Sideways: Five methodological studies of sociolinguistic interviews

The UCPH LANCHART Centre

Published in:
Acta Linguistica Hafniensia: International Journal of Linguistics

DOI:
10.1080/03740463.2017.1335111

Publication date:
2017

Document version
Publisher's PDF, also known as Version of record

Citation for published version (APA):
https://doi.org/10.1080/03740463.2017.1335111
Sideways: five methodological studies of sociolinguistic interviews

Frans Gregersen, J. Normann Jørgensen, Janus Spindler Møller, Nicolai Pharao & Gert Foget Hansen

To cite this article: Frans Gregersen, J. Normann Jørgensen, Janus Spindler Møller, Nicolai Pharao & Gert Foget Hansen (2017): Sideways: five methodological studies of sociolinguistic interviews, Acta Linguistica Hafniensia, DOI: 10.1080/03740463.2017.1335111

To link to this article: http://dx.doi.org/10.1080/03740463.2017.1335111

Published online: 21 Jun 2017.
Sideways: five methodological studies of sociolinguistic interviews*

Frans Gregersen, J. Normann Jørgensen†, Janus Spindler Møller, Nicolai Pharao and Gert Foget Hansen

The LANCHART Centre, University of Copenhagen, København, Denmark

ABSTRACT
Five interlocking case studies of variation in and between situations are reported. In all cases a sociolinguistic interview is contrasted with another speech event. The material is from the LANCHART panel study of variation in the Danish speech community in real time. Contrasting speech events are characterized using a genre classification and focusing in each case on the genre dispersion as a measure of how varied the speech event was. Two different phonetic variables are studied, the short (æ) and the (ɛŋ) variable. Four of the five case studies involve adults who also participated in interviews approximately 20 years later. For those informants, a comparison is made with the new recordings in order to evaluate claims of change in real time. Both auditory results and acoustic measurements are documented. The fifth case study concerns youngsters recorded in the new round of recordings (the S2), hence there is no newer recording to compare with. In all cases the older (æ) variable is sensitive to a change in situation whereas the newer (ɛŋ) variable only varies with situation for the young informants. In the final section, we discuss possible consequences for comparability and for the methodology of empirical (socio)linguistics.

KEYWORDS Variationist sociolinguistics; methodology of empirical linguistics; data collection; interviews; real time change; single person sessions vs. group sessions

1. Introduction

Sociolinguistics is an empirical science: it is based on language data furnished by informants in a setting. This is essential. Since the very start of Labovian variationist sociolinguistics it positioned itself vis-à-vis theoretical, aka Chomskyan, linguistics as being about everyday speech (observational evidence) in contrast to grammatical knowledge based solely on intuitions and introspective evidence.
(Gregersen 2000; Labov 1972c). This position has to address an obvious challenge, i.e. to forge a reliable instrument of collecting valid data. Two demands present themselves, demands which often may be at loggerheads: on the one hand, data have to be “good” or valid in that they may be taken to reflect what language users do when they are not being informants for sociolinguists. On the other hand, we want data to be controllably comparable so that we may generalize on the basis of the findings.

Similar to a number of other disciplines (sociology, psychology), two traditions have arisen which weigh the two purposes somewhat differently. Following e.g. Milroy, Li, and Moffatt (1991) we distinguish one tradition that is concerned more with quantitative data and generalizations on the basis of such results, viz. Labovian variationist sociolinguistics (e.g., Labov 1994–2011; Tagliamonte 2011), and another which is more concerned with the situational embedding of language use and hence is wary of generalizations across situations. We may characterize the latter tradition (here conveniently abbreviated the Gumperz-Hymesian one) with key words such as “attention to context” (Duranti 1992), “grounded theory” (Strauss and Corbin 1994), “ethnography of speaking” (Hymes 1971), and “interactional sociolinguistics” (Gumperz 1982, 1992). This latter tradition tends to focus on the many possibilities open to speakers and the many meanings produced in the many different situations. With key words such as “contextualization” and “indexicality” the tradition aims to understand situated meaning-making in interaction from a participant perspective. In this sense, this tradition celebrates the flexibility of language use – and of speakers in general.

In contrast, the Labovian tradition is easily connected to key words such as “the sociolinguistic interview,” “observer’s paradox,” and “attention to speech.” Labovians view variation in the final instance as a reflection of social structures, in the sense that macro-level sociological variables such as social class, ethnicity, and gender are considered to be transformed in some, not fully understood, process into quantitative patterns in language use. Labovians value the possibility of generalizing as central to the scientific process, hence the quest for comparability of data.

Focusing on field methods the variationist view may be reconstructed as follows: we strive in our data collection to approximate a situation without any field worker, i.e. no individual external to the private world of the informant (“observer’s paradox”), present. This means that field workers have to work on the relationship to the interviewee so that they gradually become insiders or turn into what Albris (1991, 53f) has labeled “an intimate stranger.” The idea is that interviewees will then let go of their sociolinguistic monitor (Labov et al. 2006, 2011), i.e. the system that keeps language use in place according to speakers’ perception of appropriate language use in the situation at hand. Interviewees will thus converge toward their vernacular, supposedly the most systematic speech form at the command of the individual and hence the most
One might ask, why is one style better than another? Why the effort to record the least formal style? My answer is that there is one style of speech that is superior to all others – from the linguistic point of view – which we call the vernacular. It is the form of language first learned, most perfectly acquired, which we use automatically and unthinkingly in conversation with family and intimate friends. It is the most systematic and rule-governed: the formal language we acquire later in life never shows the same intricate regularities, and we often find ourselves embarrassed to discover that for many years we have been mispronouncing a word that was only learned in reading. Most importantly, the vernacular is the basis for historical continuity and regular linguistic change: it is the form of language that is inherited from parent to child over generations. The history of a language is the history of its vernacular. (Labov 2013, 3)

From this point of view, situational variation is intra-personal and a function of class-related variation in that it represents perceived formality in the shape of attention to form. The view entails an understanding of variation as primarily caused by social structures but mediated through the perception of (successive situations embedded within) speech events as being more or less distant from the informants’ daily life. Transformed into field method rules: the fieldworker should consistently exploit the possibilities of stimulating the use of genres and the introduction of topics which are part and parcel of the informant’s mundane activities! This will result in samples of the vernacular, the least formal speech form (Labov 1984).

In this paper we contrast sociolinguistic interviews carried out according to the guidelines described above (derived from Labov 1984) with various other speech events. We have recorded a number of informants in two speech events at roughly the same point in time. Then, we introduce the dimension of time by replicating the sociolinguistic interviews with the same informants around 20 years later. Following a convention introduced in Gregersen 2009a, we refer to any original interviews in such a real time study as belonging to S1 (Study 1) and the replications as belonging to S2 (Study 2). In our case, the two S1 speech events are thus compared to the S2 interview in order to see how they relate with respect to real time change in the use of the selected variables.

Since the speech event that we compare may be different in so many ways we have attempted to control for the quality of the sociolinguistic interview. We have avoided using the dichotomous concept of the vernacular vs. everything valid expression of his or her language (Labov 1984, 29). Labov’s favorite example of a useful tool in this respect is the calling forth of personal narratives (Labov 2001, 2013). Since personal narratives about life and death are thought to be central to informants’ identity the informants become so absorbed by the (re)telling of events that their monitor gets so to speak jammed, because the narrative itself triggers attention to content rather than to form. Thus, the speech used to convey personal narratives will be less influenced by external norm pressure and by the same token more authentic:
else (let alone confronting the thorny issue of how to delimit the vernacular inside a sociolinguistic interview). Instead we employ an approach based on genre analysis as included in a broader analysis of discourse contexts, i.e. what we call Discourse Context Analysis (DCA, Gregersen and Barner-Rasmussen 2011; Gregersen, Jensen, and Pharao forthcoming; Jensen 2017; Jensen and Gregersen 2016). We take the number of instances of the various genres found in the interview, i.e. genre dispersion, as an indication of the type of interview we have before us. Interviewers have to do everything in their power to vary the speech event such that genres which are never present at formal occasions, e.g. Jokes and Personal Narratives, are being recorded as examples of less formal language use. We submit that genre dispersion is one way to get at the type of speech event sampled.

The studies are ordered such that those which vary less come first and those which vary in more ways come last. First, we focus on the effect of site of interview and interviewer effects. Next, we contrast sociolinguistic interviews with other methods of getting information on language use and variation, viz. radio interviews, group interviews and group discussions. The central precondition is that the informant remains the same in all pairs of S1 recordings on the one side and in the S2 recordings used to bring in the notion of change on the other (Bailey 2002). Thus in every sense of the word we are presenting what Labov 1994 calls a panel study here, viz. the later replication of an original study using the same informants in both studies (Labov 1994–2011, 76f).

1.1. The data

The data come from a panel-and-trend study of language change in real time, the LANCHART study, involving recordings with informants from 5 different sites in Denmark with a time distance between S1 and S2 of around 20 years (Gregersen 2009a). In this paper we only use material from the S1 Copenhagen panel and S2 recordings with youngsters from Næstved, a provincial town less than 100 km south of Copenhagen.

1.2. Structure of the paper

In a number of impressive methodological papers since at least 1997, Guy Bailey and associates have highlighted a number of methodological issues such as the interviewer effect, transcriber effects etc. (Bailey and Tillery 1999; Tillery and Bailey 2003; Bailey, Tillery, and Andres 2005; Bailey, Wikle, and Tillery 1997; Cukor-Avila and Bailey 2001; Tillery and Bailey 2003). In the first section we review the relevant methodological studies, focusing on Rickford and McNair-Knox (1994) and Rickford and Price (2013) while simultaneously introducing our 5 case studies. The design of all 5 case studies is that first a S1 sociolinguistic single person interview is compared to some other speech event involving the same informant. Then, in the studies where there is an S2 interview, we compare
S1 and S2 interviews. The aim is always the same: to elucidate the extent of intra-individual variation, synchronically and diachronically. In the next sections, we look at the variables used and the results. In the concluding discussion, we outline a number of consequences for the methodology of sociolinguistics.

2. The sociolinguistic interview

2.1. What type of speech event is it?

Feagin distinguishes two types of sociolinguistic interviews:

The most influential one, modeled on Labov’s work, uses a set of questions to elicit as much free conversation as possible, with some reading tasks designed to elicit a range of styles. Another way of going about it is simply to let the conversation flow. This more open-ended type of interviewing is intended to reduce the distance between interviewer and subject, making the interaction more natural. (2002, 29)

Below we report on results from sociolinguistic interviews of the second type. Using a Labovian terminology we have in our adaptation of the Labov 1984 format sacrificed some comparability (i.e., the relatively fixed thematic structure and the strict literal format for certain standard questions asked) in order to accomplish conversational flow. This does not mean that conversations deviate much from the Labovian standard in terms of using the informant’s life history as the overall structure and of using every opportunity to stimulate narrative activity. But the resulting recordings were in all cases less strictly similar than the interviews documented in detail in Labov 1984. Note, however, that this is more or less irrelevant in case studies 2–5 below since there we do not compare different sociolinguistic interviews but interviews with other speech events. As to case study 1, cf. below.

2.2. Studies in the methodology of sociolinguistic interviews

2.2.1. Site of recording, type of interview

As Milroy, Li, and Moffatt (1991) note, the early Labov paper on “The Logic of Non-Standard English” (Labov 1969) remains the locus classicus for a comparison of interviews featuring the same informant, in this case eight-year-old African-American boy Leon L., and the same interviewer, in this case the African-American adult Clarence Robins. Labov contrasts the unhappy “traditional” first interview with the successful second interview (Labov 1972b, 206ff). He shows how bringing along both food and a friend of the informant changes the (informant’s perception of the) situation so that the hesitant and shy boy from the first interview changes his linguistic personality completely in the second one. Since Labov also refers to Caucasian interviewers interviewing African-American kids, one might have believed that the issue was one of ethnicity. But Cukor-Avila and Bailey (2001) have shown that this need
not be the relevant dimension. We have to vary all the ingredients separately: interviewer’s ethnicity, his stance (such as the interviewer’s introduction of swearing in the second interview), and relation to the informant, the friend’s presence or absence etc., to evaluate their effect, if any, on the informant’s linguistic production. This cannot be done in this paper, but what we can do is, to start with, to compare a first and a second interview featuring exactly the same interviewer and interviewee to see whether there are any differences in the phonetic patterns. The first interview is performed at the informant’s work place, the second at his home (cf. below Section 4, case study 1). We briefly contrast the results of the recordings from the S1 of 1987 with the recording from 2005 of the same informant.

### 2.2.2. The interviewer effect

Bailey and Tillery (1999) show that in the Linguistic Atlas of the Gulf States material there is a definite interviewer effect, called the Rutledge effect (cf. also Tillery and Bailey 2003, 355f). The reason for this name is that one of the Atlas interviewers, Barbara Rutledge, was rather alone in actively eliciting a particular construction (the might could construction) – and that she was eminently successful at it. The interviewer is different from other field workers in being interested in this particular construction, thus potentially creating linguistic boundaries in the Atlas having to do not with the informant but with the interviewer. But the interviewer effect may be much more profound than this. Rickford and McNair-Knox (1994) argue that at least addressee, topic, and familiarity be taken into account when analyzing intra-individual variation. In their study it is impossible to tease ethnicity of interviewer and familiarity with informant apart (cf. also Rickford and Price 2013, 167) but they conclude that ethnicity (or ethnicity and familiarity with informant) of interviewer is a factor. The study is an empirical test of Bell’s (1984) style theory and urges sociolinguists to follow suit. We take up this challenge but we have not analyzed the effect of topic which remains an issue in itself, nor ethnicity, but the interviewer effect in terms of familiarity (case study 1) and possibly gender (case study 2).

One of the LANCHART informants was interviewed twice during the same year and was thus subjected to the same field work technique – but by two different interviewers. In this case there is a gender difference between interviewers and the resulting relationship may be analyzed as being an effect of this, but we cannot in principle rule out a range of other differences between the two interviewers as being important for the result. This is even truer for the subsequent comparison with the S2 recording: Should this be compared to the first or the second S1 interview (cf. below, case study 2)?

Another version of this effect may be seen by contrasting a sociolinguistic interview with an interview from the broadcasts of Radio Denmark. One of our informants was interviewed in the radio shortly after he had been interviewed by us. Bell 1984 introduced the notion of audience design to explain stylistic
differences (cf. also Bell 2001). We may thus see whether this type of interview with its characteristic double-sided audience design (both the immediate audience, i.e. the radio host or interviewer, and the listening radio public need to be taken into consideration) differs from the sociolinguistic interview as to phonetic patterning, cf. below, case study 3. In this particular instance it is methodologically more appropriate to compare the S1 sociolinguistic interview from 1988 with the S2 sociolinguistic interview from 2006 than to bring the radio interview into the equation.

2.2.3. Varying the number of informants

A number of studies have used the format of having two informants talk first to an interviewer and then to each other, such as Hagen and Simonsen (2014, 500f) and Johannessen et al. (2005) on the Norwegian NoTA corpus. The method has obvious attraction for data collection but it begs the question of the essential audience design effect. In case study 4 we focus on the possible effect of audience design by contrasting single person interviews with two sisters with two double person interviews with the same informants performed 20 years apart. This particular design makes it possible first to compare variation in the single person interviews and the double person interview and secondly to compare the two double person interviews in order to see whether there are any differences in real time. The S2 double interview is in this case the only new recording available; no single person interviews with these two informants were carried out.

The idea of staging group discussions between the informants, with or without interviewers present (Gregersen 2009, 11f) is another characteristic of the Gumperz-Hymes tradition (Milroy, Li, and Moffatt 1991, 289). Again, using a variationist reconstruction we may argue as follows: if informants know each other so well that they do not see any use of any monitor or external norm pressure, then group discussions would be a much better way to circumvent the “observer’s paradox” than the, arguably, sometimes a bit awkward, strategy of having to vary the sociolinguistic interview situation (Butters 2000; cf. also Labov et al. 1968; 57 and Labov 1972b). For reasons of asymmetry between field workers and informants, this argument may be stronger, the younger your informants are. We have performed single person interviews and staged group discussions with the same informants, 15–16 years of age, and we report on the differences below in case study 5. Here there is no time dimension since these informants so far have only been recorded once, viz. in 2007, only.

---

1Johannessen et al. (2005, slide 15) identify a new paradox, viz. that of having the informants relax so much that they do not only relinquish their monitor but also proceed to discuss what to the Norwegian data authorities are “sensitive issues” (which by definition should not be discussed in publicly available corpora), cf. also Hagen and Simonsen (2014, 501).
3. The LANCHART study

3.1. Field methods

In the Copenhagen Project in Urban Sociolinguistics 1987–1990 (Gregersen and Pedersen 1991), which is the S1 for most of the studies below, we adapted the Labovian methods to the study of Copenhagen speech. Identifying a neighborhood where we could find both Middle Class (henceforth MC) and Working Class (henceforth WC) informants in sufficient numbers, we interviewed only persons born and raised in Copenhagen. We did not use the famous “danger of death” question to elicit personal narratives for the simple reason that when we tried it out, most people said “no, they had never been in any danger of death.” Indeed we did not try to elicit anything directly but cultivated the principle of tangential shifting (Labov 1984, 32, cf. also Labov 2013, 8) such that the interviewers deftly followed suit whenever the informant wanted to go somewhere new. As our over-all structure we elaborated on the nexus of the history of the neighborhood and the informant’s own life story. We did, however, still aim for a maximum of casual style as defined in Albris (1991).

The result was that interviews were perhaps less comparable in terms of content than the standard Labovian ones (cf. Gregersen and Pedersen 1991). In the S2, when the interviews were repeated approximately 20 years later by the LANCHART study, we employed the same field work techniques (Gregersen 2009; Gregersen, Maegaard, and Pharao 2014) but we also used group interviews and in some cases also double interviews, cf. below, techniques that are more frequently used in interactional sociolinguistics.

3.2. Variables studied

3.2.1. The phonetic variables

We have selected two phonetic variables, of which the first one is well known, even stereotyped, in the Danish speech community, viz. the short (æ), while the other, the (ɛŋ) variable, is to all intents and purposes a recent and rather vigorous variable which involves the raising of [ɛ] to [e] before the velar nasal [ŋ] (Holmberg 1991). The latter change has, in contrast, gone more or less unnoticed by the public (Gregersen 2015, 2016). Furthermore, the first variable is very frequent, while the other is more or less specialized to a specific lexical set and comparatively infrequent.

3.2.1.1. The short (æ) variable. From a structuralist point of view there are two variants of the phoneme of short /a/ in Danish. One, which in most cases is realized as [æ], is found before alveolar consonants, syllable boundaries and nil, and the other, [a], before velars and labials. The first allophone is the one we label the variable (æ) in this study. It has two variants, [e] and [æ]. The (æ) variable is not only extremely frequent, it is also the most frequently studied
variable in Danish sociolinguistics, cf. Brink and Lund (1975), Jorgensen (1980), Holmberg (1991), Gregersen, Pharao, and Maegaard (2009), Gregersen (2009b), Gregersen (2014), Gregersen, Maegaard, and Pharao (2014). \( \text{æ} \) has been selected here as a very frequent and highly meaningful variable, which does not seem to have any direction in its variation. The \( \text{æ} \) is a stable sociolinguistic variable.

3.2.1.2. The \( \text{ɛŋ} \) variable. In Holmberg 1991 a variable was identified which we here label \( \text{ɛŋ} \): in some cases /ɛ/ is raised to an [e] before [ŋ]. Holmberg 1991 conclude that “The ÆNG [here: \( \text{ɛŋ} \)] picture looks very much like an ongoing change” (Holmberg 1991, 220). The \( \text{ɛŋ} \) is rather infrequent, being strictly limited to a narrow context. There are, however, enough frequent lexical items that manifest this particular structure such as \textit{tænke} “think,” \textit{længe} “for long,” \textit{senge} “beds pl,” and \textit{engelsk} (“English”) and enough structures for it to be thought of as a phonetic variable rather than a lexical one (cf. further Gregersen 2015). In contrast to \( \text{æ} \), the \( \text{ɛŋ} \) variable seems to be directed toward the raised variant [e] as the new and vigorous change. It thus differs from the \( \text{æ} \) variable in two important respects.

3.2.1.3. Coding practice. In principle the coding was a forced choice between the raised and the non-raised variants, the envelope of variation being automatically identified (through the transcripts). But it turned out that both with the \( \text{æ} \) and with the \( \text{ɛŋ} \) variable coders identified some segments as belonging to an in-between category. In both cases we report the net results, i.e. with the in-between category, for inspection, but for the sake of comparability and simplicity we also report a raising percentage where we collapse the in-between variants and the raised variants. This means that in some cases it is possible to use \( \chi^2 \) statistics though the figures for the separate variants, raised and in-between, only allow for a Fisher’s exact test.

In all cases, first coding was strictly auditory. The codes are the result of two independent listeners’ perception and only when they disagreed have disagreements been resolved by a third listener, the checker. We coded 40+ instances if possible. In the LANCHART study, only passages labeled by the Discourse Context Analysis as belonging to the Macro Speech Act of Exchange of Information (cf. next section) were coded for phonetic variation. In four of the five studies additional acoustic measurements are reported on.

3.2.2. The LANCHART Discourse Context Analysis (the DCA)
At the outset the LANCHART study discarded the simple dichotomy of casual versus formal or non-casual style. In order to code for more profound comparability, we developed a Discourse Context Analysis (henceforth DCA) including six dimensions (Gregersen and Barner-Rasmussen 2011; Gregersen, Jensen, and Pharao forthcoming; Gregersen, Nielsen, and Thøgersen 2009; Jensen and
Gregersen 2016). In the DCA we distinguish between total coding and partial coding of transcripts. The DCA is a huge apparatus but in this connection we only need two of its six dimensions: we distinguish a total coding category of Macro Speech Act and a partial coding category of Genre. “Total coding” means that every passage in the transcripts has to be labeled as belonging to one of the categories of e.g. the dimension of Macro Speech Act. In contrast, the Genre coding is partial, meaning that only passages which fulfill the criteria for being categorized are recognized. A consequence is that in most transcripts a majority of passages do not belong to any Genre at all. In contrast, all passages are assigned a Macro Speech Act code.

The phonetic coding is dependent on the Macro Speech Act coding in that only passages belonging to the Macro Speech Act of Exchange of Information were coded for phonetic variation. All DCA coding is based on transcripts only; that is: no DCA coder has ever heard the sound of what he or she is coding (in order to escape vicious circles since we knew that we would have to use the DCA to delimit passages for phonetic coding).

As to the genre dimension, the narrative field has in the DCA been divided into three different genres, the first one being the Labovian Personal Narratives. Personal Narratives are characteristic by being about singular reportable events and experienced as such by the narrator, often, but not always, placing him- or herself as the main protagonist of the story. Two other kinds of narrative activity are recognized as separate genres: either the narrative is about recurring or even quite general activities. This we label General Account. Or it may be concerned with rather specific activities but these are not of the reportable type, nor necessarily self-experienced in every detail. This we label Specific Account.

Among the other genres we find Jokes, Soap box (named after the proverbial Hyde Park Corner where speeches often were made on soap boxes) and Gossip. Finally we have reserved a genre for the Reflection on general circumstances, or even life in general, that is often used precisely in life history interviews, even, as we shall see, interviews with very young informants. For the precise definitions and exemplifications using the corpus, we refer the reader to the Manual.

In this paper we have selected the DCA dimension of genre to characterize the speech events involved, i.e. the sociolinguistic interview and its contrasting speech event. We document for both speech events the numbers of genres instantiated, i.e. the genre dispersion. This characterization is used to give the reader an independent measure of variation inside the limits of the given speech event. There is no guarantee that this is reflected in the phonetic results:

---

2There is a detailed manual in English for DCA on the LANCHART website (LANCHART 2011).

3A reasonable objection to the use of genre dispersion by only looking at whether a genre is present or not, would be to point to the psychological or perceptual weight a long narrative might have in contrast to a minimal one. We are in principle able to document both. This might be the better choice for a paper on the perceived success of an interview or an interviewer in calling forth weighty examples of the more informal genres. We have opted for the crude measure of genre dispersion because we want to remain neutral as to which genres are “formal” and which “informal.”
the majority of instances of the phonetic variables are from passages outside any genre. Thus the genre dispersion is not directly reflected in the phonetic results if only for the reason that the phonetic variables studied here diverge in frequency. The relationship between genre and the (æ) variable is studied in Gregersen and Barner-Rasmussen (2011) on the basis of a limited number of recordings, which were coded for phonetic variation from start to finish. Using this selection of files the authors document that the samples of 40 instances only in two cases out of eight are significantly different from the total of the entire recording.

To sum up: in the following we report on results from a panel study of language use in Copenhagen Denmark spanning a period from 1987 to 2009. We report on sociolinguistic interviews as the baseline for comparison in all cases but contrast with a number of different types of speech events using the instrument of genre dispersion to characterize the pairs of speech events in order to see whether there is a difference between the phonetic patterns used in the interview vs. that used in the contrasting speech event. Both auditory and acoustic comparisons are reported. Introducing the dimension of time, we finish by, where possible, comparing the S1 recordings with the S2 recordings. All the case studies below point to the possibilities of systematically studying intra-speaker variation (stylistic variation in the traditional terminology (Schilling-Estes 2002)) as a function of situational factors.

4. Results

4.1. Case study 1: site as a variable?

KLT$^4$ is a male working class informant who was born in Copenhagen in 1949 and grew up there. He was first interviewed in 1987 by EM at his work place. The interview was part of the systematic search for candidates for our investigation. KLT’s boss had pointed to him as a suitable informant (field notes by EM). The first interview lasted only half an hour before the recording was changed completely since the interviewer and his interviewee were joined by the informant’s work mates for their scheduled communal lunch. The second S1 interview, also from 1987 and still with EM as the interviewer, was recorded at the informant’s home.

4.1.1. Genre dispersion

As Table 1 shows, there is no difference in genres actualized during the two interviews, and only slight differences in the relative proportions.

$^4$All identities are anonymized for reasons of confidentiality.
4.1.2. Results of the auditory analysis

The results for the phonetic (æ) and (ɛŋ) variables are shown in Tables 2 and 3.

4.1.3. Results of the acoustic analysis

In Figure 1, the formant values are given in raw hertz (Hz) and the boxplots show the distribution of the data. Thick horizontal lines indicate the median value, and the boxes indicate the range from the first to the third quartile. Whiskers show the full range of the data excluding outliers, which are indicated by small circles. Note that for F1, a lower median indicates more raised tokens and for F2 a lower median indicates more back tokens.

The acoustic analysis corroborates the auditory analysis since the difference is significant at $p = 0.02746^*$. In all cases where significance is reported for the acoustic results, t-tests have been used.6

4.1.4. Discussion

There is no discernible difference between the two interviews in terms of Genre dispersion: the interviews are both of them dominated by the less personal genres within the narrative field. Nevertheless, there is a hugely significant effect for one of the phonetic variables. In order to interpret this difference between the two speech events we note that the (æ) variable in the Holmberg 1991 was shown to be style sensitive. But what causes this stylistic difference? One option

---

5Fisher’s exact test is used whenever there are less than five instances in a cell in all other cases we use $\chi^2$ statistics.
6As to the results for the (ɛŋ) variable, there was not enough material to perform an acoustic analysis.

Table 1. Genre dispersions for two interviews with KLt.

<table>
<thead>
<tr>
<th>Genre</th>
<th>Interview 1</th>
<th>Interview 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narrative</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Specific Account</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>General Account</td>
<td>10</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 2. (æ) variable: results for KLt.

<table>
<thead>
<tr>
<th></th>
<th>ε</th>
<th>In-between</th>
<th>æ</th>
<th>n</th>
<th>Raising (%)</th>
<th>$p$ (Fisher)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview 1</td>
<td>1</td>
<td>1</td>
<td>40</td>
<td>42</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Interview 2</td>
<td>13</td>
<td>1</td>
<td>25</td>
<td>38</td>
<td>36</td>
<td>0.0005***</td>
</tr>
</tbody>
</table>

We follow standard practice in labeling levels of significance with asterisks going from one (significant at the .05 level) to three (significant at 0.0005 or less).

Table 3. (ɛŋ) variable: results for KLt.

<table>
<thead>
<tr>
<th></th>
<th>ε</th>
<th>In-between</th>
<th>ɛ</th>
<th>n</th>
<th>Raising (%)</th>
<th>$p$ (Fisher)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview 1</td>
<td>5</td>
<td>11</td>
<td>16</td>
<td>31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview 2</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>7</td>
<td>57</td>
<td>0.3630 NS</td>
</tr>
</tbody>
</table>
might be familiarity both in terms of the second interview coming later and
being carried out at the informant’s home turf. Nevertheless, it is somewhat
surprising that the difference is so distinct. If we compare the S1 recordings
from 1987 with an S2 recording produced 20 years later of an interview fea-
turing the same informant and again recorded at his home (as in interview 2
from S1) but featuring another interviewer, we get the pattern shown in Table 4.

There are two available options here: if we compare the S2 recording with S1
interview 1, nothing has happened at all in KLTs life span. But if we compare
instead the S2 recording with S1 interview 2, there is a drastic life span change.
This shows that intra-individual synchronic variation may be greater than real
time life span (diachronic) variation. Or put another way: we might seriously
have underestimated the amount of raising of (æ) in this informant’s repertoire
if we had looked only at S1 interview 1 for traces of life span change.

Table 4. (æ) variable in real time for KLT.

<table>
<thead>
<tr>
<th></th>
<th>In-between</th>
<th>æ</th>
<th>n</th>
<th>Raising (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview 1</td>
<td>1</td>
<td>40</td>
<td>42</td>
<td>5</td>
</tr>
<tr>
<td>Interview 2</td>
<td>13</td>
<td>25</td>
<td>38</td>
<td>36</td>
</tr>
<tr>
<td>2005</td>
<td>4</td>
<td>42</td>
<td>48</td>
<td>8</td>
</tr>
</tbody>
</table>
4.2. Case study 2: interviewer effects?

The female working class informant NLD was interviewed twice. Having performed only very few interviews, JJ left the Copenhagen Urban Sociolinguistics project, and it was decided to repeat the interviews with EM as the interviewer. In terms of S1 as a whole, the regular interviewer thus actually conducted the second interview and in a way the EM interview has the status of an S1 replication of the S1 interview carried out by JJ. The results of a comparison between the two S1 recordings are shown in Table 5 in the same format as for case study 1.

4.2.1. Genre dispersion

The genre dispersion shown in Table 5 tells us that the interview with EM as the interviewer features slightly more genres than the one performed by field worker JJ. Furthermore, the genres only represented in the EM interview are those which we rarely find in single person interviews with adult informants, i.e. jokes and gossip. In terms of varying the course of the interview, and consequently, we may suppose, the relationship between interviewer and interviewee, the EM interview has more to offer than the JJ one.

4.2.2. Results of the auditory analysis

The results for the phonetic (æ) and (ɛŋ) variables are shown in Tables 6 and 7.

Table 5. Genre dispersions for two interviews with NLD.

<table>
<thead>
<tr>
<th>Genre</th>
<th>Interviewer EM</th>
<th>Interviewer JJ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soap box</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Joke</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Gossip</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Reflection</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Gossip</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Narrative</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Specific account</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>General account</td>
<td>16</td>
<td>15</td>
</tr>
</tbody>
</table>

Table 6. (æ) variable: results for NLD.

<table>
<thead>
<tr>
<th></th>
<th>ε</th>
<th>In-between</th>
<th>æ</th>
<th>n</th>
<th>Raising (%)</th>
<th>p (Fisher)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviewer EM</td>
<td>8</td>
<td>1</td>
<td>36</td>
<td>45</td>
<td>20</td>
<td>0.0255*</td>
</tr>
<tr>
<td>Interviewer JJ</td>
<td>2</td>
<td>45</td>
<td>47</td>
<td>4</td>
<td>0.0005</td>
<td></td>
</tr>
</tbody>
</table>

We follow standard practice in labeling levels of significance with asterisks going from one (significant at the .05 level) to three (significant at 0.0005 or less).

Table 7. (ɛŋ) variable: results for NLD.

<table>
<thead>
<tr>
<th></th>
<th>e</th>
<th>In-between</th>
<th>ε</th>
<th>n</th>
<th>Raising (%)</th>
<th>p (χ^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviewer EM</td>
<td>9</td>
<td>14</td>
<td>40</td>
<td>65</td>
<td></td>
<td>0.8172 NS</td>
</tr>
<tr>
<td>Interviewer JJ</td>
<td>10</td>
<td>3</td>
<td>23</td>
<td>57</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.2.3. Results of the acoustic analysis

The results are shown in Figure 2 for F1 and in Figure 3 for F2. They are significant at \( p = 0.000249^{***} \) (F1) and \( p = 0.00003757^{***} \) (F2). There were no significant differences between the \( \text{æ} \) results but for the \( \text{ɛŋ} \) variable both the acoustic analyses of the F1 and the F2 show highly significant results (which the auditory analysis, however, was not able to document).

4.2.4. Discussion

In terms of genre dispersion we might be tempted to call one of the interviews good and the other one bad. But this is null and void, for we do not have any other criterion than the genre dispersion itself. The two interviews are simply different speech events. JJ is a female interviewing a female informant, EM is a male interviewing a female informant. JJ performed the first interview, EM the second. Maybe the informant got used to being interviewed and relaxed more the second time? We may simply conclude that any number of conclusions may be drawn by this pair of S1 interviews since the auditory analysis reveals one contrast, whereas the acoustic analysis reveals another one. Looking at the S2 recording now, we get the picture shown in Table 8.

The difference between the results for the \( \text{æ} \) variable is either significantly different in real time \( (p = 0.0026^{**}) \), meaning that NLD has indeed changed her use of the \( \text{æ} \) variable during her life span, or not different at all (meaning
no change). The interpretation depends on which interview we compare with. And we have no criteria for deciding which one to take as the point of departure. Let us take a look at the other variable, the (ɛŋ) variable in real time in three interviews with NLD, as shown in Table 9.

For the computation of the raising % we have again taken the first two columns and treated them as one (because they both diverge from the standard value in the direction of raising). But once we introduce the S2 recording it pays off to keep the two categories distinct: In the S2 recording there is only

Figure 3. NLD’s F2 for variable (ɛŋ) in the S1 interviews with JJ and EM. Note: Y-axis values are in hertz.

Table 8. The (æ) variable in real time in three interviews with NLD.

<table>
<thead>
<tr>
<th></th>
<th>e</th>
<th>In-between</th>
<th>æ</th>
<th>n</th>
<th>Raising (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 Interviewer EM</td>
<td>8</td>
<td>1</td>
<td>36</td>
<td>45</td>
<td>20</td>
</tr>
<tr>
<td>S1 Interviewer JJ</td>
<td>2</td>
<td>45</td>
<td>45</td>
<td>47</td>
<td>4</td>
</tr>
<tr>
<td>S2 (2006)</td>
<td></td>
<td></td>
<td>42</td>
<td>42</td>
<td></td>
</tr>
</tbody>
</table>

Table 9. The (ɛŋ) variable in real time in three interviews with NLD.

<table>
<thead>
<tr>
<th></th>
<th>e</th>
<th>In-between</th>
<th>ɛ</th>
<th>n</th>
<th>Raising (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 interviewer EM</td>
<td>9</td>
<td>17</td>
<td>14</td>
<td>40</td>
<td>65</td>
</tr>
<tr>
<td>S1 interviewer JJ</td>
<td>10</td>
<td>3</td>
<td>10</td>
<td>23</td>
<td>57</td>
</tr>
<tr>
<td>S2 (2006)</td>
<td>1</td>
<td>12</td>
<td>31</td>
<td>44</td>
<td>30</td>
</tr>
</tbody>
</table>
one instance of a clearly raised variant (the [e]) in contrast to the S1 recordings which contained 9 and 10, respectively, but 12 of the category in-between. So something has definitely happened in real time with the (ɛŋ) raising; it has more or less reversed its course for this informant. Note that she produces far more standard variants (the [ɛ]) in the S2 recording than in any of the two S1 recordings.

If we can take this analysis of the (ɛŋ) variable as a clue for the interpretation of the (æ) variable as well, then NLD is indeed a life span changer. But this is a frail IF and we have no warrant for treating the two variables as if they always behaved alike. The best argument comes from the overall design of the LANCHART study. JJ only conducted few interviews whereas EM conducted several. Hence we have good external reasons (viz. minimizing the overall variation as to interviewers) to take the S1 EM interview as our reference point for the real time study, and indeed the interviewer in the S2 was also a male. But for all we know, the interviewer in the S2 might have established a similar relation to the informant in the S2 recording that JJ did in her S1 interview. We would have to look for other analyses to decide this (e.g., analyses of interaction or of topic shifting, or what might possibly have happened in terms of norm changes during the 20 odd years which elapsed between the S1 and the S2).

The problem is more or less akin to the one discussed in Rickford and McNair-Knox (1994, 262ff). Rickford and McNair Knox study one informant, Foxy Boston, in four interviews. There is a significant difference between one of the interviews and the rest. In this case there is a time difference which allows the authors to tell a story about Foxy’s development which may or may not be the clue to the differences. The authors know a lot about this informant. But suppose we did not interview informants more than once and did not know much else about them than what they told us during the interview – which we suppose is true of the majority of cases reported in the literature. How could we avoid concluding that the results for someone like Foxy in interview II were true, at that time, and consequently treat her as being less “vernacular” (in this case AAVE) than she “really” is? In our case, NLD, there is no developmental story to be told. The difference in time was that of months. Whichever story we may prefer about the variational patterns in evidence here, the conclusion is inescapably that intra-individual variation between speech events which on the face of it do not vary that much are indeed pervasive.

4.3. Case study 3: audience design: sociolinguistic interview versus radio interview

DFM is a Middle Class male informant born in 1954. He was thus 35 years old when he was interviewed twice, once by the field worker HH and once by a Danish radio station. The S1 interview is a typical life-history interview. In
contrast, the S1 radio interview, which took place in the same year as the S1 interview, focuses on the informant’s professional specialist knowledge. At the time he was a pioneer in relationships between technology and health at the work place serving as a consultant to trade unions. In the S1 radio interview, he is positioned as an advocate for the slaughter house workers, trying to force the owners of slaughter houses to develop new ways of building factories in order to revolutionize the ways to organize production inside the houses. The radio interview is comparatively long and the informant is – atypically – offered plenty of time to formulate his partisan views.

4.3.1. Genre dispersion
As shown in Table 10, there is an obvious contrast between the personal subjective genre of Narrative represented by five instances in the S1 sociolinguistic interview and the political genre of Soap box which has replaced it in the S1 radio interview. The sociolinguistic interview is concerned with the private citizen, the radio interview features the political citoyen.

4.3.2. Results of the auditory analysis
The results for the phonetic (æ) and (ɛŋ) variables are shown in Tables 11 and 12.

4.3.3. Results of the acoustic analysis
DFM does not have any significant differences in his F1 but his F2 differences are significant at $p = 0.02^*$, as shown in Figure 4. The results of the auditory analysis are corroborated by the acoustic analysis.

<table>
<thead>
<tr>
<th>Genre</th>
<th>Sociolinguistic interview</th>
<th>Radio interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narrative</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Soap box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific account</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>General account</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 10. Genre dispersions in sociolinguistic and radio interview with DFM.

<table>
<thead>
<tr>
<th>e</th>
<th>In-between</th>
<th>æ</th>
<th>n</th>
<th>Raising %</th>
<th>$p (\chi^2)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 sociolinguistic interview</td>
<td>8</td>
<td>1</td>
<td>33</td>
<td>42</td>
<td>21</td>
</tr>
<tr>
<td>S1 radio interview</td>
<td>23</td>
<td>8</td>
<td>20</td>
<td>51</td>
<td>61</td>
</tr>
</tbody>
</table>

We follow standard practice in labeling levels of significance with asterisks going from one (significant at the .05 level) to three (significant at 0.0005 or less).

Table 12. (ɛŋ) variable: results for DFM.

<table>
<thead>
<tr>
<th>e</th>
<th>In-between</th>
<th>ɛ</th>
<th>n</th>
<th>Raising (%)</th>
<th>$p$ (Fisher)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 sociolinguistic interview</td>
<td>24</td>
<td>2</td>
<td>15</td>
<td>41</td>
<td>63</td>
</tr>
<tr>
<td>S1 radio interview</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>9</td>
<td>56</td>
</tr>
</tbody>
</table>
Again the (æ) variable turns out to be extremely sensitive to differences between speech events. The radio interview features much more raised variants than the sociolinguistic interview. This might be explained by the fact that the (æ) variable has a history which the speech community is or at least was aware of at the time of the S1: it started out as a social shibboleth indicating maleness and Working Class at the same time (Brink and Lund 1975; Jørgensen 1980). This means that the raised short (æ) is available for a spokesman for the Working Class males as a token of solidarity or even membership, in particular when he is broadcasted as such. While the discussion of the two previous case studies seem to point toward the raised variant indicating more casual or relaxed style called forth by the relationship with the interviewer as an intimate stranger, this case seems to rest on a more simplistic interpretation of the raised variant's meaning potential as pertaining mainly to class and gender as speaker variables. To uphold both (types of) interpretations would be tantamount to suggesting that the (æ) variable is on a par with such long known and stereotypical variables as (ing) in the American context (Campbell-Kibler 2009, 2011) in having a very wide meaning potential indeed, partly depending on the gender and social class of the speaker at hand. The use of the variants of the (æ) variable

Figure 4. DFM’s F2 for the (æ) variable in the S1 recordings.
Note: Y-axis values are in hertz.

4.3.4. Discussion

Again the (æ) variable turns out to be extremely sensitive to differences between speech events. The radio interview features much more raised variants than the sociolinguistic interview. This might be explained by the fact that the (æ) variable has a history which the speech community is or at least was aware of at the time of the S1: it started out as a social shibboleth indicating maleness and Working Class at the same time (Brink and Lund 1975; Jørgensen 1980). This means that the raised short (æ) is available for a spokesman for the Working Class males as a token of solidarity or even membership, in particular when he is broadcasted as such. While the discussion of the two previous case studies seem to point toward the raised variant indicating more casual or relaxed style called forth by the relationship with the interviewer as an intimate stranger, this case seems to rest on a more simplistic interpretation of the raised variant's meaning potential as pertaining mainly to class and gender as speaker variables. To uphold both (types of) interpretations would be tantamount to suggesting that the (æ) variable is on a par with such long known and stereotypical variables as (ing) in the American context (Campbell-Kibler 2009, 2011) in having a very wide meaning potential indeed, partly depending on the gender and social class of the speaker at hand. The use of the variants of the (æ) variable
has to be seen in its situational and semantic context in order to be properly understood (Coupland 2007; Eckert 2008).

As for life span change, the S2 recording (2006) agrees perfectly with the raising values of both (æ) and (ɛŋ) in the S1 sociolinguistic interview. The Radio interview is the outlier – for the reasons discussed above.

4.4. Case study 4: varying the number of informants: single person interviews versus double interviews

BCL, a female working class informant born in 1960, and her sister, KPM, also from the working class but 5 years older, were in the S1 both interviewed separately and together. The recordings took place during 1987. When they were re-recorded in 2006 for the S2, this was also a double interview.

4.4.1. Genre dispersion

The genre dispersions for the two S1 single person interviews as shown in Table 13 are somewhat unusual in that there are a fair number of Gossip instances, particularly in the interview with BCL. Furthermore, both of them feature a number of the comparatively rare genre of Reflection. They are also quite long and this is reflected in the genre dispersions as well. We note that the S1 double interview is somewhat less dispersed than the S1 single person interviews in that the genre of Reflection is not represented at all although it was amply so in both single person interviews. This reflects the fact that when more people are being “interviewed” at once there is no single person who can make such claims to the floor which the genre of Reflection presupposes. In all other respects, the three S1 recordings are similar.

Table 13. Genre dispersions for three S1 interviews with BCL and KPM.

<table>
<thead>
<tr>
<th>Genre</th>
<th>Single person BCL</th>
<th>Single person KPM</th>
<th>Double interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soap box</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Gossip</td>
<td>13</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Reflection</td>
<td>6</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Narrative</td>
<td>3</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Specific account</td>
<td>6</td>
<td>18</td>
<td>13</td>
</tr>
<tr>
<td>General account</td>
<td>24</td>
<td>20</td>
<td>14</td>
</tr>
</tbody>
</table>

4.4.2. Results of the auditory analysis

For speakers BCL and KPM, the results for the (æ) variable are shown in Tables 14 and 15 and for the (ɛŋ) variable in Tables 16 and 17.
4.4.3. Discussion

The picture is relatively clear here. The (ɛŋ) variable is not particularly sensitive to type of recording but the (æ) variable is. The clear picture emerges when we compare the raising percentage of the single person interviews with that of the double person interview: the sisters simply converge on a common denominator in the double interview, both of them having significantly different values when they are interviewed singly and together; but in this case converging entails different directions of accommodation due to highly significant different values in the single person interview ($p = 0.0009$ (Fisher’s exact; two ways)). BCL has significantly less raising in the double interview compared to the single person session. In contrast, KPM had absolutely no raised or in-between variants at all in the single person session but she has close to the same value as her sister when they are interviewed together (remember if you please, that we merge raised variants and in-between variants in our measure of raising percentages!).

4.4.4. Results of the acoustic analysis

Figures 5 and 6 only show results for F1, because F2 did not manifest any significant changes. The figures compare BCL and KPM alone in S1 single person interviews and together in the S1 group session.

### Table 14. (æ) variable: results for BCL.

<table>
<thead>
<tr>
<th></th>
<th>ɛ</th>
<th>In-between</th>
<th>æ</th>
<th>n</th>
<th>Raising (%)</th>
<th>$p (\chi^2)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single person interview</td>
<td>9</td>
<td>2</td>
<td>35</td>
<td>46</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Double interview</td>
<td>1</td>
<td>6</td>
<td>63</td>
<td>70</td>
<td>10</td>
<td>0.0429*</td>
</tr>
</tbody>
</table>

We follow standard practice in labeling levels of significance with asterisks going from one (significant at the .05 level) to three (significant at 0.0005 or less).

### Table 15. (æ) variable: results for KPM.

<table>
<thead>
<tr>
<th></th>
<th>ɛ</th>
<th>In-between</th>
<th>æ</th>
<th>n</th>
<th>Raising (%)</th>
<th>$p (\text{Fisher})$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single person interview</td>
<td>2</td>
<td>7</td>
<td>73</td>
<td>82</td>
<td>12</td>
<td>0.0555 NS</td>
</tr>
<tr>
<td>Double interview</td>
<td>2</td>
<td>7</td>
<td>73</td>
<td>82</td>
<td>12</td>
<td>0.0555 NS</td>
</tr>
</tbody>
</table>

### Table 16. (ɛŋ) variable: results for BCL.

<table>
<thead>
<tr>
<th></th>
<th>ɛ</th>
<th>In-between</th>
<th>ɛ</th>
<th>n</th>
<th>Raising (%)</th>
<th>$p (\text{Fisher})$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single person interview</td>
<td>7</td>
<td>1</td>
<td>14</td>
<td>22</td>
<td>36</td>
<td>1.000 NS</td>
</tr>
<tr>
<td>Double interview</td>
<td>3</td>
<td>1</td>
<td>14</td>
<td>22</td>
<td>36</td>
<td>1.000 NS</td>
</tr>
</tbody>
</table>

### Table 17. (ɛŋ) variable: results for KPM.

<table>
<thead>
<tr>
<th></th>
<th>ɛ</th>
<th>In-between</th>
<th>ɛ</th>
<th>n</th>
<th>Raising (%)</th>
<th>$p (\chi^2)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single person interview</td>
<td>9</td>
<td>11</td>
<td>22</td>
<td>42</td>
<td>48</td>
<td>0.691 NS</td>
</tr>
<tr>
<td>Double interview</td>
<td>6</td>
<td>9</td>
<td>24</td>
<td>39</td>
<td>38</td>
<td>0.691 NS</td>
</tr>
</tbody>
</table>
Figure 5. BCL's use of F1 for the (æ) variable in S1 double and single interviews. Note: Y-axis values are in hertz.

Figure 6. KPM's use of F1 for the (æ) variable in S1 double and single interviews. Note: Y-axis values are in hertz.
The acoustic results do not corroborate the auditory analysis of convergence on a common value of raising, but the changes from the single person interview to the group session are in both cases highly significant: \( p = 0.000792^{***} \) for BCL and \( p = 0.003922^{**} \) for KPM.

4.4.5. Discussion

If we now compare the double interview from the S1 (1988) with the S2 double interview (from 2006), we get the picture in Table 18.

None of the sisters have changed significantly which is actually also true if we take the comparison to involve the single person interviews from 1987 instead of the double person interview. In 2006 the sisters would only agree to be interviewed together so we do not have any single person interviews to compare with.

Whichever way we choose to interpret this result, it makes a case for comparability. If we choose to have single person interviews as the basis of comparison in real time, we have to stick to this type of interview. Or put differently: if convergence is a factor we can at all control, this would be because convergence presupposes knowledge of what to converge to, and that knowledge is available with sisters but not – at least at the outset – with field worker strangers. This might conceivably change as the stranger eases him- or herself into the status of intimate stranger and it would be worthwhile to study whether there is a gradual convergence between interviewer and interviewee going on in all cases, in some cases or in no cases at all (for a suggestive approach cf. Sørensen (2014) and for a discussion of the role of convergence and accommodation in general cf. Auer and Hinskens (2005)).

4.5. Case study 5: group discussions versus single person interviews

This case study stands alone. It concerns the relationship between single person interviews and group discussion (à la focus groups). We have not performed any acoustic analysis\(^7\) and the informants are all young, in fact around the critical age period (15–16 years of age). The data are from Næstved. We recorded

---

\(^7\)Because of the cost-benefit ratio: there are few instances of variables and the hope of finding significant differences is hence not high. In contrast the cost of performing all the analyses would indeed have been significant!.

---

Table 18. (æ) variable: results for BCL and KPM in real time.

<table>
<thead>
<tr>
<th></th>
<th>e</th>
<th>In-between</th>
<th>æ</th>
<th>n</th>
<th>Raising (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCL S1 double</td>
<td>1</td>
<td>6</td>
<td>63</td>
<td>70</td>
<td>10</td>
</tr>
<tr>
<td>KPM S1 double</td>
<td>2</td>
<td>7</td>
<td>73</td>
<td>82</td>
<td>12</td>
</tr>
<tr>
<td>BCL S2 double</td>
<td>3</td>
<td>45</td>
<td>45</td>
<td>48</td>
<td>6</td>
</tr>
<tr>
<td>KPM S2 double</td>
<td>1</td>
<td>52</td>
<td>53</td>
<td>53</td>
<td>2</td>
</tr>
</tbody>
</table>

---
eight youngsters in both single person interviews and group recordings. These recordings, carried out in 2007, represent the LANCHART Centre's investment in the future. As an addition to the two generations of informants who were recorded twice, we identified a new generation, generation 3, to be included in the next generation of real time studies.

The format for the sociolinguistic interviews was the usual one but the format for the group recordings deviates somewhat. They start out with a brief section which serves to identify the informants in the recording equipment: they were allotted a track each on the recording device and the field worker asks the informants to count to 10 and say their name so that the future transcribers will know which person is on which track. A section on language attitudes featuring a self-identification follows. The theme of (attitudes to) language gradually subsides and the field worker presents a stimulus collage with pictures of icons from pop culture. This is used as the stimulus for the rest of the session and leads to discussions ranging from gender roles, sex, and drunkenness to confidences of having been referred to a psychologist. The field worker had strict instructions to withdraw from active participation as soon as possible.

The two groups have the same even gender distribution, two boys and two girls but in the first group session the field worker is a female, whereas in the second group it is a male. The two groups each feature a “star” in the sense that there is a skewed distribution of the floor with DJG, a girl, talking most of the time in Group 1 and EEH, a boy, talking most of the time in Group 2, followed by his mate MDM. These kids are all classmates and thus know each other quite well. Genre dispersion in the first group is as shown in Table 19.

The generalization here is obvious. When the young informants get together in a group, they gossip (about others), whereas they do not perform any other

<table>
<thead>
<tr>
<th>Genre</th>
<th>DJG single person</th>
<th>ECG single person</th>
<th>MTH single person</th>
<th>NJO single person</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gossip</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Specific account</td>
<td>12</td>
<td>9</td>
<td>6</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>General account</td>
<td>9</td>
<td>8</td>
<td>10</td>
<td>17</td>
<td>14</td>
</tr>
</tbody>
</table>

Table 20. Genre dispersions in single person interviews and group recordings; Næstved group 2.

<table>
<thead>
<tr>
<th>Genre</th>
<th>EEH single person</th>
<th>MDM single person</th>
<th>MTB single person</th>
<th>MUI single person</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soap box</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Narrative</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Gossip</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>Specific account</td>
<td>9</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>General account</td>
<td>13</td>
<td>11</td>
<td>14</td>
<td>3</td>
<td>16</td>
</tr>
</tbody>
</table>
genres than the two objective narrative ones in the single person interviews. Obviously, with a grown up field worker and an unknown youngster there is a challenge hard to overcome in stimulating the use of other genres than the two objective narrative ones. For the other group, the picture is as shown in Table 20. Here the generalization is that there are significantly more genres represented in the group recording, and it is notable that the group recording is where the more subjective genres abound. Only one informant had any gossip in his single person interview, and another one had two personal narratives; all four used mainly or solely the two objective narrative genres, General and Specific Account.

4.5.1. Results of the auditory analysis
For Group 1 we have results for both the (æ) and the (ɛŋ) variables, as shown in Tables 21 and 22.

From Table 21, there is one obvious generalization to be made: the informants all have more raised variants in the group recording relative to the single person interview. The difference between the figures for the sociolinguistic interviews and the group session is, however, only significant for one of them, notably the most talkative person in the group. Please note the low number of this highly frequent variable for the others.

**Table 21. Results of the (æ) variable for Næstved group 1.**

<table>
<thead>
<tr>
<th>Person</th>
<th>ɛ</th>
<th>In-between</th>
<th>æ</th>
<th>n</th>
<th>Raising (%)</th>
<th>p (Fisher)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DJG single person</td>
<td>39</td>
<td>39</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DJG group</td>
<td>11</td>
<td>29</td>
<td>40</td>
<td>28</td>
<td>0.0004***</td>
<td></td>
</tr>
<tr>
<td>ECG single person</td>
<td>36</td>
<td>36</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECG group</td>
<td>1</td>
<td>6</td>
<td>7</td>
<td>14</td>
<td>0.1628 NS</td>
<td></td>
</tr>
<tr>
<td>MTH single person</td>
<td>1</td>
<td>3</td>
<td>39</td>
<td>43</td>
<td>0.6873 NS</td>
<td></td>
</tr>
<tr>
<td>MTH group</td>
<td>2</td>
<td>1</td>
<td>20</td>
<td>23</td>
<td>0.1800 ns</td>
<td></td>
</tr>
<tr>
<td>nJO single person</td>
<td>41</td>
<td>41</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nJO group</td>
<td>1</td>
<td>8</td>
<td>9</td>
<td>11</td>
<td>0.1800 NS</td>
<td></td>
</tr>
</tbody>
</table>

We follow standard practice in labeling levels of significance with asterisks going from one (significant at the .05 level) to three (significant at 0.0005 or less).

**Table 22. Results of the (ɛŋ) variable for Næstved group 1.**

<table>
<thead>
<tr>
<th>Person</th>
<th>ɛ</th>
<th>In-between</th>
<th>ɛ</th>
<th>n</th>
<th>Raising (%)</th>
<th>p (Fisher)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DJG single person</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>12</td>
<td>92</td>
<td></td>
</tr>
<tr>
<td>DJG group</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>7</td>
<td>29</td>
<td>0.0095**</td>
</tr>
<tr>
<td>ECG single person</td>
<td>5</td>
<td>4</td>
<td>12</td>
<td>21</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>ECG group</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>MTH single person</td>
<td>3</td>
<td>2</td>
<td>8</td>
<td>13</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>MTH group</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>nJO single person</td>
<td>2</td>
<td>1</td>
<td>7</td>
<td>10</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>nJO group</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1.000 NS</td>
</tr>
</tbody>
</table>

We follow standard practice in labeling levels of significance with asterisks going from one (significant at the .05 level) to three (significant at 0.0005 or less).
The (ɛŋ) variable is considerably less frequent than the (æ) variable and since one person dominates the group in terms of the quantity of speech,\(^8\) there are no instances at all of (ɛŋ) for two of the four group members. Again, however, the tendency is clear: for DJG the difference between the result for the single person interview and the Group recording is significant, this time because she has fewer instances of the raised variants in the group recording. This result stands out. It shows that the (ɛŋ) variable, which in none of the other studies has shown any sensitivity to recording type, does indeed vary – at least for this young informant.

In view of the fact that there was an even greater difference as to genre dispersion in the case of Group 2, we look to see whether the phonetic results (we have only been able to code the (æ) variable) confirm the tendencies we have observed in Group 1. The results are shown in Table 23.

Here again we see that group recordings tend to create converging results. This is an artifact of the methodology. On the one hand, single person interviews with informants who are this young tend to feature little genre dispersion and if we want to mend this, we turn to group sessions – only to get skewed results. One of the youngsters dominates the scene and the others tend to converge toward him or her. It has to be noted, however, that the two dominant informants stand out as those who themselves manifest the most significant differences between single person interview and group session. So what do they converge toward – other than a perception of the Group recordings session as possibly an arena to display a certain persona? And we are back full circle to what these changes mean in terms of the social meaning of these two linguistic variables (Eckert 2001).

\(^8\)This is a familiar potential problem for this type of data: skewed distributions of the floor may make for skewed representations of informants’ production of linguistic variable occurrences.

### Table 23. Results of the (æ) variable for næstved group 2.

<table>
<thead>
<tr>
<th>Person</th>
<th>ɛ</th>
<th>In-between</th>
<th>æ</th>
<th>n</th>
<th>Raising (%)</th>
<th>p (Fisher)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEH single person</td>
<td>6</td>
<td>1</td>
<td>20</td>
<td>27</td>
<td>26</td>
<td>0.0014**</td>
</tr>
<tr>
<td>EEH group</td>
<td>8</td>
<td>2</td>
<td>2</td>
<td>12</td>
<td>83</td>
<td>0.3615 NS</td>
</tr>
<tr>
<td>MDM single person</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>11</td>
<td>55</td>
<td>0.5875 NS</td>
</tr>
<tr>
<td>MDM group</td>
<td>7</td>
<td>1</td>
<td>2</td>
<td>10</td>
<td>80</td>
<td>1.000 NS</td>
</tr>
<tr>
<td>MTB single person</td>
<td>2</td>
<td>1</td>
<td>16</td>
<td>19</td>
<td>16</td>
<td>1.000 NS</td>
</tr>
<tr>
<td>MTB group</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>7</td>
<td>29</td>
<td>1.000 NS</td>
</tr>
<tr>
<td>MUI single person</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUI group</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We follow standard practice in labeling levels of significance with asterisks going from one (significant at the .05 level) to three (significant at 0.0005 or less).
In terms of attention to content rather than linguistic form, the Group 2 session is apparently successful. The informants gradually take the opportunity to talk about things they seem not to have talked to each other about before. In a passage close to the end it transpires that at least three of them (the second girl does not say much during the entire session and does not contribute to this part) for various sensational reasons have been referred to a psychologist; nothing indicates that this has been talked about before. In another passage, which actually occurs when the field worker has left them alone for some minutes they start talking about sado-masochism. These are obviously what might be termed rich topics in the Labovian framework, cf. e.g. Rickford and McNair Knox (1994, 258ff; Rickford and Price 2013). A thorough analysis would have to contrast such passages to for instance the passages focused on language at the beginning to see whether the variants used differ, in other words whether the topics influence the use of phonetic variants and if so to which degree.

5. Summary of results

In all five case studies there was some significant difference between the sociolinguistic interview and its contrasting speech event whether this was of the type of another sociolinguistic interview, a radio interview or a group session. The auditory results do not always match the acoustic results (which was not to be expected with variables which have such diverse social meanings as the (£) and the (£ŋ)9) but that may only make things even more serious for proponents of taking the sociolinguistic interview as the only data collection technique worth its salt; whether we use only auditory or only acoustic methods we shall come up with the same result: there is a significant difference to be accounted for.

6. Concluding discussion

Sociolinguistics has developed alternative views on variation. Rampton (2001) distinguishes between four different perspectives on variation, three of which – including the Labovian one – consider language variation primarily to be a reflection of social structure. The fourth view, the so-called discourse view, maintains that speakers may also exploit language variation for social purposes, such as in identity work (this is in fact not foreign to Labov, as documented in his explanation of the variation in Martha’s Vineyard, see Labov (1972a, 28)). According to the discourse view, speakers have access to a set of linguistic (or in a wider sense, semiotic, see Blommaert 2005, 207) resources with which they associate meaning and values. By using features in given situations speakers align with, or attempt to align with, the meanings and value associations of the features. However, such meanings and values are perennially negotiable, and

---

9For a different take on this relationship but with more or less the same data, cf. Hansen 2010.
therefore liable to variation even in the given situation. Blommaert rejects the conversation analytic approach to situation and context, among other reasons because “contexts are not features of single texts but of larger economies of communication and textualisation” (2005, 57).

In multilingualism studies it has been acknowledged at least since Gumperz (1982) that speakers may use their access to linguistic resources to contribute to interaction with meaningful intentions. Gumperz’ distinction between “situational” and “metaphorical” code-switching is a case in point. Code-switching caused by a change in situational factors, such as the set of individuals participating in the interaction, or the place (cf. Fishman 1965), was different from code-switching in which the speaker by switching from one code to the other also would shift from referring to one set of values and meanings to another set of values and meanings.10

Discussions about data and representativity hinge on theoretical understandings of language. Language understood as resources, features, available to speakers as semiotic material leaves us with the understanding that speakers are always under observation, namely by their interlocutors, and the observer’s paradox is therefore in the best case negligible. In this understanding, the task of sociolinguistics becomes to compare data obtained under different circumstances and establish theories about the causality of regularity in variation. This is precisely what we do with this paper. We have a wide range of data collected systematically through sociolinguistic interviews with attention to individuals’ age, geographical background, socioeconomic status group, gender, and time of recording. We can establish with some certainty the parameters of variation across all these variables in one given type of situation. The open question is to what extent this one type of situation in any relevant way allows for a relevant range of variation to happen, and for a relevant set of analytical procedures to be administered by us as sociolinguists. To study this question we analyzed a supplementary set of data obtained from the same individuals, but under different circumstances, i.e. in situationally different data. We raised the question Will a change in situation lead to different types of language variation which cannot be brought out in sociolinguistic interviews?

The answer is yes. In all cases studied there was at least one variable (in four out of five cases the (æ) variable) which varied with situation. The conclusion has to be that the sociolinguistic interview must be discussed much more and supplemented by other types of data collection methods if we want to generalize about the reasons for individual patterns of variation. One obvious consequence would be for sociolinguists in general to pay much more attention to the circumstances under which data have been collected and to specify these in reasonable detail as part of any empirical paper.

10Later studies in code-switching (for instance Auer 1999) have found that code-switching can be related to conversational intentions and factors in even more complex ways.
One other consequence is that we must develop new ways of connecting dimensions of situation to dimensions of variation. We have exemplified our results in terms of phonetic variation in order to stress the mediated character of variation. Under any theory, the distance between situational factors and linguistic factors will be following the hierarchy that pragmatics varies directly with (perceived) situation while determination gradually weakens as we pass to semantics, syntax, and finally phonetics. And yet we have shown that there are phonetic consequences of varying the situation however slightly.

In one sense this should not come as a surprise to any sociolinguist since this was the reason for creating (and defending it contra e.g., Wolfson 1976) the particular type of speech event “the sociolinguistic interview” in the first place. After all, if field workers could not vary the situation inside the speech event of the sociolinguistic interview it would lose its raison d’être. But if it turns out that sociolinguistic interviews are just one kind of speech event and may not be the general instrument that any other situation could be referred back to, we might start rethinking our data collection altogether.

We might briefly pause here and discuss present day alternatives to the sociolinguistic interview. Why bother with a tool which was invented more than 50 years ago? The reason is straightforward: in the words of a contribution to a recent collection of papers which seems to have reached the status of being accepted as the standard textbook for courses in how to do sociolinguistics,11

Despite the continuous expansion of sociolinguistic data collection techniques, The Sociolinguistic Interview as originally developed for Labov’s (1966) study of New York City’s Lower East Side remains ideologically central to the field. Broadly adopted is Labov’s early statement about good data … (Becker 2013, 91)

What Becker refers to here, is Labov’s statement “No matter what other methods may be used to obtain samples of speech (group sessions, anonymous observation), the only way to obtain sufficient good data on the speech of any person is through an individual, tape-recorded interview” (1972a, 209).12

There may be other reasons for this status: the field has begun to address the issue of real time change (Bailey 2002; Wagner and Buchstaller 2017) and since most S1s used sociolinguistic interviews as the standard format for their data collection, most S2s are more or less forced to follow suit. Alternative options all have their own problems: one tempting alternative is self-recording, i.e. letting the informants themselves record without any sociolinguist present to make them feel uneasy (Schøning and Møller 2009). However, the advantages of not having a professional to interfere are often squandered by having an amateur to do the recording instead: bad sound quality, too much background noise, ethical problems with friends of friends being recorded without permission and so on and so forth. Sometimes self-recordings are valuable corrections for the

---

11Judged by its second edition being published already 4 years after the first (March 2017).
12Cf also Feagin on sociolinguistic interviews as “the primary method of quantitative sociolinguistics” (2002, 26).
sociolinguist, but not valuable material for acoustic measurements. You cannot get everything. Furthermore, much of what was taken for granted in the sociolinguistic interviews, such as knowing what was referred to or pointed at during the recording, is lost to, or is at the very least very difficult to retrieve for, the analyst. But still: self-recordings can be very “useful in studies occupied with documenting and explaining how speakers employ their linguistic resources in order to socially navigate through their everyday interactions and activities” (Schøning and Møller 2009, 268) but it is not an alternative.

Thus there are good reasons to suppose that sociolinguistic interviews will remain the gold standard data collection device for some time – for quantitative, Labovian-style variationist sociolinguistics. We are fully aware that this is not so for ethnographic-style qualitative interactional sociolinguistics of the Hymes-Gumperz-type but that is precisely the point. Our conclusion on the basis of the evidence presented above is clear: we do not wish to discredit or forego the gold standard, on the contrary. But we simply cannot privilege any situation as the basic one and consequently view all other situations as “shifts away from” or “in the direction of” the basic one. Just as we cannot privilege any strand of sociolinguistics or discard any method beforehand. Instead, we should use all available methods to study the (possibly wide) limits to what is in the repertoire of various speakers. They might even vary as to how wide their repertoires are (Rickford and Price 2013, 166).

In short: we have underestimated intra-individual variation. All methods should be combined in the new quest for its limits.

Acknowledgements

The research reported here has been financed by the Danish National Research Foundation through its grant DNRF 63 to the LANCHART Centre 2005–2013 which we gratefully acknowledge. We wish to thank our colleagues Marie Maegaard and Jacob Thøgersen for invaluable advice on the original version. The first author is grateful to the editors of Acta Linguistica Hafniensia, in particular Hartmut Haberland and Janus Mortensen, for the encouragement to publish a renewed version and for numerous improvements.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This work was supported by Danmarks Grundforskningsfond [grant number DNRF 63].

13Guy and Cutler (2011) is a case in point. They use the insights created during 40 years of research into coronal stop deletion to argue that some speakers deviate from their “basic” value in one direction (and hence are viewed as “performing” a speech variety) while others do not (and consequently are seen as authentic). We propose to look at the total range of variation available to a person, i.e. his or her repertoire, rather than to use one or the other situation as basic.
Notes on contributors

Frans Gregersen is the former director (2005–2015) of the LANCHART Centre (Language Change in Real Time) of the University of Copenhagen, Denmark. He now serves as a professor of Danish language at the same university and directs the Danish Voices in the Americas project.

J. Normann Jørgensen was a professor of Danish as a second language at the University of Copenhagen. He died on 29 May 2013. He was an indispensable co-author in the first round but obviously not in the second. We dedicate this paper to his memory.

Janus Spindler Møller is an associate professor at the Department of Nordic Studies and Linguistics. He took his PhD in 2009 with a thesis on polylinguism in Køge, a result of the replication of the Køge project which he carried out as part of the LANCHART study. He was appointed associate professor in 2014.

Nicolai Pharao took his PhD with a thesis on “Consonant Reduction in Copenhagen Danish” in 2010. He has been an associate professor at the Department of Nordic Studies and Linguistics of the University of Copenhagen since 2013.

Gert Foget Hansen took his PhD with an experimental study of the Danish stød in 2015. He is a post doc and the officer in charge of all technical matters including digitalization with the Danish Voices in the Americas project.

ORCID

Frans Gregersen http://orcid.org/0000-0002-5175-3673
Nicolai Pharao http://orcid.org/0000-0002-6828-9061
Gert Foget Hansen http://orcid.org/0000-0002-5837-9039

References


