britain, coupled with our own anecdotal impressions of the variable in London, lead us to propose that ING is an ideal variable with which to begin a comparative examination of the functioning of the sociolinguistic monitor. To test the behaviour of ING in the UK, we followed the same basic experimental protocols as Labov et al. (2006, 2011). We constructed our own Newscast passage adapted to a British context. The passage contained 10 tokens of verbal ING, each preceding an unstressed schwa in order to avoid possible assimilation effects.<sup>6</sup> The passage is presented in (2), where superscripts indicate token number:

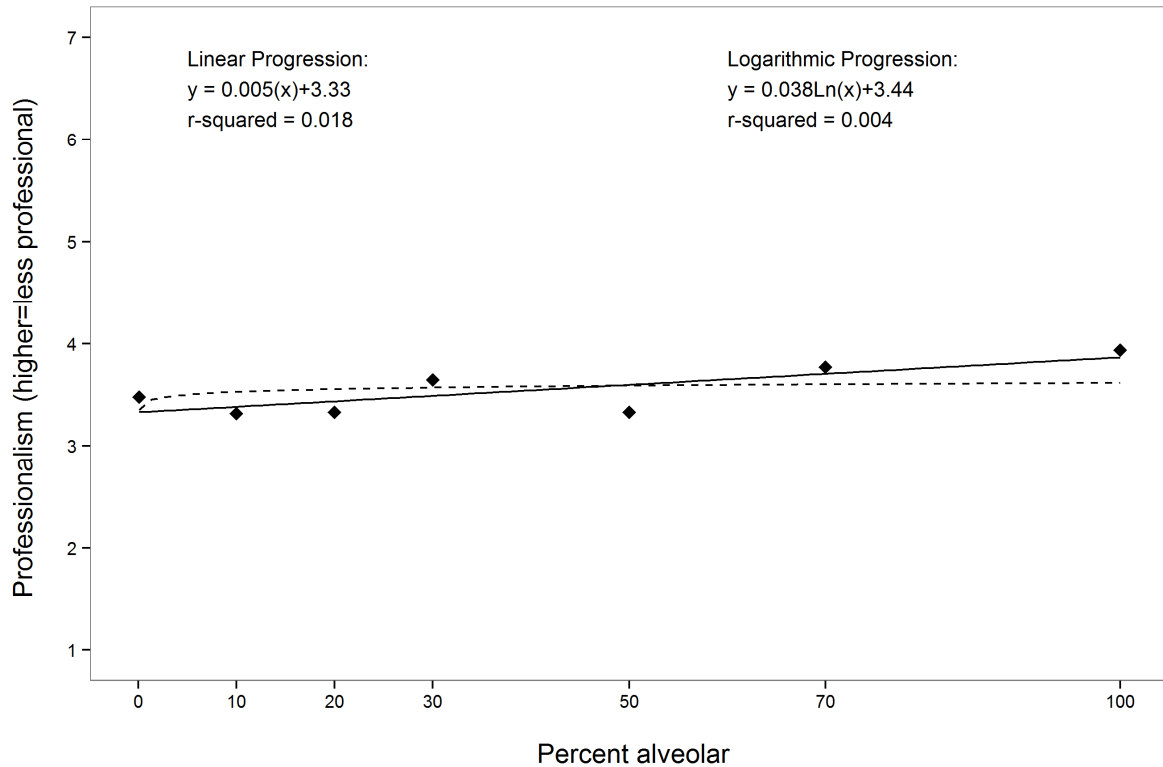
#### (2) Newscast passage for the ING experiment

- Nick Clegg was *putting*<sup>1</sup> a brave face on when he met a group of angry students at a London university yesterday.
- A Revision Committee has spent the last two years *preparing*<sup>2</sup> a bill which would allow women to become bishops in the Church of England.
- The results of a project which has looked at how local museums are *working*<sup>3</sup> across the UK were revealed in the House of Commons today.
- Figures released today show that only one third of women of state pension age are *receiving*<sup>4</sup> a full state pension.
- A consumer organisation has advised shoppers to protect themselves from identity fraud by *creating*<sup>5</sup> a secure payment method when *paying*<sup>6</sup> a bill online.
- The government is *trying*<sup>7</sup> a new program which aims to cut down on fraudulent benefit claims.
- At a press conference today, the Chancellor was not *confirming*<sup>8</sup> a rumour that income tax will rise in the next budget.

- Buckingham Palace was *denying*<sup>9</sup> a claim today that a Chinese firm has been awarded a contract to supply tableware at the marriage celebration of Prince William and Kate Middleton.
- Today, the government is *publishing*<sup>10</sup> a full list of MPs' expenses for the final six months of last year.

We recorded a young woman from the southeast of England reading the passage twice, once with 100 percent velar realizations and once with 100 percent alveolar realizations. From these two recordings, we constructed seven experimental stimuli ranging from 0 percent alveolar to 100 percent alveolar, in precisely the same manner as Labov et al. (2006) (see above). We progressively modified tokens from the middle of the passage outward in an effort to avoid any of the “initial variant encountered” effects reported in Labov et al. (2006). What this means is that for the 10 percent alveolar stimulus, token 5 (*creating*) was modified to present the alveolar realization while all other tokens were velar; for the 20 percent stimulus, tokens 5 and 7 (*trying*) were modified; for the 30 percent stimulus, tokens 5, 7 and 3 (*working*) were modified; and so on. Aside from the modifications of the 10 ING tokens, the seven stimuli were identical.

The stimuli were presented to 48 listeners (35 women and 13 men), all native speakers of British English who were undergraduate students at the University of London. 38 of the students were raised in Southern England, while 10 of them were raised in Northern England.<sup>7</sup> All students were between the ages of 18-43 (mean age: 20.1), and were therefore similar in age to those informants for whom Labov et al. (2006, 2011) found a significant ING effect. As in Labov et al.'s experiments, listeners were told that they were going to hear recordings made by a woman who was studying to be a journalist and who was applying for a job as a newscaster. Listeners were asked to rate each recording for how “professional” it sounds on the same 7-point Likert scale used by Labov et al.



**Figure 2.** Average “professionalism” ratings as a function of alveolar variants in the ING experiment (N=48).

The results of our ING experiment are presented in Figure 2. In stark contrast to Labov et al.’s (2006, 2011) findings, we see in Figure 2 that our listeners do not appear to rate any of the guises significantly differently in terms of perceived “professionalism.” Instead, what we find is a remarkably flat distribution of ratings across the seven stimuli, ranging from a mean rating of 3.32 for the 10 percent guise to a mean rating of 3.97 for the 100 percent guise. Though there does not appear to be any significant patterning in the data, for the sake of completeness Figure 2 also presents both a linear and a logarithmic regression line to determine whether either of them represents a good fit of the data. In terms of the linear regression (the solid line in Figure 2), we see that the  $r^2$  value (which roughly corresponds to what fraction of the variation in the data is accounted for by the quantitative model) is very low, at only 0.018 (i.e., the model accounts for only 1.8 percent of the observed variation in ratings). Moreover, the slope of the linear regression line is only 0.005,

meaning that the difference in mean rating between the 0 percent stimulus and the 100 percent stimulus is predicted to be only 0.5 points (and hence a relatively small effect). The logarithmic regression gives similar results, though here the goodness-of-fit drops down to 0.004, meaning that the logarithmic regression is only able to account for 0.4 percent of the observed variation in rating. Together then, the quantitative findings in Figure 2 indicate that our listeners display no apparent sensitivity to variation in frequency of the ING variable, at least as far as ratings of the speaker's perceived levels of "professionalism" are concerned.

In order to test for the existence of significant patterns within the dataset, we also ran both linear and logarithmic regressions that examined listener responses across the axes of listener sex and listener region. We chose these two factors since previous research on verbal ING has shown them to be significant constraints on the variable's distribution (see references cited above).<sup>8</sup> The results of the linear regression are presented in Table 2 (the results of the logarithmic regression are comparable, so we do not present them here). In Table 2, we see that there are no additional significant patterns that are obscured by the aggregate data. The only pattern to approach the threshold of significance is the interaction of Guise and Sex. What this interaction indicates is that male listeners appear to show greater sensitivity to the increasing frequency of the alveolar variant than female listeners do. For what it's worth, it is interesting to note that this difference between men's and women's ratings is the opposite of what we might predict from a prestige-linked variable (i.e., women appear to be less sensitive to the variation), and it is also the opposite of what was found in both Philadelphia and New Hampshire by Labov et al. (2006, 2011). It is unlikely, however, that this sex-linked pattern is a meaningful one, given that neither regression analysis selects it as significant.<sup>9</sup>

**Table 2.** Linear regression of listeners' evaluations of the "professionalism" of the speaker as a function of frequency of the alveolar variant (N=48)

	Estimate	<i>t</i> -value	p =
(Intercept)	3.329	12.054	0.000
Guise	0.005	0.440	0.660
Sex (MALE)	-0.153	-0.593	0.553
Region (SOUTH)	0.153	0.539	0.590
Guise : Sex	0.008	1.689	0.092
Guise : Region	0.001	0.192	0.848

degrees of freedom = 330;  $r^2 = 0.018$ 

To summarize the findings of our experiment, there is no evidence in our data of the kind of frequency-linked evaluation of the ING variable found in Labov et al. (2006, 2011), at least not on the "professionalism" dimension. It is important to bear in mind that null empirical results, like ours here, should always be treated with caution. Yet, to the extent that our findings are valid, they present a problem for Labov et al.'s conceptualization of the sociolinguistic monitor since they point to a situation in which listeners display no apparent perceptual sensitivity to a variable even though that variable is both stratified in production and subject to explicit meta-linguistic commentary. We would argue, however, that if valid, our findings would be consistent with the contention that ING has a different sociolinguistic profile in Britain than it does in the US, and that the cognitive processes that govern sociolinguistic perception are sensitive to such differences. In other words, we suggest that the difference of sociolinguistic profile renders ING less *socially salient* on the "professionalism" dimension in the UK. It is then this relative lack of social salience that, we argue, underlies the lack of a significant frequency effect in our data.

Above, we claim in general terms that a variable's social salience will vary as a function of a listener's prior experiences with the form. We can characterise this phenomenon more specifically here by arguing that situations in which a listener has encountered a variable in the past (i.e., its sociolinguistic profile) have an impact on the relative *strength*

(Fazio 1986, 2001, 2007) of the attitudes that listener maintains towards the variable form. The concept of attitude strength relies on a definition of attitudes as associative relationships between an object and a summary evaluation of that object stored in memory (Fazio 2007; Bohnet & Dickel 2011). In other words, attitudes are forms of evaluative knowledge that become activated (or *potentiated*; see Bassili and Brown 2005) when a relevant attitude object is encountered. An important component of this framework is the idea that not all attitudes are alike: some may be activated in an automatic fashion whenever the relevant object is present, while others may require more deliberative processing. This difference in the relative automaticity of attitude activation is what is meant by the term *attitude strength*. Applying this concept to the case of ING, we propose that listener attitudes to the variable are stronger (i.e., more automatically accessible) in the US than in Britain. Under this proposal, the US listeners in Labov et al.'s experiments automatically access a frequency-linked evaluative association between [ɪ] and progressively decreased levels of perceived "professionalism" because of the already existing strength of that association stored in memory. For British listeners, in contrast, we hypothesise that the association between [ɪ] and low levels of "professionalism" is weaker. Hence, this association is not as automatically available and is not accessed in the context of our experimental task. This is not to say that no evaluative association exists between ING and prestige in the UK. Rather, we suggest that activating this association among British listeners requires more deliberative processing than was possible in our experiment (see also Campbell-Kibler 2009 on the deliberative processing of ING in a US context).

Unfortunately, based on the present research we are unable to provide independent evidence for our contention that listener attitudes to ING on the professionalism dimension are weaker in Britain than in the US.<sup>10</sup> Nonetheless, we do believe that it is possible to glean indirect support for our proposal from a comparative examination of the social distributions

of ING in the US and the UK. This is because, as we note above, it is the social distribution of a variable that ultimately determines the strength of listeners' attitudes towards a given linguistic form. As a diverse body of research over the years has demonstrated (see, e.g., Krosnick et al. 1993; Pomerantz, Chaiken and Tordesillas 1995 for reviews), attitude strength is determined by two primary domains of conditioning factors: those that involve how certain an individual is about her attitudes (what is called *attitude commitment*) and those that involve how important an attitude is to an individual's sense of self (what is called *attitude centrality*). Commitment and centrality are, in turn, themselves determined by the social conditioning of the attitude object (Holland, Verplanken and van Knippenberg 2003). If, for example, a linguistic form is used consistently and exclusively by a particular prestigious group of speakers, then listeners will be certain of (i.e., committed to) a prestigious evaluation associated with that form. Similarly, if membership in the prestigious group is an important part of a listener's sense of self, then attitudes towards the group's characteristic language style will be highly central. It is therefore instructive to examine the social distributions of ING in Britain as compared to the US in order to determine how the differences between the two may impact upon attitude commitment and centrality, and hence ultimately upon attitude strength.

In his classic study of New York City English in the early 1960s (Labov 1966), Labov reports average rates of [ɪn] use among working-class (WC) speakers of 80 percent in casual speech. We can compare this figure with an average rate of only 67 percent [ɪn] among working-class speakers in the London area in the early 1970s (Houston 1985). In fact, Houston reports that multivariate analysis of the ING variable demonstrates that, when compared to speakers elsewhere in the UK, all London WC speakers favour the velar [ɪŋ] form in casual speech (though the strength of that favouring varies from a factor weight of 0.56 to 0.89 depending upon the speaker's precise location in the region). What this



comparison indicates is the existence of a quantitative difference in the extent to which the alveolar variant is the default form for casual speech among WC speakers in London versus New York at that time.

More recent investigations of the ING variable have highlighted a similar quantitative disparity. Evans-Wagner (2012), for example, reports that her WC speakers in Philadelphia use the alveolar variant an average of 81 percent of the time in casual speech. In contrast, recent research by Schlee, Meyerhoff and Clark (2011) in West London reports an average rate of only 36 percent [ɪn] use among WC speakers in casual speech. Similarly, Tollfree (1999) reports that in Southeast London WC speakers make “frequent use” of the alveolar form in what she terms “broader varieties”, though that use is by no means categorical (or near-categorical). As soon as we move northward from London, however, we begin to find higher rates of use of the alveolar variant across the social spectrum. In Sandwell in the West Midlands (approximately 125 miles northwest of London), Mathisen (1999) reports an average rate of use for the [ɪn] variant of 68 percent for all speakers, with 45 percent [ɪn] use among the middle-class (MC) and 90 percent [ɪn] for the WC. In York (approximately 100 miles further north), Tagliamonte (2004) reports an overall average rate of 76 percent for the alveolar variant in casual speech, with WC speakers using the form 82 percent of the time and MC speakers doing so 70 percent of the time. Finally, Schlee et al. (2011) report an average of 92 percent [ɪn] use among WC speakers in casual speech in Edinburgh (approximately 400 miles north of London), while Reid (1978) reports an average of 61 percent [ɪn] among MC boys in the same city.

What emerges from this brief review of research on ING variation is the fact that the differentiation in the use of the alveolar variant across social class lines is seemingly less straightforward in Britain than it is in the US. In Southern varieties of British English, we find relatively high amounts of the velar form among WC speakers (64 percent [ɪŋ] in

London as compared to only 19 percent in Philadelphia). Conversely, we find relatively high rates of use of the alveolar form for MC speakers in Northern and Scottish varieties (45 percent in Sandwell; 70 percent in York; and 61 percent in Edinburgh). In fact, in the research cited above, region appears to be the most important constraint on ING variation in the UK, with MC speakers in the North making more frequent use of the [ɪn] form than WC speakers in the South.<sup>11</sup> Given these facts, it therefore seems possible to argue that British listeners may be less committed to (i.e., less certain of) an attitudinal association between ING and differing levels of status or “professionalism”. Rather, the primary association for variants of ING in Britain may be regional in nature. This would imply that, unlike in the US (though see Hazen 2008), an evaluative link between [ɪn] and a lack of “professionalism” may not be strong enough to be automatically activated for British listeners. The relative weakness of this attitude would then account for the lack of any significant effect in our results.

As we say above, since we have no direct empirical evidence for the importance of attitude strength, our arguments in this regard remain necessarily speculative. Nevertheless, we maintain that an account based on attitude strength could provide an elegant solution for the disparity between our findings and those of Labov et al. (2006, 2011). We would add, moreover, that attitude strength would also allow us to account for the fact that we find no evidence for a correlation on the part of our listeners between the alveolar variant of ING and decreased levels of perceived “professionalism” even though speakers are shown to moderate their use of ING across speech contexts (e.g., Schlee et al. 2011). This is because the concept of attitude strength allows us to distinguish between more automatic processing (of the kind required in our experimental task) and the more deliberative monitoring of language that is presumably responsible for stylistic stratification in speech production and for overt meta-linguistic commentary (e.g., Labov 1972; Campbell-Kibler 2008, 2009). In other words,

attitude strength would provide us with a means to account for the fact that ING may evoke no evaluative reaction from our listeners, despite being a stereotype in the traditional Labovian sense.

## TH-FRONTING IN BRITAIN

In order to investigate the potential impact of social salience on perception further, we conducted a second experiment to investigate listener reactions to a variable with yet another sociolinguistic profile and which we hypothesise attracts stronger attitudes in the British context. TH-fronting, or the merger of the voiceless interdental fricative [θ] with [f] (e.g., *fin*g for *thin*g), is a traditional Cockney feature that began rapidly diffusing throughout the UK in the 1970s and early 1980s (Trudgill 1986; Williams & Kerswill 1999). By the late 1990s, evidence of robust patterns of TH-fronting had been identified among younger speakers throughout the southeast of England, as well as in the northeast and in Scotland (Williams & Kerswill 1999; Kerswill 2003; Stuart-Smith & Timmins 2006; Clark & Trousdale 2009). These studies all found similar patterns of social stratification, whereby TH-fronting is concentrated primarily in the speech of members of the lower social classes and particularly among young WC men. This spread in the use of TH-fronting has been accompanied more recently by an increasing conscious awareness of the variable as a part of an enregistered (Agha 2003) urban “youth language.” Thus while we know of no study specifically devoted to examining perceptions of TH-fronting in the UK, anecdotal evidence suggests that TH-fronting has become a stereotype (Labov 1994) of working-class and/or urban British speech.

To examine listeners’ perceptual sensitivity to quantitative differences in the frequency distributions of TH-fronting, we follow the same experimental protocols as for our examination of ING. We first constructed a new Newscast passage that contained 10 possible sites for TH-fronting. In an effort to reduce potential confounds, we chose to focus

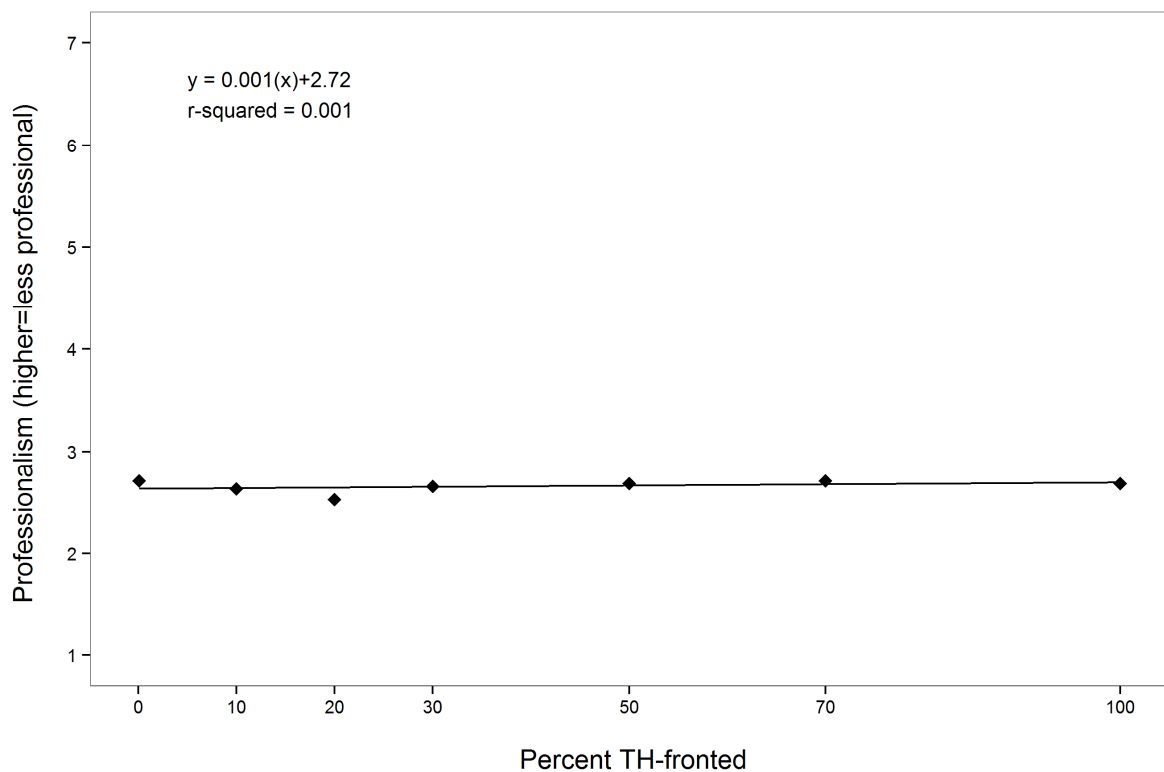
exclusively on the word-initial position. We also made sure to exclude as tokens both numerals and the lexemes *thing* and *think* based on evidence that these words may behave differently from other TH-fronting contexts (e.g., Clark and Trousdale 2009). Our Newscast passage for the TH-fronting experiment is given in (3), where superscripts again indicate token number:

(3) Newscast passage for the TH-fronting experiment

- Despite the upturn in spending, figures released today show that Britain is still in the *thick*<sup>1</sup> of the recession.
- Surprisingly, *throughout*<sup>2</sup> the recession, hourly earnings have continued to rise in most sectors.
- One sector which has been hit badly however is the Arts, and *theatres*<sup>3</sup> in particular are struggling to cover the costs of their productions.
- To encourage spending, the Chancellor has announced that the personal tax *threshold*<sup>4</sup> is to be raised in next year's budget, although no specific figures have been released yet.
- The band Elbow has been chosen to record a track which will be used by the BBC as the *theme*<sup>5</sup> for all their Olympic coverage.
- The latest exhibit of a *throne*<sup>6</sup> made of weapons is proving to be a popular attraction at the British Museum; visitors have faced queues of up to two hours.
- One ninety-year-old woman faces a bleak Christmas this year as *thieves*<sup>7</sup> took off with presents and food from her home.
- The Palace has announced today that services of *Thanksgiving*<sup>8</sup> will take place around the country next year to celebrate the Queen's Diamond Jubilee year.
- And finally, freezing conditions are expected in London after *thermometer*<sup>9</sup> readings showed temperatures of minus two degrees in surrounding areas last night.
- The cold spell has seen an increase in flu-related illnesses – prescriptions for cold and *throat*<sup>10</sup> infections have doubled in the past week.

We recorded the same woman from the southeast of England for the TH-experiment as was used for the ING experiment. As before, the speaker was recorded reading the passage twice, once with all tokens realized as [θ] and once with them all realized as [f]. From these two recordings, we constructed seven experimental stimuli that ranged from 0 percent [f]-realizations to 100 percent [f]-realizations in the same manner as before (see description of ING experiment above). The seven stimuli were then presented to three new groups of

listeners, who were again told that they would be helping a journalism student select a recording to send with her application to be a newscaster and were asked to rate the recordings on the same 7-point “professionalism” scale as was used previously. We originally began by presenting the recordings to a group of undergraduate students at the University of London (N=39). Following the experiment, however, we discovered that only 7 of those 39 listeners were from the North of England. Wanting to achieve a more balanced sample across regions, we replicated the TH-experiment at the University of Salford (N=26) and the University of Sheffield (N=36). The findings we discuss below are based on the results from all three of these listener groups combined (Total, N=101; Northern listeners, N=56; Southern listeners, N=45; mean age = 19.8).



**Figure 3.** Average “professionalism” ratings as a function of frequency of [f] variants in the TH-fronting experiment (N=101).

The overall results for the TH-experiment are presented in Figure 3. There, we see that differences in the frequency distributions of the [f] variants do not seem to be affecting listener ratings of the speaker’s perceived “professionalism”. Much like we found for ING, average mean ratings of the speaker are remarkably flat across the entire frequency distribution, ranging from a low of 2.61 for the 20 percent guise to a high of 2.84 for the 70 percent guise. This general lack of variability in ratings is also reflected in the linear regression equation, where we see a slope of only 0.001 and a goodness-of-fit value of only 0.1 percent. A full regression analysis confirms the non-significance of the different guises in accounting for observed variation in listener ratings (see Table 3).

**Table 3.** Linear regression of listeners’ evaluations of the “professionalism” of the speaker as a function of frequency of the labio-dental variant (N=101)

	Estimate	<i>t</i> -value	<i>p</i> =
(Intercept)	2.720	5.275	0.000
Guise	0.001	0.395	0.693
Sex (MALE)	-0.160	-0.696	0.487
Region (SOUTH)	0.472	1.674	0.095
Guise : Sex	0.004	0.891	0.373
Guise : Region	-0.012	-2.140	0.033

degrees of freedom = 697;  $r^2 = 0.022$

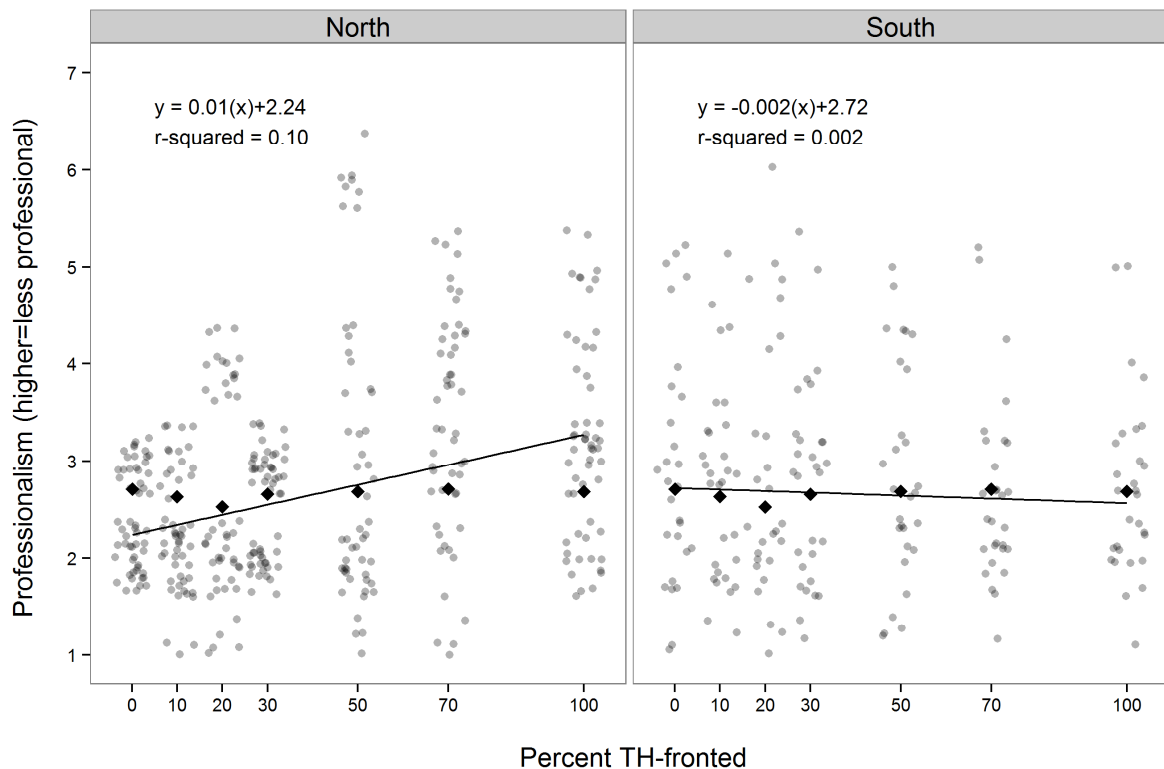
Interestingly, however, the regression results in Table 3 indicate a significant (linear) effect for the interaction of guise and listener region ( $p = 0.033$ ). The meaning of this effect is evident when we consider the ratings for Northern and Southern listeners separately, as in Figure 4. There we find that for Southern listeners (the right panel of Figure 4) there is a flat distribution of average ratings that parallels the findings for all of the listeners as a whole. This is not the case, however, for Northern listeners (left panel of Figure 4). If we examine the individual scores of Northern listeners (grey circles in Figure 4), we see that these listeners downgrade ratings of the speaker’s perceived “professionalism” as a function of the

frequency of the [f] variant. The pattern is not perfect, and is in fact not reflected in the Northerners' average ratings (indicated by black triangles in the figure). This is because the average values are highly sensitive to the variability in individual listener ratings that exists among Northern respondents. Nevertheless, when we consider individual ratings (as opposed to averages), we see a clear upward trend in the left panel of Figure 4, indicating a significant downgrade of perceived "professionalism" as frequency of fronted tokens increases.

Regression analyses on only the Northern listeners indicate that this pattern is significant ( $t = 2.266$ ,  $df = 390$ ,  $p = 0.024$ ), such that for every 10 percent increase in [f] forms there is a corresponding 0.1 point decrease in ratings of how "professional" the speaker sounds (hence a 1 point decrease across the entire frequency range).<sup>12</sup> While this effect among Northern listeners is admittedly not very large (it accounts for only 10 percent of the observed variation in ratings), the effect is a significant one and indicates that, as a group, Northern listeners are perceptually sensitive to the frequency of the labio-dental variant as a marker of a decreased "professionalism".

To determine whether attitude strength could account for the observed patterns among Northern and Southern listeners respectively, we turn once again to a survey of the social distribution of the TH-fronting variable in Britain. Beginning in the south, Williams and Kerswill (1999) report adolescent WC speakers in Reading (45 miles west of London) and Milton Keynes (50 miles north of London) as having average rates of [f] for /θ/ of 80 percent and 72 percent respectively in interview speech. For MC adolescents, these rates drop to 6 and 22 percent. More recently, Holmes-Elliott (2012) finds that young WC speakers in Hastings (65 miles southeast of London) have an average rate of 78 percent [f] overall. Finally, Schlee and Ramsammy (fc) report an overall average rate of 54 percent [f] for /θ/ among WC speakers in West London, based on recordings made in 2009. Particularly interesting in Schlee and Ramsammy's findings is the fact that their speakers do not vary

their use of TH-fronting as a function of speech style. In casual speech, Schlee and Ramsammy’s informants use [f] for /θ/ 53.7 percent of the time, while in a more formal reading task they do so 54.2 percent of the time. This lack of stylistic differentiation leads Schlee and Ramsammy to argue that their speakers seem to be “unaware” of their own use of TH-fronting, which, they note further, may “contribute to their inability to consciously monitor TH-fronting in reading.”



**Figure 4.** “Professionalism” ratings as a function of frequency of [f] variants split by listener region (North, N=56; South, N=45). Average values are represented by black triangles. Individual ratings are depicted by grey circles. Individual ratings have been “jittered” in order to schematically represent the distribution of ratings across categories.

Given data such as these, it does seem possible to apply the concept of attitude strength to account for the apparent lack of sensitivity to TH-fronting as a marker of perceived “professionalism” among our Southern listeners (caveats about caution when evaluating null empirical findings notwithstanding). Overall, rates of use of [f] for /θ/ are very high in the South, approaching near-categorical use for some speakers. In fact, scholars such as Kerswill and Williams (2002) and Kerswill (2003) have argued that TH-fronting has



begun to lose some of its social stigma in the region, and, as evidenced by its encroachment into MC speech, is in the process of becoming a more general “youth norm.” Moreover, for those speakers who do TH-front, there is no evidence of stylistic differentiation, such that [f] is used as frequently in more formal contexts as it is in more informal ones. Thus, it could be the case that the prevalence of TH-fronting in the region has made the Southern listeners in our study relatively less committed to an evaluative association between TH-fronting and decreased level of “professionalism” even though popular stereotypes construe [f] to be a non-prestige form. In other words, much as we argue for ING above, there appear to be grounds to suggest that a disconnect may exist between stereotypical perceptions of TH-fronting in southern England (informed by more conscious monitoring of the form) and listeners’ more automated perceptual evaluations. Due to a lack of direct evidence to support them, our arguments in this regard remain necessarily speculative. Nevertheless, we once again propose that, assuming that our results are valid, attitude strength could provide an explanation for the lack of a significant TH-fronting effect among the Southern listeners in our experiment.

Turning to TH-fronting in Northern varieties, we find a somewhat similar social distribution of the variable as in the South. In Derby (125 miles north of London), Docherty and Foulkes (1999) report an average rate of 62 percent fronted tokens among young WC speakers in casual speech as compared to only 7 percent among young MC speakers. Docherty and Foulkes note, moreover, the prominent use of TH-fronting also in more formal contexts, including in word-list readings. In Wilmslow (approximately 190 miles northwest of London), Watts (2005) reports an overall rate of 44 percent fronted tokens among WC speakers, and only 3 percent among MC speakers. In Hull (approximately 200 miles north of London), Williams and Kerswill (1999) report a rate of 77 percent [f] for /θ/ among young WC speakers and 13 percent for young MC speakers. Finally, Stuart-Smith, Timmins and

Tweedie (2007) found that in Glasgow (400 miles north of London) young WC speakers used [f] for /θ/ 27.7 percent of the time in casual conversation while young MC speakers did not use it at all.<sup>13</sup> Moreover, Stuart-Smith et al.'s findings parallel those of Schlee and Ramsammy (fc) in that young WC Glaswegians used similar amounts of [f] in word-list reading (30.2 percent) and in conversation (see also Robinson 2005 for a similar finding in Livingston, just west of Edinburgh).

Given the similarity in the social distribution of TH-fronting in northern and southern varieties, it is not immediately clear whether attitude strength can account for the disparity in apparent perceptual sensitivity to the variable observed between Northern and Southern listeners. In terms of attitude commitment, we would expect Northern listeners, like their Southern counterparts, to be aware of the relatively high rates of [f] use in both formal and informal contexts. We would therefore assume that the evaluative link between TH-fronting and decreased levels of perceived “professionalism” would be as weak in the North as we argue that they are in the South. And while it may be the case that [f] for /θ/ is somewhat more sharply socially stratified in northern varieties, it is by no means possible to claim that social stratification of the variable does not exist in southern England (cf., for example, Kerswill and Williams’ data from Reading). Rather, to try and account for the Northern listeners’ reaction to quantitative variation in TH-fronting, we turn to the concept of attitude *centrality*, as opposed to commitment, and argue that it may be the key factor governing the observed pattern.

Recall that centrality (sometimes also called *ego-importance* or attitude *embeddedness*) is the second determinant of attitude strength, and involves the relative importance of a given attitude to an individual’s sense of self (e.g., Pomerantz, Chaiken and Tordesillas 1995). Unlike commitment, which is an indication of how certain an individual is about a given attitude, centrality measures the extent to which an individual views that

attitude as an integral part of her identity. What we have in mind for the relationship between centrality and TH-fronting is that though fronting has diffused rapidly throughout the UK in the past 30 years, there is substantial evidence to suggest that it is still widely viewed as a Southern (or “Cockney”) feature (Kerswill 2003; Stuart-Smith et al. 2007; Schlee and Ramsammy, *fc*). This is partially due to the fact that there is a much longer history of TH-fronting in southern varieties (dating back to at least the early nineteenth century; Kerswill 2003) and to the fact that popular media representations of Southern British English (such as in the television soap opera *Eastenders*; Stuart-Smith 2007) make extensive, and even emblematic, use of the variable. If “not being Southern” is an important part of Northern listeners’ identities (i.e., it is highly *central*), then we would anticipate that these listeners would show a greater perceptual sensitivity to features that are marked as “Southern.” Kerswill & Williams (2002), in fact, make a similar argument with respect to the perception of a variety of non-standard grammatical features in three English towns. They describe how variants that are strongly associated with a particular social group or location remain highly recognizable even if they are not frequently used by listeners. In essence, they argue that the social value of certain forms serves to make them more easily noticed and classified. We make the same argument with respect to TH-fronting in our experiment, and suggest that Northern listeners may be more attuned to the occurrence of [f] since the form is in a sense coded as being part of a highly codified “out-group” language.<sup>14</sup>

Finally, it is important to highlight that our results among Northern listeners indicate the existence of a linear – as opposed to logarithmic – correlation between increased frequency of [f] and decreased evaluations of the speaker’s perceived “professionalism”. At this point, we have no explanation for why we do not find the logarithmic response pattern that Labov et al. (2006, 2011) propose is characteristic of the sociolinguistic monitor. Following Labov et al., it could be the case that the existence of a linear pattern in our data is

evidence of our listeners not yet having acquired the full evaluative schema. Under this scenario, we would predict that if re-tested in the future, our informants would display the logarithmic pattern. We note, however, that our informants are roughly comparable in age to those tested in Labov et al.'s original ING experiment (where the logarithmic progression was identified), and crucially older than the high school students in their follow-up experiment (where it was not). We would therefore expect the logarithmic pattern to have already developed for our informants, if it is in fact developmental in nature.<sup>15</sup> As a side note, we would also add that an analysis based on attitude strength is capable of modelling both a linear and a logarithmic response pattern without recourse to additional arguments about developmental stages. According to this account, a sufficiently strong attitude would allow for a “shortcutting” (Preston 2010) of the normal evaluative process, such that *noticed* forms are immediately associated with a relevant evaluation without having to pass through the additional steps of *classifying* and *imbuing*. This process, similar in spirit to automated exemplar retrieval (e.g., Strand 2000; Johnson 2006), would then result in a logarithmic response pattern since the initial encounter with a linguistic form would be sufficient to activate the relevant stored representation. Weaker attitudes, in contrast, would presumably not enable automatic retrieval. As a result, arriving at a judgment would require a listener to proceed through an additive series of attribute evaluations, resulting in a linear response trajectory (see Stevenage, Hugill and Lewis 2012 for a recent discussion of these alternatives). Since we are unable to test either the developmental or the attitude strength proposals with the current data, we leave these issues for future research.

## DISCUSSION

Our goal in this paper has been to examine listeners' perceptual evaluations of the quantitative distributions of sociolinguistic variables as a way of further testing the

functioning of Labov et al.'s (2006, 2011) proposed sociolinguistic monitor. Specifically, we set out to investigate whether a variant's social salience (understood as the ease with which it is *classified*) has an impact on the proposed monitor's operation. Our reasons for doing so are twofold. First, Labov et al. (2011) themselves claim that testing the monitor on less socially salient variables is necessary to determine the generality of the logarithmic pattern they identify. Second, and more importantly, we argue that Labov et al.'s conceptualisation of the proposed monitor is itself based on certain potentially problematic assumptions regarding the stability of evaluations within a community and the ability to infer evaluations from patterns of observed production. We address this critique in our work by integrating a cognitively more complex model of evaluation (Preston 2010) and by treating social salience as a dynamic construct that is sensitive (among other things) to listeners' prior evaluative experiences with a variable (e.g., Fazio 2007; see also Fridland, Bartlett and Kreuz 2004).

All together, the findings of our experiments are very different from those of Labov and colleagues. In our replication of Labov et al.'s experiment with ING, we find no evidence among our British listeners of a correlation between the increased use of the alveolar variant and a decrease in the perceived "professionalism" of the speaker. This is in spite of the fact that stylistic stratification of ING along formality lines exists throughout the UK and that there is evidence for a stereotypical awareness of the variable in Britain. A similar finding was obtained for TH-fronting among Southern listeners. In that case, listeners displayed no sensitivity to the frequency of [f] as a marker of decreasing levels of perceived "professionalism" even though the feature is stratified in production along analogous lines and stereotypically linked to an urban working-class identity. Our only significant finding was among the Northern listeners in our TH-fronting experiment, where we observe the expected correlation between increased fronting and decreased perceptions of the speaker's "professionalism" (though that correlation is linear, not logarithmic).

Mindful of the need to treat null empirical results with caution, we nevertheless maintain that our findings present a meaningful contrast with those of Labov et al. (2006, 2011). We propose an admittedly speculative account for our results based on the concept of attitude strength. The benefit of this analysis is that it allows us to entertain the possibility that listener evaluations vary as a function of prior experience and to distinguish between more automatic processes of attitude activation and the more deliberative monitoring of language. In short, we argue that the social distribution of ING in the UK (particularly the evident “blurring” of its stratification along social class lines) is such that listeners’ commitment to an evaluative association between the alveolar variants and decreased levels of perceived “professionalism” may be reduced. This in turn weakens listeners’ attitudes to the variant on the professionalism dimension. As a “weak” attitude, we suggest that the association between frequent [ɪ] and a lack of “professionalism” is not automatically activated, and so does not appear in our experimental task. Despite its weakness, we argue that this attitude nevertheless exists, and is therefore available to moderate variation in production and in more conscious and deliberative perception.

We propose a similar account for TH-fronting. In this instance, we again argue that the social distribution of [f] for /θ/ in southern England (i.e., the lack of stylistic stratification of the variant and its slow spread into middle-class speech) again reduces listeners’ commitment to a non-prestigious evaluation of the form, which subsequently weakens the associated attitude. It is this weakened attitude that we then claim accounts for the lack of a significant frequency effect. For Northern listeners, in contrast, we suggest that even though the social distribution of [f] in northern varieties may be similar to the South, the fact that [f] for /θ/ continues to be viewed as a “Southern” feature impacts upon the centrality of the evaluations associated with the variant, and subsequently strengthens the relevant attitudes.

We hypothesise that this strength is then what underlies the significant frequency-linked effect found for TH-fronting among Northern listeners.

As we note above, we have no independent evidence for our claims regarding the relative strength of listener attitudes towards ING or TH-fronting. Nevertheless, we argue that an analysis based on attitude strength would succeed in providing a unified account of our empirical findings, as well as those of Labov et al. (2006, 2011). Central to our proposal is the idea that listeners' prior experiences with variables (as reflected in their respective social distributions) serve to alter the commitment and centrality of the attitudes in question. By focusing on prior experience in this way, our analysis is able to move beyond an assumption of evaluative stability and instead treat sociolinguistic perception as a complex, variable phenomenon (Preston 2010, 2011). We note, moreover, that an account based on attitude strength is consistent with recent theoretical developments elsewhere in linguistics, particularly exemplar-based models of language processing and their application within sociophonetic research (e.g., Pierrehumbert 2001; Hay, Nolan and Drager 2006). As such, we believe that attitude strength could serve as an important analytical tool for further refining our understanding of how social and linguistic information are linked in the cognitive architecture, and how they are subsequently retrieved in online speech processing.

Yet even abstracting away from the details of our proposal, we would argue that the results presented here illustrate a number of important properties of sociolinguistic perception that must be borne in mind as we continue to develop our models of sociolinguistic cognition. The first of these, as suggested to us by Campbell-Kibler (2012), is the idea that we must keep production and perception distinct. In saying this, we do not mean to imply that the two are unrelated. Rather, we argue that a more nuanced account of the relationship between them is necessary, one that is sensitive to the complex ways in which attitudes may impact upon behaviour (Azjen and Fishbein 2005; Preston 2011). In the context of the research presented

here, we suggest that Labov et al.'s contention that a single cognitive unit controls both social judgments and social behaviour is belied by our findings that in Britain the stratification of ING and TH-fronting in production is not accompanied by an analogous stratification in evaluative perception. These results underscore the need for functionally dissociable modules for monitoring speech production and speech perception in our theories of sociolinguistic cognition.

In terms of perception itself, we believe that our findings also illustrate the importance of distinguishing between more automated and more deliberative perceptual phenomena (Fazio 1986, 2007; Campbell-Kibler 2009). It is by maintaining a distinction of this sort that we can account for the fact that individuals are able to articulate explicit stereotypical attitudes towards particular linguistic forms (such as [ɪn] sounding “unprofessional”) while remaining perceptually insensitive to those forms in more automated tasks. In other words, our models must be able to accommodate varying levels of automaticity if we hope to be able to capture the empirical realities of sociolinguistic perception. Finally, we argue that adopting a more complex model of perception like the one outlined here also requires an equally complex understanding of social saliency as one of the principal factors that moderates the relative automaticity of perception. Revising our understanding of social saliency requires us to move beyond a typology based simply on social “awareness”, and instead to consider the other individual, social and contextual parameters (such as, for example, attitude strength) that ultimately determine whether and how a variant takes on social meaning. Incorporating this more nuanced understanding of sociolinguistic cognition would, we argue, allow researchers to develop more sophisticated accounts of how social information is cognitively stored, encoded and retrieved, and ultimately help to clarify the relationship between perception and production in language variation.



NOTES

- 1 Only verbal ING is considered here based on substantial prior research that indicates that ING is a morphological variable, where the relevant choice is between two allomorphs [ɪŋ] and [ɪn] (Labov 2001; Tagliamonte 2004). While variation also exists in the phonetic realization of non-verbal ING, such as in the words *nothing* or *something*, scholars have argued that this pattern is governed by a distinct phonological (as opposed to morphological) rule.
- 2 This is a simplification of the variety of different evaluations associated with [ɪŋ] and [ɪn] in the US, which include a range of affective, regional and identity-linked correlates (see, e.g., Campbell-Kibler 2007 for more details). In spite of this, we believe that it is safe to argue that [ɪŋ] in the US is generally associated with percepts in the “status” domain (e.g., intelligence) while [ɪn] tends to be associated with percepts in the “solidarity” domain (e.g., casualness).
- 3 Labov et al. (2006) in fact began with only 6 stimuli that examined reactions to passages with 0%, 30%, two versions of 50%, 70% and 100% alveolar tokens. They later went on to include 10% and 20% alveolar stimuli (and to exclude one of the 50% alveolar versions) to arrive at the 7 experimental stimuli described here. For the purposes of our review of Labov et al.’s research, we abstract away from this initial stage of experimentation and focus only on the tests conducted with 7 experimental stimuli.
- 4 The details provided here refer to Labov et al. (2006) Experiment 2. In addition to Experiment 2, they also conducted tests (Experiment 1) using 6 stimuli instead of 7 (see note 3); individual tests in which listeners could rate the recordings on a continuous scale ranging from 0 to 1000 (where higher values indicated judgments of higher levels of professionalism) and alter their responses throughout their hearing of

the passage (Experiment 3); and tests in which listeners in the US South rated a Southern (as opposed to Northern) US speaker (Experiment 4). While there are certain interesting differences, the results of these three other experiments are largely comparable with the results of Experiment 2. For this reason, we focus exclusively on Experiment 2 as it encapsulates the primary empirical findings reported in Labov et al. (2006).

5 Labov et al.'s tests were conducted on university students, hence the relatively restricted age range in the sample.

6 It is perhaps important to note that our Newcastle passage includes headlines on multiple topics, while Labov et al.'s passage was somewhat more thematically coherent. Despite this, our passage adheres to Labov et al.'s statement that their passage was "constructed as a news broadcast with ten sentences ... [whose] content reflect the public issues of the year ... when the stimuli were created" (2011: 436). Our passage, moreover, was constructed so as to mimic the format of the news broadcasts on the BBC, which we assume all of our listeners are familiar with.

7 Classification of listeners as either "Northern" or "Southern" is based on responses to a post-test question about where in the UK listeners grew up. "North" is considered to be everything north of the Midlands (and "South" everything to the south). This divide roughly follows the STRUT-FOOT isogloss boundary (e.g., Wells 1982).

8 Unfortunately, we did not have a sufficiently diversified sample to test for the possible effect of age.

9 We did not examine patterns of evaluation at the individual level, as in Labov et al. (2011), due to the lack of a significant pattern at the group or sub-group levels.

Nevertheless, such an examination could reveal interesting individual tendencies, and we note this as a possible direction for future research.

- 10 This evidence could, for example, come from neuroimaging studies that examine event-related potentials related to presentation of the [ɪn] and [ɪŋ] variants as a means of gauging the extent to which the forms are automatically perceived as contextually “anomalous”. For just such an approach to ING in the US, see Loudermilk et al. (to appear).
- 11 It is perhaps important to note that in Midlands and Northern varieties of British English, there is a third variant to the ING variable: [ɪŋɡ]. This form is a local prestige form, and competes in more formal styles with velar [ɪŋ]. As such, we assume that its presence in the system does not necessarily affect the frequency of use of the alveolar variant. See, e.g., Mathisen (1999); Watts (2005) for further details.
- 12 Mixed model analyses of the Northern listeners confirm that the group-wide pattern remains significant even when Listener is included as a random factor in the analysis. Thus while the issue of variation among Northern listeners is an important one, we abstract away from it here and focus instead only on the group-wide pattern.
- 13 There are other local Scottish variants for /θ/ that Stuart-Smith et al. also found among their WC and MC informants, including [t] and [h].
- 14 It is also perhaps interesting to recall that the speaker used in our experiments was herself from the southeast. This fact leads us to ask whether we would find the same pattern of judgments across regions if we also ran the TH-fronting experiment with a Northern speaker. Recent research in sociophonetics has suggested that when processing language listeners access sociolinguistically rich representations of speakers and/or past speech events (e.g., Johnson 2006). It could therefore be the case that our use of a speaker from the southeast serves to prime listeners for Southern features, making them more aware of TH-fronting (see also Niedzielski 1999 on the relationship between expectation and perception). For this account to work, however,

we would need to explain why a Southern speaker appears to prime TH-fronting only for Northern listeners and not for Southern listeners. This, in turn, would require the inclusion of some additional conditioning factor, such as attitude strength.

- 15 Paul Foulkes (pc) points out that the logarithmic response pattern found by Labov et al. (2006, 2011) could be an artefact of their research design, in which the 10 ING tokens are spread over only 7 sentences (3 sentences contain 2 tokens each; the other 4 sentences contain 1 token each). In addition, there are several occurrences in Labov et al.'s Newcastle passage in which a token appears in a phonetic neutralization context (e.g., *working class*). In our Newcastle passages, tokens are more evenly spaced throughout the text and we attempted to avoid any phonetic confounds by controlling for phonetic environment. It is therefore possible that this slight alteration in method accounts for our not finding a logarithmic pattern in our data.

## REFERENCES

- Agha, Asif. 2003. The social life of cultural value. *Language and Communication* 23: 231-73.
- Azjen, Icek & Martin Fishbein. 2005. The influence of attitudes on behaviour. In Albarracín, Dolores, Blair Johnson & Mark Zanna (eds.), *The handbook of attitudes*, 173-221. New York: Psychology Press.
- Bailey, Richard. 1996. *Nineteenth century English*. Ann Arbor: University of Michigan Press.
- Bassili, John & Rick Brown. 2005. Implicit and explicit attitudes: Research, challenges, theory. In Albarracín, Dolores, Blair Johnson & Mark Zanna (eds.), *The handbook of attitudes*, 543-74. New York: Psychology Press.
- Bohner, Gerd & Nina Dickel. 2011. Attitudes and attitude change. *Annual Review of Psychology* 62: 391-417.
- Campbell-Kibler, Kathryn. 2007. Accent, ING, and the social logic of listener perceptions. *American Speech* 82: 32-64.
- Campbell-Kibler, Kathryn. 2008. I'll be the judge of that: Diversity in social perceptions of ING. *Language in Society* 37: 637-59.
- Campbell-Kibler, Kathryn. 2009. The nature of sociolinguistic perception. *Language Variation and Change* 21: 135-56.
- Campbell-Kibler, Kathryn. 2012. Modelling sociolinguistic cognition. Discussion paper presented at Sociolinguistic Symposium 19, Freie Universität Berlin.

- Cedergren, Henrietta. 1973. The interplay of social and linguistic factors in Panama. Unpublished PhD dissertation. Ithaca: Cornell University.
- Cheshire, Jenny. 1996. Syntactic variation and the concept of prominence. In Klemola, Juhani, Merja Kytö & Matti Rissanen (eds.), *Speech past and present: Studies in English dialectology in memory of Ossi Ihalainen*, 1-17. Frankfurt am Main: Peter Lang.
- Clark, Lynn & Graeme Trousdale. 2009. Exploring the role of token frequency in phonological change: evidence from TH-Fronting in east-central Scotland. *English Language and Linguistics* 13: 33-55.
- Daily Telegraph. 2010. Listening to today's youth slang takes its toll. *Daily Telegraph* September 30, 21.
- Docherty, Gerard & Paul Foulkes. 1999. Derby and Newcastle: Instrumental phonetics and variationist studies. In Foulkes, Paul & Gerard Docherty (eds.), *Urban voices: Accent studies in the British Isles*, 47-71. London: Arnold.
- Evans-Wagner, Suzanne. 2012. Real-time evidence for age gradING in late adolescence. *Language Variation and Change* 24: 179-202.
- Fazio, Russell. 1986. How do attitudes guide behaviour? In Sorrentino, Richard & Edward Higgins (eds.), *Handbook of motivation and cognition: Foundations of social behaviour*, 204-43. New York: Guilford.
- Fazio, Russell. 1990. Multiple processes by which attitudes guide behaviour: The MODE model as an integrated framework. In Zanna, Mark (ed.), *Advances in experimental social psychology*, 75-109. New York: Academic Press.
- Fazio, Russell. 2001. On the automatic activated of associated evaluations. *Cognition and Emotion* 15: 115-41.
- Fazio, Russell. 2007. Attitudes as object-evaluation association of varying strength. *Social Cognition* 25: 603-37.
- Foulkes, Paul & Gerard Docherty. 2007. Phonological variation in England. In Britain, David (ed.), *Language in the British Isles*, 52-74. Cambridge: Cambridge University Press.
- Fridland, Valerie, Kathryn Bartlett & Roger Kreuz. 2004. Do you hear what I hear? Experimental measurement of the perceptual salience of acoustically manipulated vowel variants by Southern speakers in Memphis, TN. *Language Variation and Change* 16:1-16.
- Hay, Jennifer, Aaron Nolan & Katie Drager. 2006. From fush to feesh: Exemplar priming in speech perception. *The Linguistic Review* 23: 351-79.
- Hazen, Kirk. 2008. ING: A vernacular baseline for English in Appalachia. *American Speech* 83: 116-40.
- Holland, Rob, Bas Verplanken & Ad van Klippenberg. 2003. From repetition to conviction: Attitude accessibility as a determinant of attitude certainty. *Journal of Experimental Social Psychology* 39: 594-601.
- Holmes-Elliott, Sophie. 2012. Apparent time, real time and an "off-the-shelf change." Paper presented at Sociolinguistic Symposium 19, Freie Universität Berlin.
- Houston, Ann. 1985. Continuity and change in English morphology: The variable ING. Unpublished PhD dissertation. Philadelphia: University of Pennsylvania.
- Jespersen, Otto. 1961. *A modern English grammar on historical principles, Part I: Sounds and spellings*. London & Copenhagen: George Allen & Unwin/Ejnar Munksgaard.
- Johnson, Keith. 2006. Resonance in an exemplar-based lexicon: The emergence of social identity and phonology. *Journal of Phonetics* 34: 485-99.

- Johnstone, Barbara. 2009. Pittsburghese shirts: Commodification and the enregisterment of an urban dialect. *American Speech* 84: 157-75.
- Kerswill, Paul. 1985. A sociophonetic study of connected speech processes in Cambridge English: An outline and some results. *Cambridge Papers in Phonetics and Experimental Linguistics* 4. Cambridge: University of Cambridge.
- Kerswill, Paul. 2003. Dialect levelling and geographical diffusion in British English. In Britain, David & Jenny Cheshire (eds.), *Social dialectology*, 223-43. Amsterdam: John Benjamins.
- Kerswill, Paul & Ann Williams. 2002. "Saliency" as an explanatory factor in language change: Evidence from dialect levelling in urban England. In Jones, Mari & Edith Esch (eds.), *Language change: The interplay of internal, external and extra-linguistic factors*, 81-110. Berlin: Mouton de Gruyter.
- Kristiansen, Tore. 2010. Attitudes, ideology and awareness. In Wodak, Ruth, Barbara Johnstone & Paul Kerswill (eds.), *The SAGE handbook of sociolinguistics*, 265-79. London: Sage.
- Krosnick, Jon, David Boninger, Yao Chuang, Matthew Berent & Catherine Carnot. 1993. Attitude strength: One construct or many related constructs? *Journal of Personality and Social Psychology* 65: 1132-51.
- Labov, William. 1964. Stages in the acquisition of standard English. In Shuy, Roger (ed.), *Social dialects and language learning*, 77-103. Champaign, IL: National Council of Teachers of English.
- Labov, William. 1966. *The social stratification of English in New York City*. Washington, D.C.: Center for Applied Linguistics.
- Labov, William. 1972. *Sociolinguistic Patterns*. Philadelphia: University of Pennsylvania Press.
- Labov, William. 1994. *Principles of linguistic change: Internal factors*. Oxford: Blackwell.
- Labov, William. 2001. *Principles of linguistic change: Social factors*. Oxford: Blackwell.
- Labov, William, Sharon Ash, Maya Ravindranath, Tracey Weldon, Maciej Baranowski & Naomi Nagy. 2006. Listeners' sensitivity to the frequency of sociolinguistic variables. *University of Pennsylvania Working Papers in Linguistics* 12: 105-29.
- Labov, William, Sharon Ash, Maya Ravindranath, Tracey Weldon, Maciej Baranowski & Naomi Nagy. 2011. Properties of the sociolinguistic monitor. *Journal of Sociolinguistics* 15: 431-63.
- Loudermilk, Brandon, Eva Gutierrez & David Corina. to appear. What are you talkin' about? Perception of sociolinguistic variation: Evidence from event-related potentials. *Journal of Cognitive Neuroscience*.
- Mathisen, Anne. 1999. Sandwell, West Midlands: Ambiguous perspectives on gender patterns and models of change. In Foulkes, Paul & Gerard Docherty (eds.), *Urban voices: Accent studies in the British Isles*, 107-23. London: Arnold.
- McGilliard, Graeme. 2012. Celebrate our royal gem. *Manchester Evening News*, March 14, 25.
- Moore, Samuel, Sanford Meech and Harold Whitehall. 1935. Middle English dialect characteristics and dialect boundaries. *Essays and Studies in English and Comparative Literature* 13: 1-60.

- Mufwene, Salikoko. 1991. Pidgins, creoles, typology, markedness. In Byrne, Francis & hom Huebner (eds.), *Development and structures of creole languages*, 123-43. Amsterdam: John Benjamins.
- Niedzielski, Nancy. 1999. The effect of social information on the perception of sociolinguistic variables. *Journal of Language and Social Psychology* 18: 62-85.
- Niedzielski, Nancy & Dennis Preston. 2003. *Folk linguistics*. Berlin: Mouton de Gruyter.
- Olsen, James & Jeff Stone. 2005. The influence of behaviour on attitudes. In Albarracín, Dolores, Blair Johnson & Mark Zanna (eds.), *The handbook of attitudes*, 223-71. New York: Psychology Press.
- Patrick, Peter. 2002. The speech community. In Chambers, J.K., Peter Trudgill & Natalie Schilling-Estes (eds.), *The handbook of language variation and change*, 573-97. Oxford: Blackwell.
- Pierrehumbert, Janet. 2001. Exemplar dynamics: Word frequency, lenition and contrast. In Bybee, Joan & Paul Hopper (eds.), *Frequency effects and the emergence of linguistic structure*, 137-57. Amsterdam: John Benjamins.
- Podesva, Robert. 2011. Salience and the social meaning of declarative contours: Three case studies of gay professionals. *Journal of English Linguistics* 39: 233-64.
- Pomerantz, Eva, Shelly Chaiken & Rosalind Tordesillas. 1995. Attitude strength and resistance processes. *Journal of Personality and Social Psychology* 69: 408-19.
- Preston, Dennis. 1996. Whaddayaknow? The modes of folk linguistic awareness. *Language Awareness* 5: 40-74.
- Preston, Dennis. 2010. Variation in language regard. In Gilles, Peter, Joachim Scharloth & Evelyn Zeigler (eds.), *Empirische Evidenzen und theoretische Passungen sprachlicher Variation*, 7-27. Frankfurt am Main: Peter Lang.
- Preston, Dennis. 2011. The power of language regard: Discrimination, classification, comprehension and production. *Dialectologia*, Special issue II: 9-33.
- Reid, Euan. 1978. Social and stylistic variation in the speech of children: Some evidence from Edinburgh. In Trudgill, Peter (ed.), *Sociolinguistic patterns in British English*, 158-71. London: Arnold.
- Robinson, Christine. 2005. Changes in the dialect of Livingston. *Language and Literature* 14: 181-93.
- Schleef, Erik, Miriam Meyerhoff & Lynn Clark. 2011. Teenagers' acquisition of variation: A comparison of locally-born and migrant teens' realisation of English ING in Edinburgh and London. *English World-Wide* 32: 206-36.
- Schleef, Erik & Michael Ramsammy. forthcoming. Labio-dental fronting of /θ/ in London and Edinburgh: A cross-dialectal study. *Journal of English Linguistics*.
- Sibata, Takesi. 1999. Consciousness of language norms. In Kunihor, Tetsuya, Fumio Long & Daniel Long (eds.), *Takesi Sibata: Sociolinguistics in Japanese contexts*, 371-77. Berlin: Mouton de Gruyter.
- Silverstein, Michael. 1981. The limits of awareness. *Sociolinguistics Working Paper 84*. Austin: Southwest Educational Development Laboratory.
- Stevenage, Sarah, Andrew Hugill & Hugh Lewis. 2012. Integrating voice recognition into models of person perception. *Journal of Cognitive Psychology* 24: 409-19.
- Strand, Elizabeth. 2000. Gender stereotype effects in speech processing. Unpublished PhD dissertation. Columbus: The Ohio State University.

- Stuart-Smith, Jane. 2007. The influence of the media. In Llamas, Carmen, Louise Mullany & Peter Stockwell (eds.), *The Routledge companion to sociolinguistics*, 140-48. London: Routledge.
- Stuart-Smith, Jane & Claire Timmins. 2006. "Tell her to shut her moof": The role of the lexicon in TH-fronting in Glaswegian. In Caie, Graham, Carole Hough & Irené Wotherspoon (eds.), *The power of words: Essays in lexicography, lexicology and semantics*, 171-83. Amsterdam: Rodopi.
- Stuart-Smith, Jane, Claire Timmins & Fiona Tweedie. 2007. 'Talkin' Jockney'? Variation and change in Glaswegian accent. *Journal of Sociolinguistics* 11: 221-60.
- Tagliamonte, Sali. 2004. Somethi[n]'s goi[n] on! Variable ING at ground zero. In Gunnarsson, Britt-Louise, Lena Bergstrom, Gerd Eklund, Staffan Fridell, Lise Hansen, Angela Karstadt, Bengt Nordberg, Eva Sundgren, and Mats Thelander (eds.), *Language variation in Europe: Papers from the second International Conference of Language Variation in Europe, ICLaVE 2*, 390-403. Uppsala: Uppsala University Department of Scandinavian Languages.
- Tollfree, Laura. 1999. South East London English: Continuous versus discrete modelling of consonantal reduction. In Foulkes, Paul & Gerard Docherty (eds.), *Urban voices: Accent studies in the British Isles*, 163-184. London: Arnold.
- Trudgill, Peter. 1974. *The social differentiation of English in Norwich*. Cambridge: Cambridge University Press.
- Trudgill, Peter. 1986. *Dialects in contact*. Oxford: Blackwell.
- Visser, Fredericus. 1966. *An historical syntax of the English language: Part two: syntactic units with one verb (continued)*. Leiden: E.J. Brill.
- Watts, Emma. 2005. Mobility-induced dialect contact: A sociolinguistic investigation of speech variation in Wilmslow, Cheshire. Unpublished PhD dissertation. Colchester: University of Essex.
- Wells, John. 1982. *Dialects of English*. Cambridge: Cambridge University Press.
- Williams, Ann & Paul Kerswill. 1999. Dialect levelling: Change and continuity in Milton Keynes, Reading and Hull. In Foulkes, Paul & Gerard Docherty (eds.), *Urban voices: Accent studies in the British Isles*, 141-62. London: Arnold.
- Yaeger-Dror, Malcah. 1993. Linguistic analysis of dialect "correction" and its interaction with cognitive salience. *Language Variation and Change* 5: 189-224.



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