Editorial

New horizons in sociophonetic variation and change

Arguably the main concern of modern linguistics has been to put forward evidence of an unchangeable and stable grammar in humans. At the same time *variability* remains a very fundamental property of human language. Language varies across communities, individuals and speech acts, and with language variability comes language change. The question at heart of the scientific endeavour concerned with linguistic variability is *what causes language to change*? This question is present at the core of disciplines such as historical linguistics, contact linguistics and, especially, (variationist) sociolinguistics. Sociolinguistics as a discipline has made great contributions to our understanding of variability in language and the complex workings of the human communicative faculty by showing that variation in speech follows quite robust patterns that bear relationships with social variables. The papers in this issue of *Lingua* are concerned with some of the key topics of modern sociolinguistics, namely to which extent individuals' and communities' social histories are reflected in the production of language and to which extent our social experiences influence our perception of language. The current issue even touches upon the question of how linguistic variation commences at an individual level.

Phonetic issues have played a central part in studies of linguistic variation and change since the birth of sociolinguistics. William Labov's seminal studies in the 1960s were concerned especially with phonological or phonetic variation and change, and throughout the last half century sound change has remained a core focus of studies concerned with synchronic language variation. This issue of *Lingua* brings together six studies of phonetic variation and change in the English language. The articles have in common that they use sophisticated methodologies or innovative experimental designs to further our knowledge of exactly how and why language varies and changes and how variation and change relate to social factors. They also fall into the category that one might label sociophonetic research.

The merger of the two fields of phonetics and sociolinguistics in *sociophonetics* has been described by Foulkes et al. (2010:704) as having 'the aim of identifying, and ultimately explaining, the sources, loci, parameters and communicative functions of socially structured variation in speech'. This aim thus applies to a large proportion of work done in the field of sociolinguistics, but also to work done in the discipline of phonetics. The specifically sociophonetic field of research can therefore be viewed as an overarching area of enquiry that contributes fundamental knowledge and theory to both sociolinguists and phoneticians. These two groups of linguists, although both benefitting from work done within the field of sociophonetics, do not necessarily share much more common ground, however. A focus on sociophonetics as a field of linguistics in its own right is therefore part of the motivation for publishing this special issue.

Motivation for this issue is also found in the fact that sociophonetic work can help refine general linguistic theories, such as that of exemplar theory. As argued in Pierrehumbert (2001:1) typical phonological theories struggle to account for some of the detailed phonetic knowledge that speakers have, and the variability that exist in one individual's realisation of the same phonological categories in different lexical items. A usage-based component must therefore be included to such theories to account for why perception and production targets vary across lexical items, people, and communities. Exemplar theory does this by allowing for the possibility that informants store and categorise individual instances of sounds and lexical items in memory (cf. e.g. Pierrehumbert, 2001). When accounting for language production and perception the theory also necessarily comprises social exemplars, meaning that speakers can store social information alongside linguistic input. What is more, exemplar theory partly accounts for communal generational differences in language, i.e. observable language change, by suggesting that older speakers' amounts and types of exemplars differ from those of younger speakers simply through an increased amount of experience (cf. Pierrehumbert, 2001:11). Sociophonetic work can inform us of the role of exemplars in our linguistic system by showing variability in how social categories and linguistic detail are connected by listeners. Furthermore, work in sociophonetics can show how linguistic exemplars connected with particular social categories can lose out (or win) in processes of language change.

A further motivation for the current special issue is to promote innovativeness in methodology as a general concern for current sociolinguistic research. A heightened awareness of methodological concerns is perhaps something that sets sociophonetic work apart from a lot of other work concerned with language variation and change. As mentioned above, investigations of the relationship between production of fine phonetic detail and social belonging have been prominent in the field of variationist linguistics since the 1960s (from the studies collected in Labov (1972), to more recent work such as

Llamas et al. (2009) concerned with accommodation and usage of phonetic detail or Lawson (2011) looking at vocalic variation and membership in communities of practice, to mention two examples out of many). Some of the most recent work in sociolinguistics has been concerned especially with the social meaning that particular, often fine-grained, linguistic differences might hold to listeners. This research often lies within the framework put forward by Eckert (2005) as the third wave of variationist research. The contribution of investigations in the third wave framework is a more comprehensive picture of how social meaning is constructed and conveyed in speech than what more traditional variationist research has offered. Work of sociophonetic nature has been particularly prominent in this field, and studies investigating the construction of social meaning of language and how fine phonetic detail influence social categorisation in perception (e.g. Thomas et al., 2010) or, vice versa, how social detail influences phonetic perception (e.g. Hay and Drager, 2010) have been particularly prominent.

Within this area of research, the usage of experiments is particularly fitting, as they allow for a controlled setting with gradual manipulation of the speech signal, or for a refined way of eliciting phonetic variation. The usage of innovative approaches to studying variation in speech is one of the main topics of this special issue of *Lingua*. The issue you are currently reading comprises studies investigating social variation in phonetics and phonology with state-of-the-art methodologies. The papers following this introduction were presented at the conference Experimental Approaches to Perception and Production of Language Variation (ExAPP2010) at the University of Groningen, the Netherlands, in November 2010. This conference was devoted to the use and development of new methodologies for sociolinguistic variationist research. We (organisers and guest editors) are of the belief that traditional data collection and analysis tools used to study variation can benefit largely from the introduction of new methodologies made possible through modern technology. A number of contributions to ExAPP2010 were especially concerned with the link between phonetic perception or production and the social variation found herein. The current issue comprises some of the excellent papers presented during the conference that have in common their concern for the relationship between social factors and variation or change in spoken English.

Campbell-**Kibler**'s article starts off the issue with an article based on her plenary address from ExAPP2010. The contribution addresses the link that exists between sociopsychological knowledge and linguistic perception. The paper explores the relationship between language processing and social reasoning and assumes that both social and linguistic exemplars are used to make fast on-line decisions about the language we are presented with. Her methodology is the Implicit Association Test, a test originally developed to investigate how two dichotomous concepts may be aligned in psychology. The paradigm suits her research which investigates the relationship between linguistic variables in US English ((ING), t-release, and /ay/-monophthongisation) and social variables (i) region (US South or North), (ii) occupational background (blue-collar or white-collar worker), and (iii) two categories heavily influenced by language ideology (country singers and news-anchors). Her study thus shows innovative usage of a socio-psychological method to explore how language is processed, showing that the social meaning of linguistic features is not only an important aspect of language production, but also of language perception. Her work adds to our knowledge of the role of social experience for perception by showing how listeners make quick online social categorisations of linguistic input.

Similarly, **MacFarlane** and **Stuart-Smith** take an innovative approach to investigating the perception of phonetic detail. Their study looks at the usability of brands as a determiner of social categorisation of phonetic variation, creating a methodology with strong roots in social psychology, sociolinguistics as well as phonetics. By using a listening experiment, MacFarlane and Stuart-Smith aim at investigating to which extent the abstract, locally constructed, social information that *brands* portray can be a consistent categoriser of phonetic detail in a community. They find that listeners who are aware of the local social meaning of a brand use this awareness in their perception of linguistic information. A key issue here is the role that brands play as social exemplars, and we think the study is a successful inquiry into how social information is stored alongside phonetic detail in listeners' memories to subsequently be used to form evaluative judgements.

This link between individual's social experience and their perceptual faculty also forms part of the arguments made in **Fridland** and **Kendall's** investigation, reported in the third article of this issue. Their study reports a comprehensive experimental approach to account for the relationship that exists between the perception and production of language. Their study looks at informants' participation in vowel chain shifts that are currently taking place in different US English varieties, combined with a perception study of the vowels in question. They find that a shift in production targets does not necessarily align directly with a shift in perception targets. Fridland and Kendall argue that one explanation for this mis-alignment could be found in exemplar theory and the possibility that best exemplars move in the direction of sound shifts first The results imply that listeners form rankings of exemplars, and that not all exemplars are equally important for a speaker to participate in (or hinder) a sound change. Their findings do suggest, however, that regional background is a good indicator of both how one produces and perceives vowel continua and that the perception of vowels have strong ties to people's individual production patterns. Fridland and Kendall's findings provide sound empirical foundations to exemplar theory. At the same time their findings underline a need for further sociolinguistic, and sociophonetic, research into exactly how and why listeners rank linguistic exemplars.

Individual perceptions are also the focus for the paper by **Hall-Lew** and **Fix**, which investigates perceptions of vocalisation of (L). Their paper concerns the constancy of auditory phonetic coding abilities across a large number of linguists, and their findings have implications for sociolinguistic and phonetic work also outside the English speaking world. Results from an online listening experiment show that the first language of linguists play little role for the consistency of impressionistic coding of whether vocalisation occurs or not. However, Hall-Lew and Fix conclude that the degree of vocalisation of (L)

remains a tricky subject matter for variationist research as qualitative data presented in their paper indicate how fine-grained vocalisation can have localised social meaning which could affect the coding abilities of linguists who have knowledge of these localised meanings. The question which arises from Hall-Lew and Fix' paper is how large phonetic differences must be to carry a different social meaning. Their study is of strong methodological importance, not only for variationist research, but also for research in phonetics that benefits from more information about how consistent auditory analysis is across populations.

De Decker and **Nycz** also provide valuable information for phoneticians in their paper about tensing in New Jersey English. Their paper looks at the vowel /æ/ and investigates the relationship between articulatory and acoustic phonetics using ultra sound technology and formant measurements. By comparing tongue contours with vowel formant values the authors show that not all tongue movements lead to acoustic differences and that certain acoustic differences are not due to tongue gesture. Their findings are not only interesting to phoneticians; their study proposes convincingly how seemingly unimportant articulatory differences can lie as a starting point to variation that later becomes socially meaningful. This last proposal is one that could have important implications for theories of language variation and change. More research is needed into variation in articulatory gestures, and it is a hope that new and more mobile technology can make such research easier to conduct in the future.

Similarly to Nycz and De Decker, the final paper in our issue is concerned with production of linguistic variation. The paper by **Torgersen** and **Szakay** contributes to our understanding of the relationship between prosodic variation and ethnic background. Their study looks at rhythm in Multicultural London English using the vocalic normalised Pairwise Variability Index (nPVI). Their paper shows that London retains its role as centre of linguistic innovation in the UK. It also puts forward an argument that certain rhythmic features found in the variety spoken in London could be substrate features from one or more of the many languages that have been included in the mix in the British capital through the centuries. Torgersen and Szakay thus end our issue with a hint to other important branches of studies in language variation and change, such as those of historical and contact linguistics. Their findings show how the sociocultural history of the community as well as the social backgrounds of individuals can be at interplay in a situation of language change. Their study provides a suitable rounding off to our issue by placing sociophonetic work in its larger context, namely that of investigations as of why and how language changes.

One of the general tendencies emerging from the contributions in the current issue is a heightened concern for the importance of localised social knowledge for the perception as well as the production of language. A number of the papers also make clear that much more effort must be made understanding the relationship between small changes in articulatory systems and changes in perceptual ability. The relationship between linguistic and social exemplars on an individual as opposed to on a group level should also receive more attention in future work in sociolinguistics. Important questions concern, for instance, the ranking of linguistic exemplars in the individual and the relationship between this ranking to the individuals' own language usage, as well as to the social exemplars that are stored alongside language. This question is connected to that concerning the concept of *salience* in sociolinguistic work (e.g. Trudgill, 1986 and Kerswill and Williams, 2000), of which it has been observed that certain forms, i.e. salient forms, are more (or less) likely to undergo linguistic change than others. Salience is best described as a relative term and, as pointed out by Kerswill and Williams (2000) is partly determined by local social factors alongside linguistic factors (such as having a high or low usage frequency, or showing phonological discrimination, for example). To understand why certain linguistic forms are more likely to undergo change than others it seems our models must take into account usage-based factors on the individual (e.g. ranking of exemplars) as well as on the group level (e.g. social meaning of variants).

The papers in this issue all raise important topics that deserve more attention in future work, one being the influence of social knowledge upon our perception of language. Future work should not focus only on perception of phonetic and prosodic detail, but also incorporate morphological and syntactic variability, this being an area where more focus on experimental and innovative methodologies could perceivably yield interesting results. It is also true for a lot of work within the field of sociophonetics that it focuses on variation in English only (although important and noteworthy work on other languages do exist, the seminal paper by Dressler and Wodak (1982) on Viennese German, and more recent contributions by Stanford (2008) and Pharao (2010) being some of the noteworthy examples). As the studies mentioned above, as well as previous research, show: localised social meaning is relevant to linguistic perception and production. Because the local dimension proves to be so important, we need more work done also from outside the Anglo-American social sphere.

Finally, we are still adamant that variationist research is a field within linguistics that particularly benefits from modern technology and innovative methodologies. It is our opinion that not only do all papers in the current issue of Lingua explore the relationship between social factors and linguistic variation, they also do so with a modern approach. In this way the studies contribute in their own way towards a broader understanding of the complex system that is the human linguistic faculty.

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