A variable, a style, a stance: Word-final *-er* and ethnicity in Australian English

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Abstract

One of the most salient features of the migrant 'ethnolect' in Australian English is the pronunciation of word-final {*-er*}. This article presents data from sociolinguistic interviews that support the view that there is a difference between Anglo and non-Anglo speakers, and that this difference is most pronounced in Greek speakers. The variant the Greek speakers tend to use more than the Anglo speakers is backed and lengthened, and commonly used in utterances with final High Rising Tone (HRT). There is some evidence that Greeks are leading a change to a more backed variant, through the solidarity-focused indexicalities of this variant. I show that length, backing, and HRT make up a style of speaking that I call New Australian English, and show that this style is not simply a Greek style, but one which creates a solidary stance with the interlocutor. These finding are significant for understanding the spread of new linguistic features, and how the meanings of some linguistic variables contribute to linguistic change.

language variation and change, ethnicity, Australian English, indexicality

Introduction

In the last decade or two of the twentieth century, Australians began to notice a new way of speaking English in their country that seemed to be more prevalent among native English speakers in migrant communities. This 'ethnolect' is primarily associated with speakers of Greek and Italian background, but it has also been associated with more recently established migrant communities, especially speakers of Lebanese background. One of the most salient features of this 'ethnolect' is the pronunciation of word-final {*-er*} in multisyllabic words, as in *brother*. The 'migrant' variant of the variable (er) has been impressionistically described as more open (see below), a pronunciation that has also been described for more 'vernacular' or 'Broad' forms of Australian English generally (see Mitchell and Delbridge 1965, Horvath 1985). However, no instrumental variationist sociolinguistic analysis has been performed to determine whether this form is actually characteristic of non-Anglo-Australians, what its linguistic characteristic is, and whether all non-Anglo groups use the non-Anglo variant.

This article presents data from sociolinguistic interviews that support the view that there is a significant difference between Anglo and non-Anglo speakers, and that this difference is most pronounced in Greek speakers. The variant the Greek speakers tend to use more than the Anglo speakers is backed and lengthened, and commonly used in utterances with final High Rising Tone (HRT). There is some evidence that Greeks are leading a change to a more backed variant, through the solidarity-focused indexicalities of this variant. I show that length, backing, and HRT make up a style of speaking that I call "New Australian English," and show that this style is not simply a Greek style, but one which is available to non-Greek-Australians as a linguistic resource for creating a solidary stance with the interlocutor.

These findings are significant for understanding the innovation and spread of new linguistic features (even those of which the community is somewhat aware), and how the *meanings* of some linguistic variables contribute to linguistic change. While some linguistic changes (such as mergers) clearly travel through the speech community in a fairly mechanical manner, other changes take quite complex social and geographic paths through a community, showing patterns that differentiate speakers by class, sex, and other kinds of 'identity variables.' However, as

Eckert (2000) has shown, these paths are not simple nor identical in every instance. They travel through the community in the way they do because the variants take on abstract meanings . Some groups use these indexicalities to help create their identities, while others avoid them. Moreover, Eckert shows that such meanings change and mutate as the new forms become more widespread and their meanings become the subject of wider and wider consensus. This article supports Eckert's view by showing how one variable is used in the Sydney speech community, and how the meanings of the variable are beginning to change as the feature becomes more widely available to the entire speech community. However, I argue that the best way to understand these shifts is not simply in terms of relatively enduring personal styles (as Eckert does), but in more atomistic terms of stance. In this view, personal styles are composed of a set, or repertoire, of stances, and a way of speaking represents not simply a personal style but a stance that a person tends to adopt repeatedly over time (and becomes part of their habitus, Bourdieu 1990:52-66). Because some stances are more favored by one group than another, this gives the appearance that a linguistic item directly indexes (in Ochs' 1992 sense) that group, where in actuality it also, or primarily, indexes a stance (see Kiesling 2003).

Before presenting the data and this argument, I will first give some background on the "New Australian English" (NAE) that has been identified by several researchers, and the linguistic forms proposed for it.

Migration and New Australian English

Linguists and lay writers have recently remarked on what they feel is an entirely different variety of speech in Australia spoken by recent non-Anglo migrants, particularly people of south European and Middle-Eastern background. Some have even given it a name, perhaps based on the name that speakers themselves have for it – "wogspeak." I will use a more neutral term here, given the problematic and political nature of naming varieties. Such specific naming reifies such varieties into entities that may not have existed previously, thus creating the object by studying it. In other words, the fact that I and others are studying this New Australian English (NAE) as I shall call it, is based on a cultural Discourse of migration and difference that is at the start as much about Australian society and ideology as it is about language. When I refer to NAE, this reference

should thus be taken as a reference to this social and linguistic construction, with skepticism permanently hanging from the acronym. I use "new" deliberately, as opposed to "migrant" or "ethnic", for two reasons. First, by using the latter terms I would be reifying it as a variety, and as a variety exclusively used by migrants and non-Anglos, which I do not believe to be the case. I do believe, however, that many of the features that migrant groups are using more than Anglos will influence Australian English more generally, and in that sense "New Australian English" is not just recent a recent development but the future sound of Australian English.

When I first arrived in Sydney in 1996 from the US, some of the first things I noticed were a wide variety of ways of speaking Australian English, and a strong Discourse around ethnic difference. I came to learn that these differences and Discourses were intimately tied together and recycled in Australia, as it was a topic that invariably arose in sociolinguistics class discussions around language variation. In addition, a stylized use of the features of such "wogspeak" were common in public performances with ethnicity as a central theme in Sydney in the 1990s. One very popular venue was the "Wogboys" plays, which were humorous musicals performed by a group of non-Anglo actors who played on stereotypes of different ethnicities to create their humor. These productions were probably partially responsible for the reclamation of the term "wog" from a derogatory term to an in-group term now used to claim a common migration experience and background. But some of this reclamation is no doubt also due to the public Discourse of multiculturalism in the 1980s (which has been under increasing attack since 1996), in which the government sought to reverse years of discrimination toward both migrants and aboriginal Australians by building public support for a multicultural Australia. Such a Discourse included aspects of language planning which began to value community languages as a resources (see Clyne 1991). These reforms probably pre-date the Discourse of multiculturalism, although they may have been able to come out from the 'underground' in the more liberal context. The important fact is that ethnicity, and especially migrant ethnicity with a break between Anglos, non-Anglo migrants, and Aboriginal Australians (whose case I will not address here; see Malcom 2000), has been a central organizing feature of social Discourses in Australia in the last two decades, and language variation has played a part in that Discourse.

Earlier evidence of earlier ethnic differences in Australian English were central to Horvath's (1985) findings in her path-breaking study of Sydney English. This study was probably the first to remark on ethnic differences in Australian English (previously Australian English was thought to have three or so 'sub-varieties' usually seen on a continuum from "Broad," the most 'vernacular,' to "General," and to "Cultivated," the most 'standard'). While not suggesting that there was an actual 'ethnolect' in Sydney English, Horvath's sample included Anglo, Greek, and Italian speakers and found that ethnicity was an important source of (non-categorical) differences in Sydney English. Even more important, Horvath found that Greek and Italian speakers were leading changes away from the ends of the Broad-General-Cultivated (BGC) continuum, toward the General variety. In other words, Horvath found that there was at once an advance of changes in Australian English, but also a reversal away from new variants. This in some senses presents a paradox, because we would expect most of the changes to move forward. One question left open by Horvath's study is whether the reversals she found, which were led primarily by young Greeks and Italians, were only temporary. Another explanation, however, is that the changes that were and are underway in Sydney, especially those associated with non-Anglo ethnicities, are not easily categorized in the BGC continuum. (The data in the this article are thus measured without a pre-existing continuum in mind, and will use acoustic measurements, which are less value-laden than something such as the BGC continuum.[i])

While Horvath was the first to use a variationist methodology to study the relationship between language change and ethnicity in Australia, Michael Clyne had been focused on the speech of migrant groups for several decades before Horvath's study, but his focus had been much different than Horvath's. In addition to his classic works on language shift in migrant communities (Clyne 1991), Clyne has focused on features of the migrants' ancestral language (for want of a better term) that make their way into their English, not only in the first generation, but also in second and third generations.[ii] Most recently, Clyne, Eisikovits, and Tollfree (2000) have used recordings of spontaneous speech to investigate aspects of 'ethnolects' in Melbourne English, particularly Greek, Jewish, and German varieties. The advantage of these data are that they were recorded by the study participants themselves in the absence of researchers, providing language that is less monitored and more in-group. Clyne et al. briefly describe several differences in all three groups;

the description of the features of the Greek 'ethnolect' is closest to that discussed more widely in the speech community in Sydney This description is auditory and qualitative, and not contrasted with comparable data from the Anglo community. That is, the differences are based on the impressions of the researchers, not any hard facts about the language. Their findings remain suggestive, however, and indicate that there are likely to be such differences in ethnicity in both cities.

Most recently, Jane Warren (2001) has written about this variety from a cultural and linguistic perspective. She cites several interviews with Greek Australians in Melbourne, and especially with Greek Australian actors who have been in the business of portraying Greek Australians in television and stage. She also cites several examples (2001:128) that provide strong evidence for a cultural Discourse of "wogs," and even that this style can be turned on and off at will.

There is thus ample evidence from a number of sources that there are some differences between Anglo and non-Anglo speakers of Australian English, and that some speakers are aware of this difference. But these studies leave some significant question unanswered:

> **Linguistic description**: While there has been much talk and observation of this variety, and claims about the features included in the variety, there has been no systematic description of it. Is indeed a coherent variety?
>
> **Sociolinguistic variation**: There been no study that compares purported speakers of this variety with similar Anglo speakers. That is, do the non-Anglos really speak differently from working-class Anglos living in the same or similar suburb/neighborhood?
>
> **Change**: Are the features spreading to the wider population, are are they remaining only in the speech of non-Anglos? Are non-Anglos intensifying the differences if the forms are not spreading to the Anglo community?
>
> **Indexicality**: What meanings do these features have? Are they used as "acts of identity" (LePage and Tabouret-Keller 1985) or for other purposes? Warren (2001:130) suggests that the linguistic forms of such a variety provide an important identity meaning for its speakers:

> The second generation is experiencing the challenges of finding themselves in two cultures, in two languages. … [F]or some second generation youth, this tension is expressed through a new voice which fuses and transforms this linguistic and cultural dualism to create a new way of speaking. The new voice has its own rewards, and perhaps its own constraints.

Migration in Australia

Cultural Discourses of ethnicity in Australian thus provide a number of axes on which ethnicities may be located. These Discourses have been present in Australia from the time it was founded, when Aboriginal peoples were considered by law to be non-human, and Irish transportees were differentiated from the English. At the beginning of the 21st century, Australia still relies on migrants to keep its population and labor force growing. But in the last thirty years or so a marked change in migration has occurred; as recently as 1970, the "white Australia" policy restricted migration from Asia and the Middle East . During this time, non-Anglo migrants came mostly from the Mediterranean and Eastern Europe, especially Greece, Italy, and the Balkans. After the White Australia policy ended, one of the first major waves of migration from Asia was made up of refugees from the Vietnam war and the Lebanese war in 1982 also prompted a large number of migrants from that country. There are now significant migrant populations from all parts of the world, but migration from Asia and the Middle East has had, for the Anglo Australian population, the most striking impact on Australian society in the last twenty years. The federal government in the 1980s had an explicit policy and official Discourse of 'multiculturalism,' which, in contrast to the assimilationist pre-1970 era, tried to affirm and celebrate the new cultures in Australia. Migration remains one of the most sensitive topics in Australian politics, as witnessed by events surrounding the last federal election, in which it is believed by many that the government was re-elected to a significant degree based on an anti-immigrant stance.

There are thus a number of 'identity axes' on which migrants might situate themselves, depending on the social Discourse in which they are situated. There is a Discourse of migrant and non-migrant, which is in actuality a discourse of Anglo and non-Anglo (that is, English-speaking migrants from the UK, New Zealand, North America, and South Africa are not placed into this

migrant group in this Discourse; these groups in fact comprise the majority of all migrants to Australia). This is probably the dominant Discourse around migration. There are Discourses that recognize differences among non-Anglo migrants, however, probably more so within these groups. Thus identities could be based on region such as East Asian, South Asian, Middle Eastern, Eastern European, Pacific Islander, etc. or on nationality such Greek Italian, Vietnamese, Thai, Polish, etc. There is also a commonality among Australians who are children of migrants, as they find they have common experiences, especially those that address negotiating two different cultures in one place. Finally, there is a cross-cutting issue of class, although most non-Anglo migrants, at least for the first two generations, tend to be working class. Even if they later acquire education, occupation, and incomes that would indicate a higher class, they often stay near their neighborhood of birth and retain many of the practices of working-class life that differentiates them from their Anglo peers.

When metapragmatic Discourse (Silverstein 1993) turns to 'wogspeak,' all non-Anglo and non-Asian migrants tend to be seen as the group who speaks this variety, with Australians of Greek and Italian background as the most prototypical in this group (it seems that dark-skinned and dark-haired migrant groups, exclusive of those of sub-Saharan African phenotype, are the most likely to be identified in this group).

Proposed features of New Australian English

There has been some speculative and impressionistic descriptions of NAE, but little empirical data to support these descriptions. Clyne, Eisikovits and Tollfree (2000), as noted above, carried out an auditory study that describes the presence, but not the frequency, of the following features in Greek speakers in Melbourne:

1. rounded front /u/;
2. /ə/ is realized as [ɛ];
3. voicing of voiceless stops;
4. aspiration of /k/;

5./θ/ realized as [t] and /ð/ as[d]

6./ɪə/ realized as [ia] in words like *here*

The final feature is related to {-er} as the open variant of schwa can be seen as analogous to the open variant of (er). Another variant in Australian English is the monophthongizing and raising, so that *here* is pronounced [hi], which complicated the interpretation of monosyllabic words ending in /ɪə/. Similar features are suggested by Warren, but again these are auditory reports from one speaker, albeit one who is likely to be a linguistic icon in Eckerts' (2000) sense:

1.fronted /u/;

2./θ/ realized as [t] and /ð/ as[d];

3.High Rising Tone (rising final intonation on indicative clauses);

4.Open realization of {-er}, as in *better*, which becomes [bɛɾa] (with variation in the /t/ as well)

(er) is the linguistic feature most consistently cited as characteristic of NAE, and it is therefore a likely starting point (the fronted /u/ is also a likely candidate, and this does seem to pattern by ethnicity, as noted in Kiesling & Borowsky 2001, forthcoming). In addition, High Rising Tone is also often cited; Horvath 1985 and Guy et al. 1986 both argue that this form is characteristic of non-Anglo groups. Below I will present data that concurs with these observations regarding HRT, and in fact argue for a connection between HRT and (er).

Corpus

The corpus on which this study is composed of interviews performed in 1997-1998 by Ouranita Karadimas, a Greek woman who was at the time a student at the University of Sydney, and was taking a leave of absence from a long-time secondary school teaching career. She is a resident of the area in which the interviews were performed and the sample began with acquaintances in her social network, and was built from referrals from the initial contacts (I will address this factor

later in the article). Interviews were designed in the Labovian format (Labov 1984), with question modules adapted for the Australian context.

The area in which interviews were carried out is a multiethnic region of Sydney which encompasses the band of suburbs bounded by Auburn in the east and Fairfield in the West, dipping into the Bankstown area. Migration to the Auburn/Fairfield area in the past decade or so has been extensive. The 1996 census reports that in Fairfield, 53.5% of the population was born overseas, and 51.5% in Auburn. In addition, in Fairfield, 64.1% spoke languages other than English at home, and 62.6% in Auburn. The majority of the overseas-born population in these suburbs are thus from non-English speaking countries.

The sample includes native speakers of Australian English from five ethnic groups: Anglo, Greek, Italian, Lebanese, and Vietnamese (because no male Vietnamese were interviewed, the results for this group are not presented here). All of the non-Anglo speakers are second-generation Australians (first native-born generation). I have chosen the groups so that there is a differentiation as to how ‘established’ each non-Anglo migrant community is, with the first major wave of Greek and Italian migration much earlier than the those for the Vietnamese and Lebanese.

As many informants have said in their interviews, Auburn and surrounding suburbs were working-class Anglo-dominated communities until the 1970s. The changes to population began in the late 70s to early 80s with an influx of Lebanese, Turkish, and Vietnamese populations. Many Anglos in the area, as well as members of the more 'established' ethnic groups (i.e., Italian and Greek), have asserted during the interviews that living standards and the general image of the place have taken a general downturn since this recent wave of migration. Some talk of newer migrants turning Auburn into a "Persian bazaar" full of junk shops, food shops, and kebab shops. They also claim that local schools that once used to have solid academic standings are turning into poor quality schools, where the focus is on teaching the immigrant children English. Thus there is a strong sense by many Anglos that their children are less catered for, and that schools are geared towards 'new' migrants. The newer groups, however, have a more positive outlook and generally see the area as a good one in which to live. It is clear, then, that migration to this area is a topic which is relevant to the people who live there, so these contiguous suburbs are an ideal place to

investigate how the second generation of migrants learn Australian English, whether they use variation as an ethnic identity marker, and whether the local Anglo population is using linguistic resources to differentiate themselves from different migrant groups.

Data analysis

(er) data has been compiled for 21 speakers, chosen randomly from the corpus but in order to have at least 3 speakers in each cell, except for the Italian cell. The corpus is thus made up of 11 men (3 Anglo, 4 Greek, 3 Lebanese, and 1 Italian) and 10 women (3 Anglo, 3 Greek, 3 Lebanese, and 1 Italian). These speakers were included because their complete vowel systems had been analyzed, and the (er) could thus be compared meaningfully across speakers.

Coding

Ten instances of different words, if possible, were coded for each speaker. No more than three repetitions of the same word were used for any speaker. The first two formants were measured, usually in the center of the vowel, using LPC analysis. The length of the (er) segment, the preceding and following phonetic environment were also recorded. Because one of the claimed features of NAE is Australian High Rising Tone (Guy et al. 1986), the presence of this feature in co-occurrence with (er) was also noted for each token. Class of speaker was coded based on a composite class score that included occupation, income, education, and type of housing and housing ownership.

Finally, style was coded using a system that codes the kind of 'Discourse Type' being made by the interviewee. This system was designed to capture some of the cross-interview applicability of Labov's (2001b) system, but to take into account Eckert's (2001:120) criticism that different kinds of units are used for each part of the style system. The categories and their characteristics are given in Table 1.

Answers	All answers are characterized by the fact that they can clearly be tied to a question, or a first pair part in an adjacency pair that otherwise requests the interviewee to give answers
Factual Answer	A second pair part that completes the open proposition created in the first pair part.
Opinion Answer	A second pair part part that expresses a personal opinion invited in the first pair part, such as, "Do you like living here?"
Conversational Answer	This type of answer is one not easily characterized as opinion or factual. They do not close off the adjacency pair.
Narrative	Speech that represents events ordered in time. Clauses describing the event are ordered based on the event.
Conversation	The residual category that cannot be clearly seen as a direct answer, and leads to talk by the interviewer.
Counting, Reading Passage, Word List	These are categories in which a standardized speech production is specifically requested for recording.

Table 1: Discourse Types (style) used in coding.

Results

If the main characteristic of NAE is a more open (er), then the F1 should be higher for non-Anglo speakers. This was taken as the main hypothesis, although based on my own hearing I also suspected that F2 may also be implicated, with non-Anglo speakers using a more back articulation. Note that in Labov's (1994:258) method for determining openness, however, articulations that are both phonetically lower and a more back articulation would count as more open phonologically. Multiple regression analysis was used to determine what factors significantly affected F1 and F2, and to what degree. Regression results are listed in the appendix.

Separate regression runs were made for men and women because of the effects of vocal tract length. A normalization procedure was not used for several reasons. First, women always have a higher coefficient than men for both formants in multiple regressions based on data normalized using a point-normalization procedure (Labov 2001a, Neary 1977). This pattern was true for measurements of other vowels as well, which were measured because they were needed for the normalization procedure. This result by itself does not present problems; it could be that women always have a fronter (higher F2) and lower (higher F1) articulation for every vowel. However,

Perry, Ohde, and Ashmead (2001) show that even after pitch and biological characteristics are taken into account, pre-adolescent girls have higher formant values than boys, and that this difference is used by listeners to identify a speaker's gender (a result replicated by Curtin and Kiesling 2003). These facts taken together suggest that it is at best unclear if there are purely biomechanical characteristics that are being normalized in any procedure. I thus follow the practices of John Harrington and his colleagues at Macquarie University who eschew normalization because of the possibility that it introduces unpredictable and unknown distortions into the data (see Cox 1996, Watson and Harrington 1999).

Categorical variables such as ethnicity, discourse type, and the presence of HRT were converted into dummy frequency variables (see Agresti and Finlay 1997:449, also Labov 2001a).[iii] In the first runs, the only ethnicity variable was +/-Anglo, so that the Anglo group was in effect compared against all non-Anglos as a group. For men, there were very few non-linguistic significant effects; for F2, Anglo was selected as significant to the model, with Anglos having a more front articulation than non-Anglos, but the p value was fairly high at 0.13 and is thus suspect. For women, there were consistent effects for both HRT and Narrative Discourse Type, both of which had lowering and backing effects. The only ethnic differences for women were a higher F1 (lower articulation) for Anglos (which goes opposite the hypothesis that non-Anglos have a more open articulation), as well as small effects for age (younger is lower articulation) and class (lower class score has a lower articulation). In sum, on the question of ethnicity, there are few differences when Anglo is compared to the non-Anglo group as a whole. This result suggests that either there is no NAE 'ethnolect,' or that it is more specifically used by a particular non-Anglo group. In order to test the latter possibility, further regressions were run with Anglo as the residual category and each ethnicity entered into the model as a separate variable.

The results for these second regressions are given in Table 2. Each cell of the table contains the factors that were significant ($p<.05$). These show similar effects overall, except for the ethnicity factors. For F1, the patterns for men and women diverge, especially with respect to Italian speakers, who are more open in the male group and less open in the female group. This result is due to the fact that there is only one Italian speaker represented in each group. If these speakers are discounted, then Lebanese male speakers are more open than Anglo male speakers, and Greek

female speakers are *less* open than Anglo female speakers. Note that the length of the segment is predictive of openness, which is not surprising since a more open articulation takes a longer time to arrive at the target jaw position. I will return to the effect for length below.

Dependent	Male Speaker	Female Speakers
F1 (more open)	Italian, Lebanese lower class Conv. Discourse Type length	(Greek and Italian *less open*) Narrative Discourse Type, length HRT
F2 (more back)	Greek upper class younger	 Narrative Discourse Type HRT

Table 2: Significant Factors in four a multiple regression analyses.

For F2, Greek men are significantly more back than all other men, as are more middle class and younger men. Finally, HRT and narrative Discourse Type are again significant for women, even though there is no difference in the amount of (er) with HRT between men and women. The only possible change therefore looks to be the backing in the men. In sum, there is a strong effect for length and HRT, but no consistent effect for ethnicity.

However, a closer look at the data with these results in mind provides strong evidence for a difference in the Greek speakers, but one which is not solely dependent on the openness of (er). Figure 1 shows very little consistent pattern for men and women by gender. Lebanese women have higher values, but Italian men do.

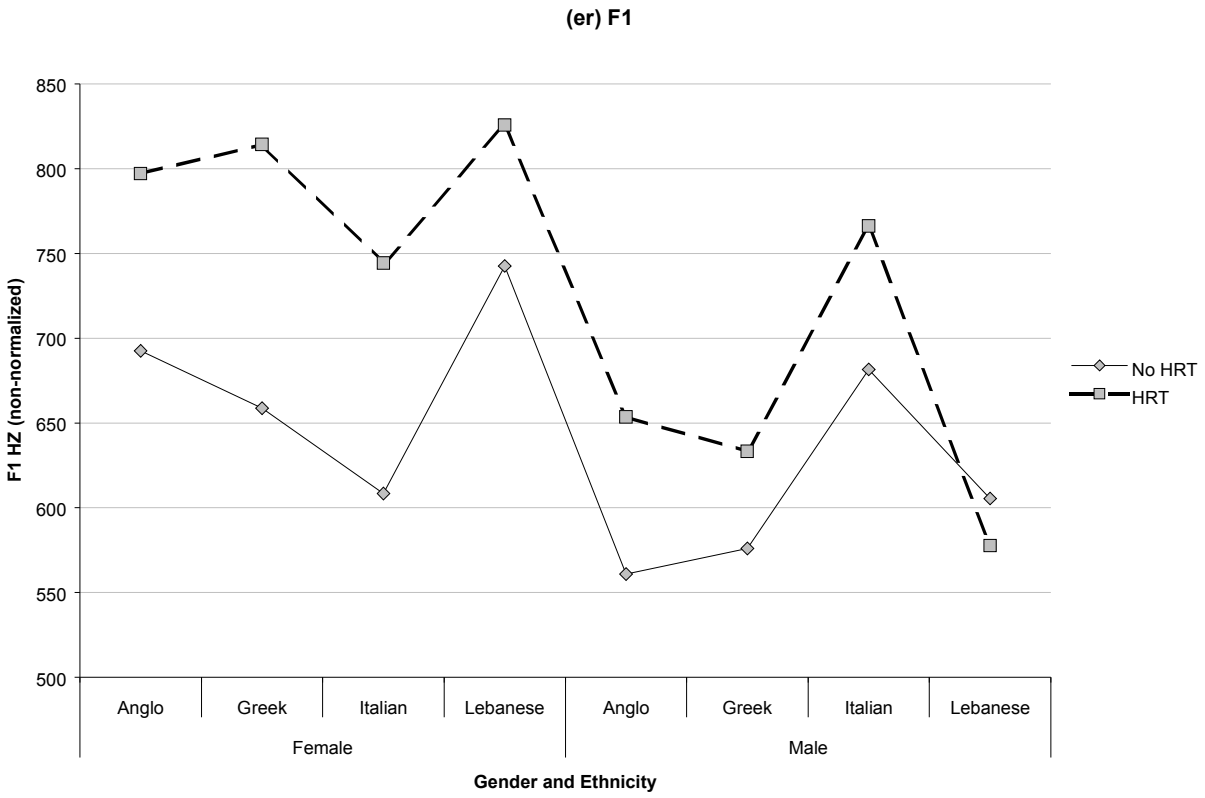

Figure 1: F1 by ethnicity, gender, and HRT

Figure 2, however, shows that F2 has a more consistent patterning for men and women: Greek-Australian speakers are the lowest and most back, followed by Italians, Anglos, and Lebanese. Tokens uttered in the context of HRT are lower, and the ethnicity patterning is most regular for HRT tokens. This result suggests that the main ethnic effect at work in terms of vowel quality is backness rather than simply openness.

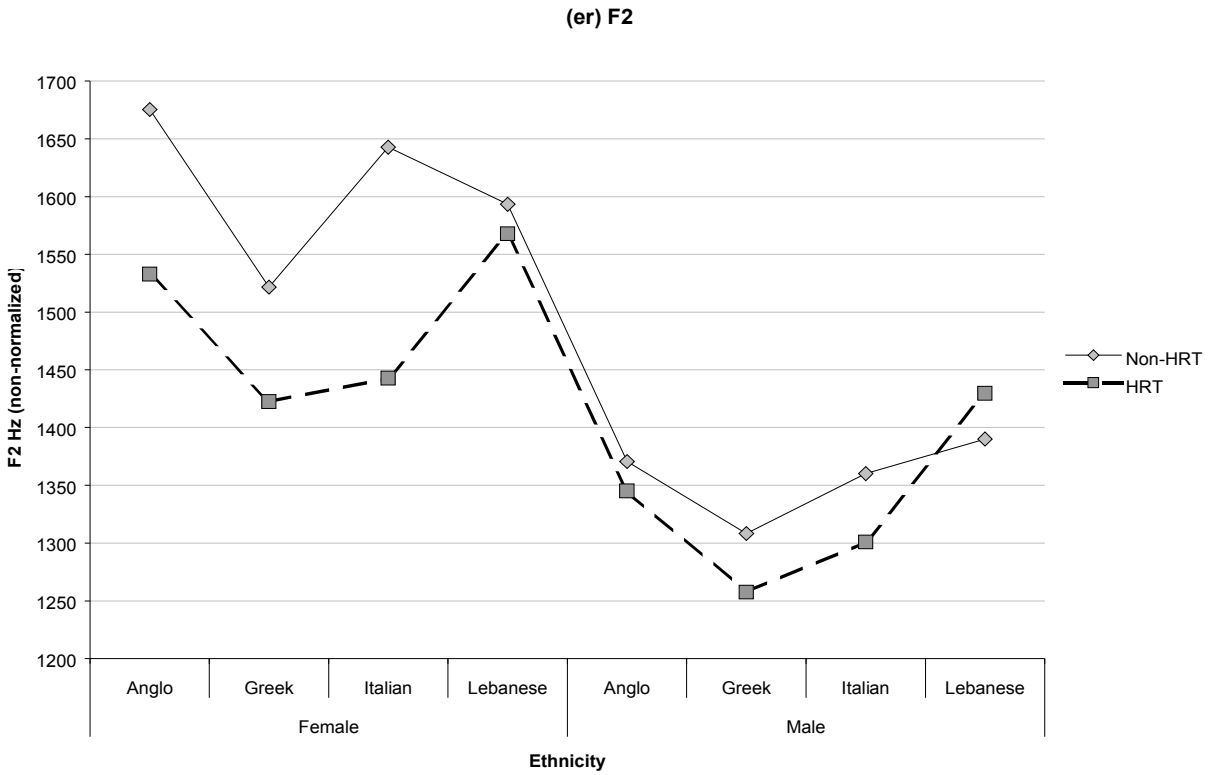

Figure 2: F2 by ethnicity, gender, and HRT

These effects can be seen even more clearly in Figure 3, which shows the mean for each speaker's (er) measure in an F2/F1 vowel space. In this figure, Greek speakers are identified by speaker number, and squares. Men are all inside the large dashed oval. For the women, two out of the three Greek speakers are far to the back, while the Greek male speakers are in the upper right of the oval. The majority of Greek speakers are thus to the back of other speakers in the sample.

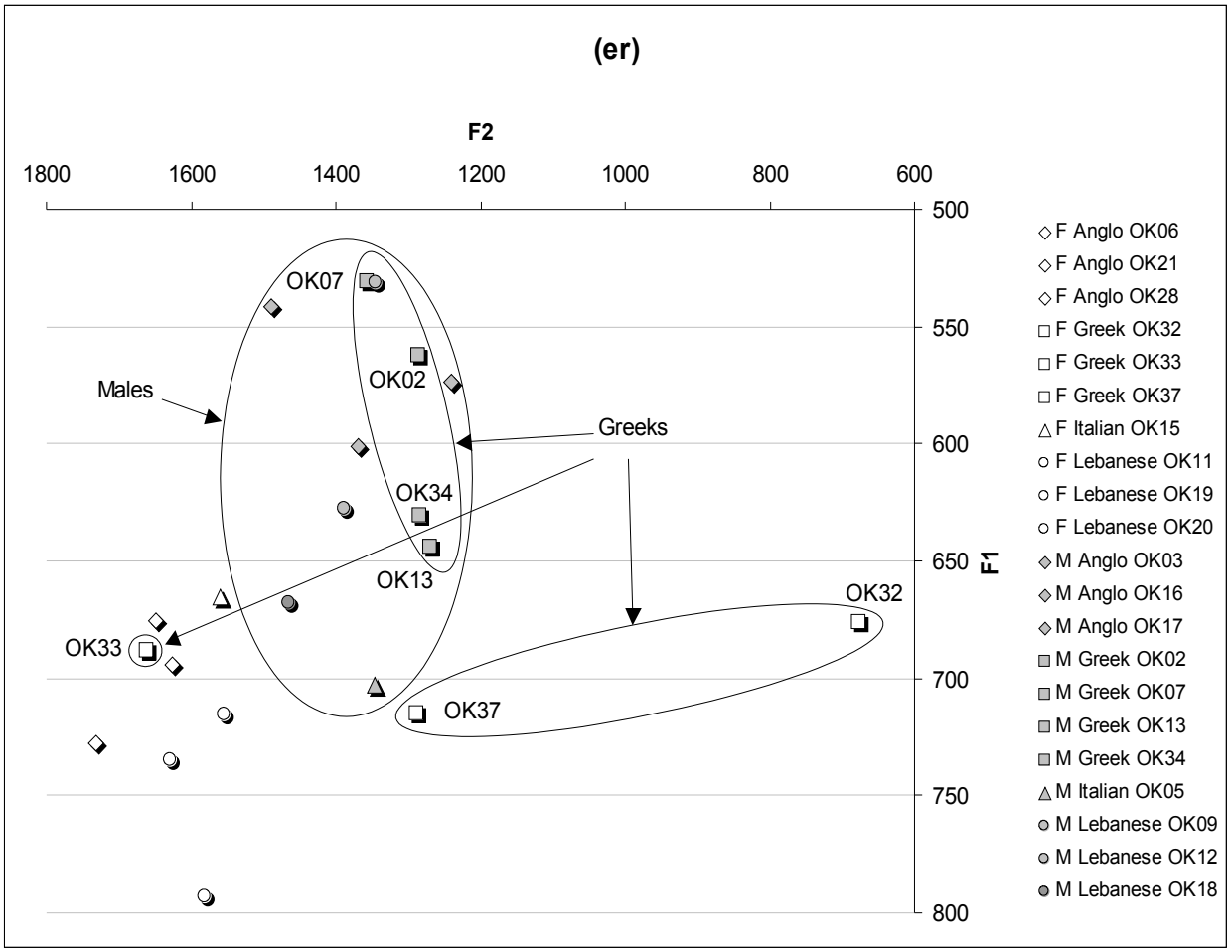

Figure 3: (er) means in an F2/F1 vowel space.

Figure 4 shows the effects of age category for F1 (older are those speakers older than 34 at the time of the interview). There are not enough speakers for the Lebanese and the the Italian groups to construct graphs of the sort in figure 2, but figure 4 does show that there is a trend toward a more open pronunciation among both Greeks and Anglos.

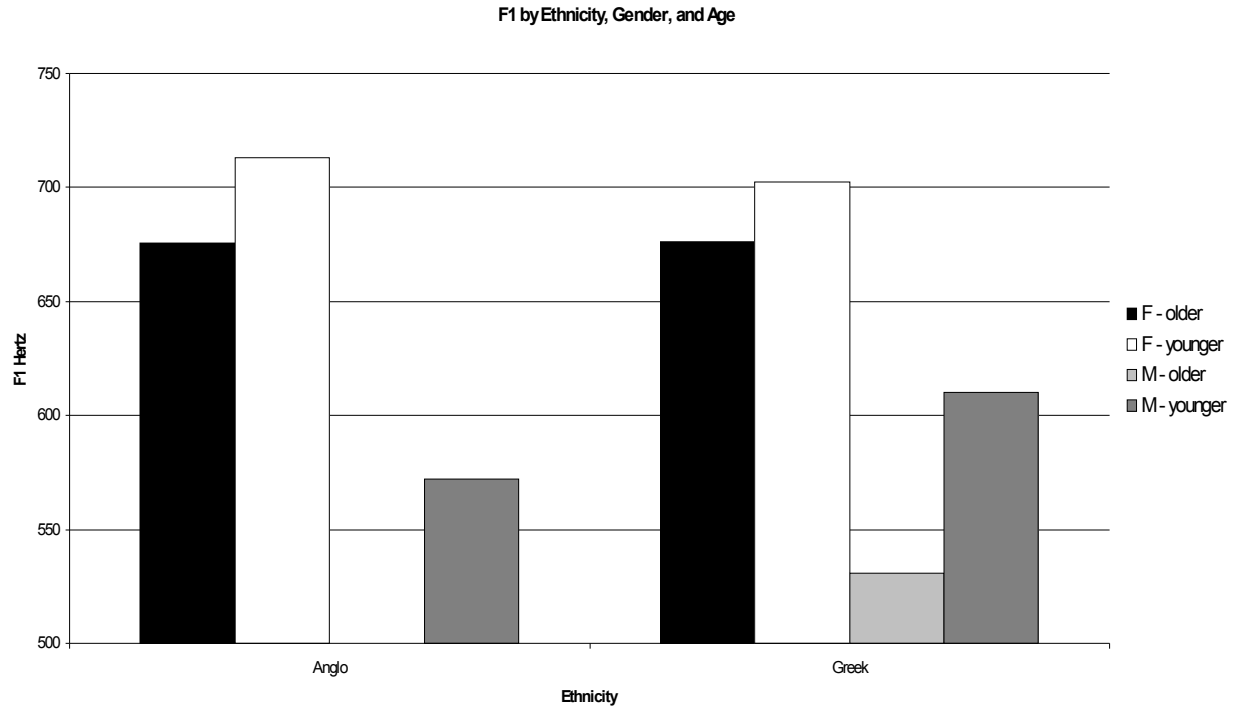

Figure 4: F1 by ethnicity, gender, and age category

Figure 5, which shows the same cross-tabulation for F2, yields a much less consistent result, so that Anglo women do not have a large difference by age, and the older women actually have a slightly lower F2. For the Greek population, however, there is a clear move toward the back in the younger generation. This result suggests that the Greeks are moving away from Anglos.

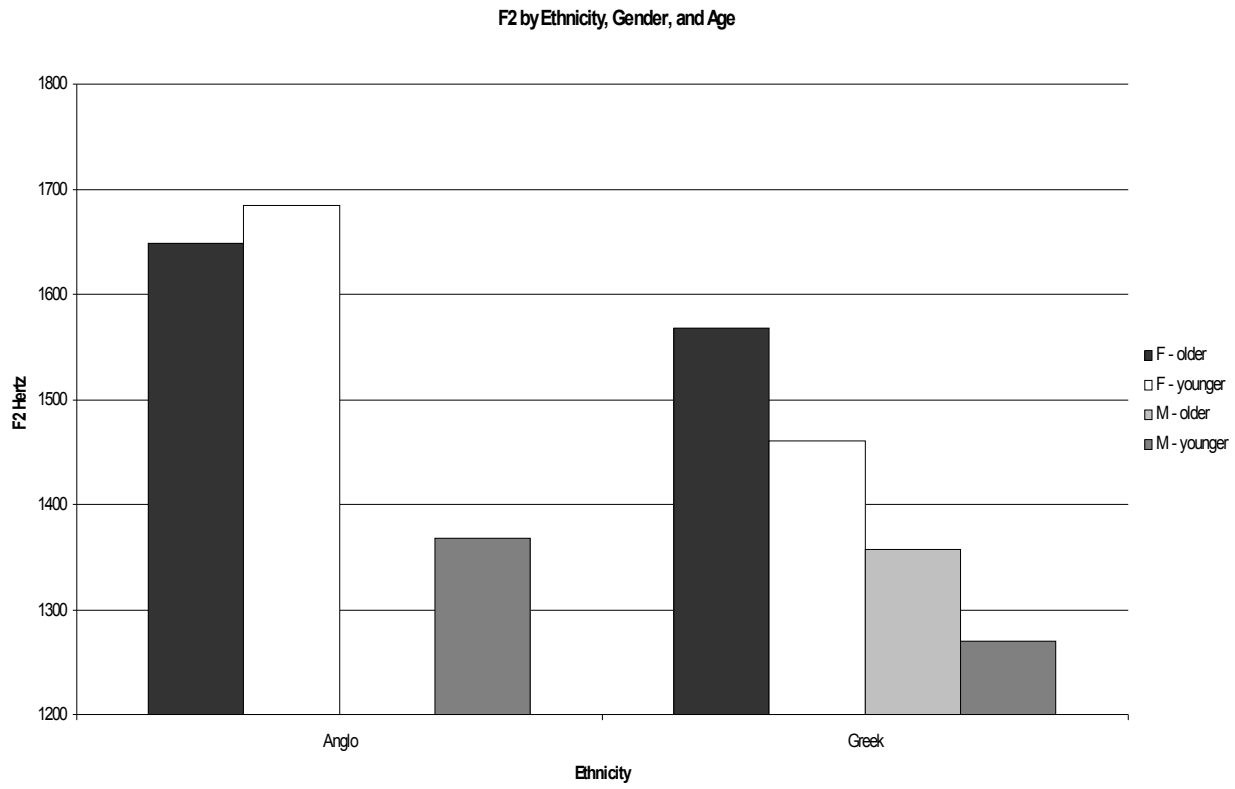

Figure 5: F2 by ethnicity, gender, and age category.

In sum, there is a clear pattern that Greeks are more likely to have a lower F2. These results suggest that the salient NAE feature for (er) is not F1, but F2 (or the back-rising diagonal), with Greek speakers the most extreme users of this form. There is some evidence that the Greek speakers are moving away from the Anglos at least for F2. The fact that the differences are not particularly strong suggests that there are other factors in addition to ethnicity at work, or that (er) is working in combination with other linguistic factors to produce the appearance of openness.

The length of the (er) segment is a particularly promising candidate for one of these linguistic factors. It cannot be determined whether a longer segment is precipitating the perception of a more back[iv] articulation, if the more open articulation is responsible for longer length, or a combination of both. When length is taken as the independent variable, however, the resulting patterns suggest that it is length that is the actual linguistic feature that hearers notice when they

describe NAE (er) as more open. The effects for ethnicity with respect to length are striking. In a regression analysis with (er) segment length as the dependent variable, both Greek and Lebanese ethnic groups are selected as significant, as is class ($p<.01$). HRT is also selected, but with $p = .08$. When non-Anglo is the residual, ethnicity is the only social factor selected ($p<.0001$). There is thus a clear effect for ethnicity, with Greek and Lebanese speakers producing much longer segments, with regression coefficients of .031 and .027, respectively, which are around 20% of the length constant of .146. These length effects, and the interaction for HRT, are shown in Figure 6.

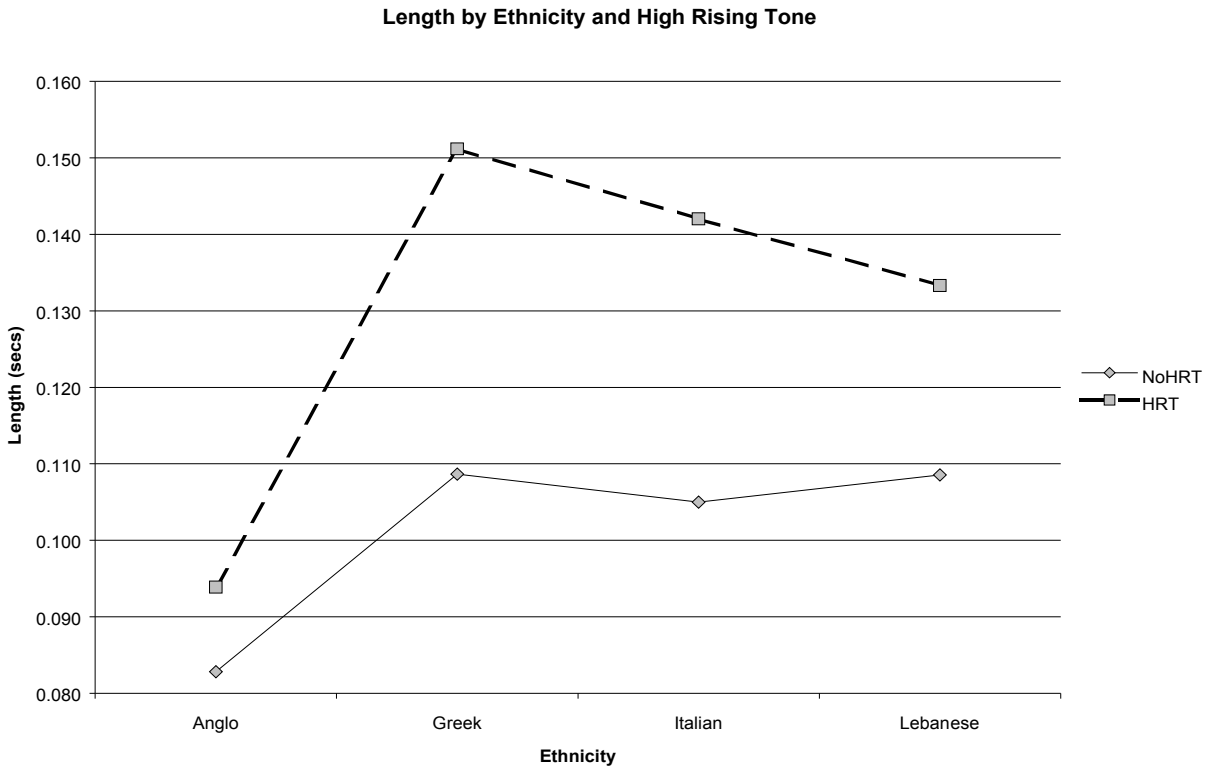

Figure 6: Length by ethnicity and HRT

This figure shows that the length for Greeks is much longer than other non-Anglo groups when the (er) token has a rising intonation, but that there is not a great difference from other non-Anglo groups when there is no HRT. Anglos show a shorter length than all other ethnic groups

regardless of the presence of HRT. This result suggests some further hypotheses. First, is it length that is being heard as a non-Anglo 'wogspeak'? Second, it is possible that the use of HRT is increasing length, which is in turn increasing the backness in Greek articulations. Both are possible, but both rely on the assumption that one of these linguistic features must be primary and causative of the others. I suggest that while these features do *reinforce* each other's appearance, they are bundled together as a style that creates a particular stance, rather than one of these features causing the presence of all the others. Figure 7 shows that the Italian speakers use the most HRT with (er), so HRT does not promote openness to the degree that it does for Greek speakers. This fact can only be explained by a social, rather than linguistic, factors.

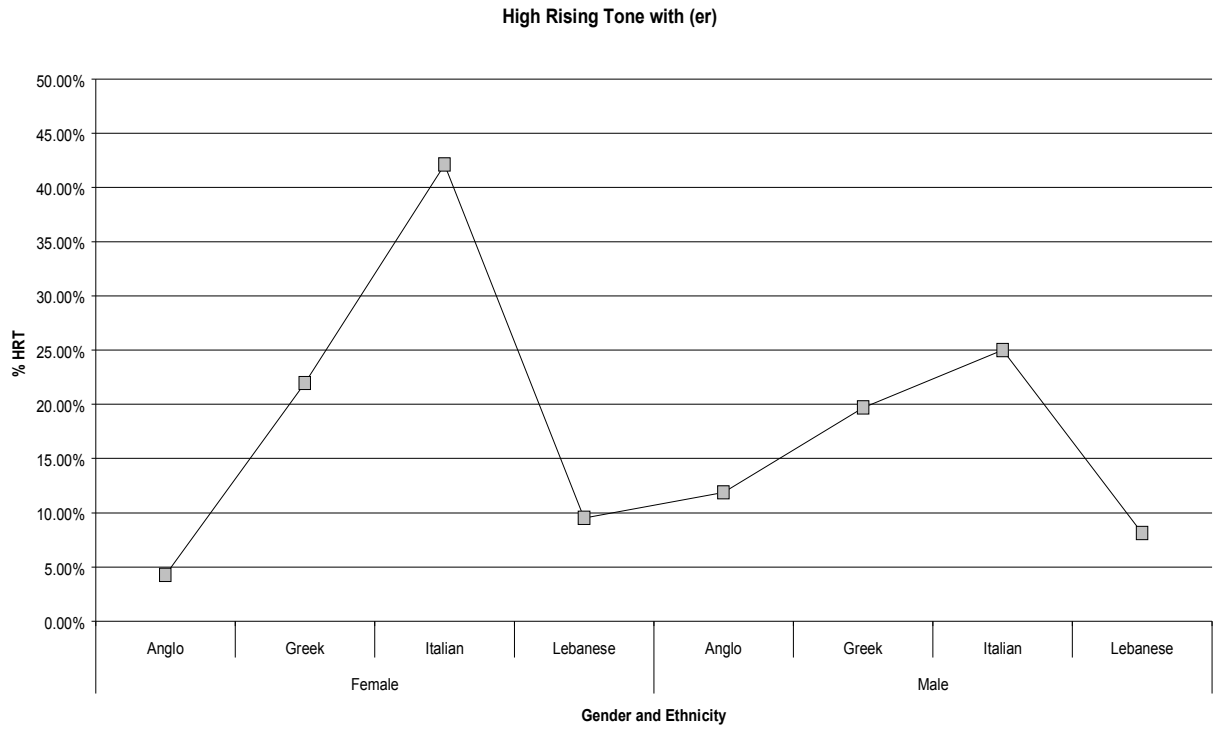

Figure 7: Percentage of (er) tokens with HRT by gender and ethnicity.

Individual average scores presented in Figure 8 show just how consistent the ethnicity effect is for length. In Figure 8, almost every Anglo speaker's average is below all the Greek speakers. Note that one of the Greek speakers with the shortest length, OK33, is also the most fronted in Figure

3. OK18 is a lower working class Lebanese man who is playing cards during the interview, which may account for his short length average. Interestingly, his vowel plot is one of the lowest among the men, suggesting that Lebanese speakers may in fact be lowering (er), while Greek speakers are backing. Another possible split in the variable is that non-Anglo men may be lowering, while non-Anglo, particularly Greek, women may be backing. Both are likely to be perceived as more open in the general sense discussed by Labov (1994).

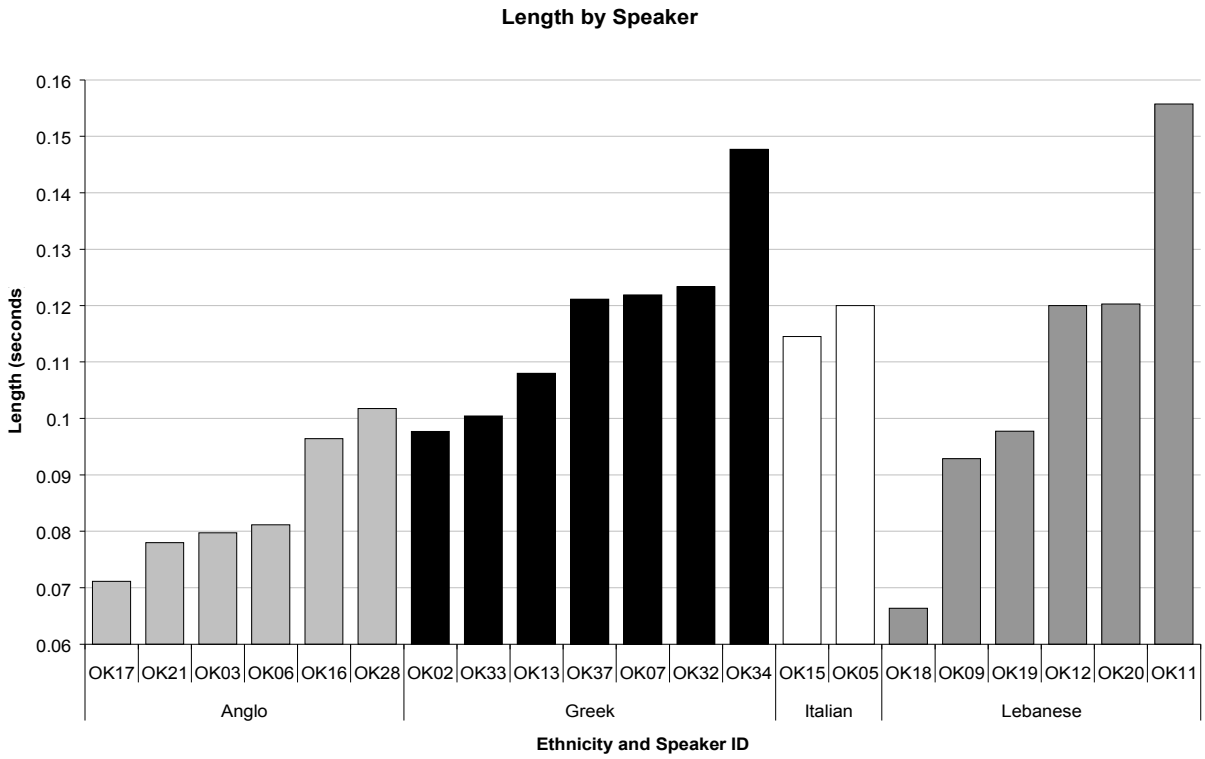

Figure 8: Length by individual speaker.

In sum, I suggest that length, openness (backness), and the presence of HRT are not isolated variables in 'wogspeak,' but tightly integrated linguistic features that facilitate the presence of the other. It is not just the openness of (er) that signals NAE, but the openness of (er) *together with* length and HRT that create the style identified by speakers in Australia as 'wogspeak.' One likely reason for this is a possible interference in the Greek-Australian's English prosody from Greek

prosody. If Greek does not have reduced vowels of the sort that often appear in an Anglo or standard pronunciation of (er), then it may not reduce this token at all, especially given that a more open articulation has been described more generally for Australian English. There is thus pressure from Greek and a 'license' to use an open (er) from Australian English. The possibility that 'wogspeak' is a change in prosody based on interference from migrant languages is one that bears further investigation, but is at this point only speculative. However, it suggests that when looking at such patterns, linguists need to think more holistically in terms of the interacting linguistic subsystems, rather than at single, isolated features.

Style and stance

While these are intriguing patterns, they are admittedly based on relatively few speakers. One way to address this shortcoming is to look more closely at the individual speakers, particularly the outliers and those who are outliers for their ethnic/gender group. By investigating the types of people who use more back and longer articulations, we can begin to understand how these features are used by speakers to do social work in conversation. Most importantly, the following analysis argues that there is in fact a reason why these three factors are working together – not just on a linguistic internal level but also on a social iconic level.

In order to explore further whether (er) has any interactional function, and what that function is, we can inspect where and when instances of long open (er) appear in the interviews, and the stances the speakers with the most and least backed values take to the interviewer. I have selected the two most back female speakers, both Greek, for a closer analysis. By investigating especially the most backed variants in these speakers, I will show that that the long, back (er) is a resource for doing solidarity – used when the speaker is connecting in some way with the interlocutor, or finding common cause with her. Thus, the speakers who have an overall more back (er) take stances aligned with the Greek female interviewer at strategic points. I argue that back (er) is therefore not simply a marker of "Greekness" – i.e., not an act of identity that marks the speaker as a Greek; rather, long, back (er) marks the *solidarity* shared by Greeks through their common experiences of Australian society. These are of course related, but the latter formulation is one in which this variant is more than an index of a group, separate from another group. It indexes an

entire experience and range of social practices, some of which we will see in the excerpts below. Being Greek in Australia is thus not just about ancestral language and genetic makeup, but social practices and experiences that include running small independent shops, the hard work of 'starting over' in a new country, eating certain foods, being the only Greeks in a small Australian town[v], and parental restrictions on children's social life, especially young women. It thus functions to supplement positive politeness strategies in these conversations (Brown and Levinson 1987).

This indexicality of positive politeness – having something in common – is expressed by rising intonation as well; Guy et al. (1985) show that HRT is used by speakers to indicate connection in discourse which could be extended to interpersonal stance. As McLemore (1991) notes, rising intonation can function as a "diagrammatic icon:" a rise that does not again fall is in a sense unfinished, and can indicate an abstract 'openness.' This rise often elicits the hearer to respond with at least minimal responses. We thus also discover that the 'internal' or purely linguistic effects are not completely automatic and mechanical. That is, speakers manipulate their prosody in order to lengthen the (er) segment when they use HRT. We find pauses that occur in unpredictable places, i.e., not at clause boundaries. An example of this use will be shown in Excerpt 2 below.

This style and the indexicality of commonality reaches its height with the general extender *whatever*, which consistently shows a more open/back use of (er). This word is used in Australian English at the end of a phrase to indicate a meaning like 'et cetera,' 'you know what I mean.' Compared with the overall mean for all tokens of (er), *whatever* tokens are further back and lower than other words, as shown in Table 3 (the 8 tokens of *whatever* are uttered by four different speakers, 1 Italian, 2 Greek, and 1 Anglo). Part of this difference is because *whatever* is likely to appear with rising intonation and phrase-finally, thus making it easy for the speaker to lengthen (note that the the length in whatever increases by 26ms). However, as we will see in an example below, like rising intonation this use of *whatever* is a strategy for connecting to the hearer: it suggests that the speaker need not be more specific because the hearer shares so much with the speaker that she need not. It is thus a positive politeness strategy, building connection and solidarity among speakers.

	F1	F2	Length
All other words	644	1455	105
whatever	774	1427	131

Table 3: Lexical effect for *whatever* (n=8)

Another aspect of the data that show the indexicality of connection is the significant effect of narrative style. This style has a significant effect for female speakers in the multiple regression, and as can be seen in Figure 9, this effect for F2 is consistent for both men and women. This increased use in the narrative cannot be attributed to less attention paid to speech, and a more vernacular or 'natural' style, because we would also expect styles such as conversation to be vernacular. Rather, speakers use more open (er) in narrative because it is essential for a successful narrative to draw the speaker in, to connect with them, to involve them, as Kristina does in her story below. Features which promote this involvement are more likely to be found in narrative. A decrease in F2 in narratives is thus consistent with the proposed indexicality of (er).

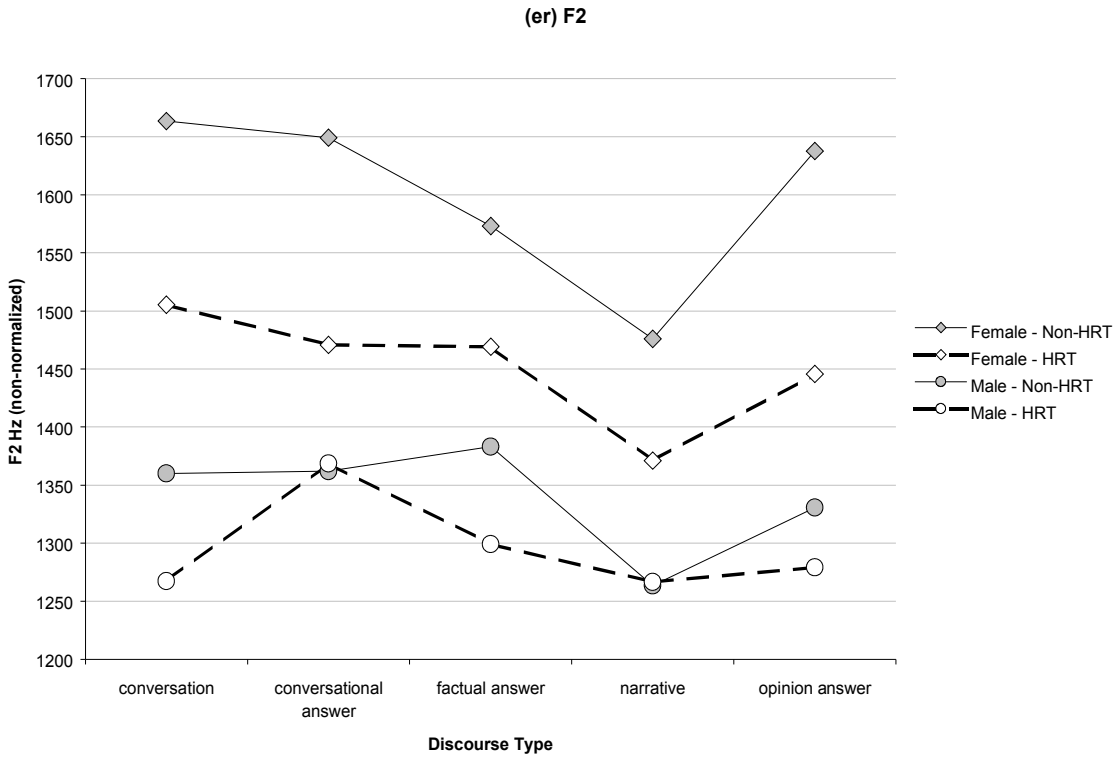

Figure 9: F2 by discourse type, gender, and HRT.

Kristina

The first speaker I will consider is Kristina (a pseudonym for speaker number OK34), who had the most backed mean of any speaker. Kristina is a Greek woman like Ouranita with a similar background and upbringing, including the fact that their father owned a small shop when they were young. Some of her most backed variants come in a narrative she tells of the event precipitating the decision of her family to give up their shop:

Excerpt 1[vi]

1 OK: You don't have to tell me ((?))
2 Kristina: No No No No No that's OK No no no I'l I'l I'm OK
3 I'm usually pretty open I'm up- my um-
4 what happened **after** that the aboriginals were having a bit of a::: *riot* on the *road* and a lot of trucks and buses come past
5 and my dad ... and mum HEARD it ...

6 and they woke up in the morning at two clock in the morning and um
7 my mum just said to my **father** LOOK get out there and get im off the road he's gonna get himself KILLED so um
8 but by this time the business was goin' down ANYway right?
9 Well my dad went out to HELP
10 and a big double de- a big double-***decker*** bus had driven PA:ST
11 and we sort of thought nothing of tha:t
12 and then my dad went to say to the big guy,
13 the big guy was about a TONNE size that's how big she was
14 and his ***sister*** couldn't pull im off,
15 his ***mother*** wouldn't- couldn't pull him off,
16 he w- my ***father*** couldn't pull him off,
17 and in the end ... another **double-decker** bus is coming and um ...
18 my dad jumped on the other side of the ROA:D+
19 to save himself the **double-decker** bus ... swerved for HIM and hit HIM ... my father ...
20 it just it it actually stopped the same time it hit im but it hit im in the nose and cracked his skull and lost his sense of his nose. ...
21 IV: oh no
22 K: and the aboriginal guy was- was all right 'cause nothing touched him y'know so:
23 um that's why sometimes when someone's in **danger** he he you help you get killed a lot of times
24 h- my dad end up coming out all right uh he went to hospital and all that but ah we soon **after** got up and left

This is not only a tragic, personal story, but one told in the context of a discussion with the interviewer about the common Greek Australian experience of having a small shop, an experience shared by the interviewer. Figure 9 shows Kristina's tokens of (er) plotted against her general vowel system. Here we see that her (er) is clearly very back, and moreover that the tokens in the narrative (in italics in the excerpt) are among the most back. Given that the function of a narrative is not only to entertain but also to draw the speaker in, the back (er) can add to this feeling if it indicates an openness or connectedness to the interviewer. Note also that these backed variants appear near the climax of the story, in a section with a repetition of the frame *my <relative> <modal>n't pull him off* . While I am not arguing that the back (er) is doing the sole work of connection here, I do argue that its indexicality of connection adds to the involvement created by the story, just as the repetition does (see Tannen 1989 on involvement and repetition in

conversation). By examining this narrative, then, we can understand more fully how (er) works with other aspects of talk to build solidarity and involvement.

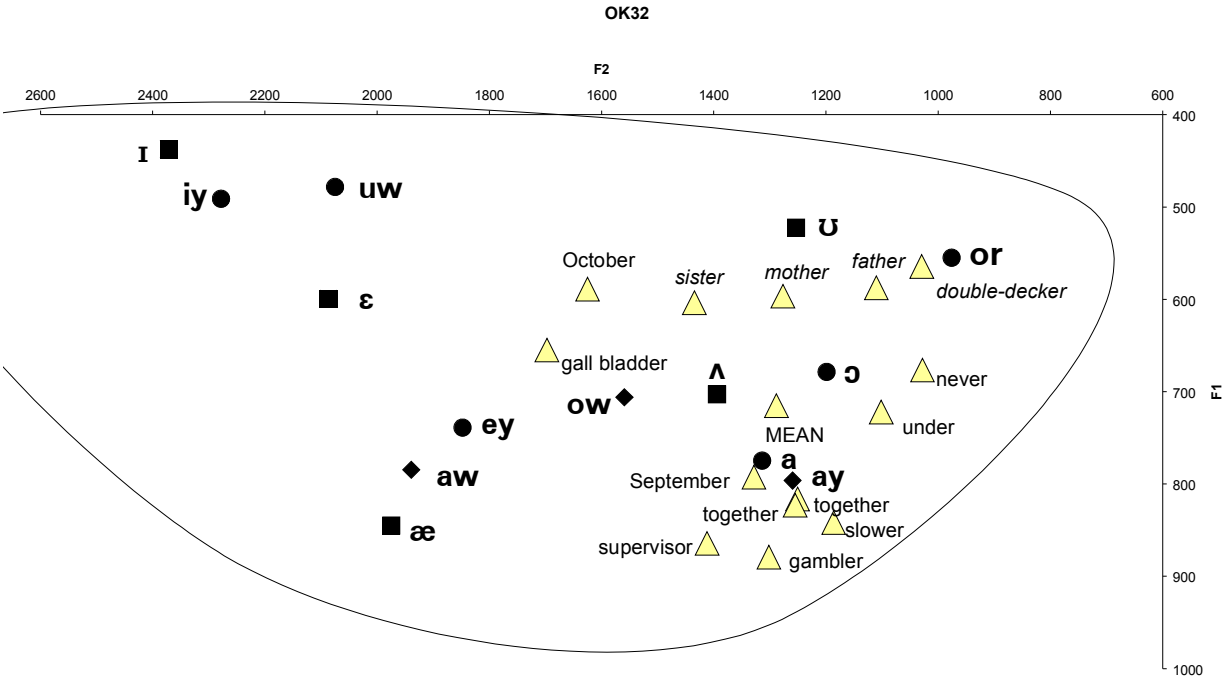

Figure 10: Plot of Kristina's tokens in an F2/F1 vowel space.

Ellie

Another aspect of solidarity can be related to finding common ground with the interlocutor, as Kristina did by sharing experiences about having a family shop. Ellie (OK37) also has a similar background as the interviewer, and in fact in this passage from which a number of her tokens are taken, as shown in excerpt 2, is explicitly about a shared past with the interviewer.

Excerpt 2

1 Ellie: Well I ***remember***+ ... As kids we used to um ... put um tobacco
2 I think my parents used to grow tobacco?
3 Do you **remember** that too? ...
4 And y'know we used to sit here
5 Iver: No no no not me but but but tell me yeah
6 Ellie: Ye:s yes all like aunties or relatives or ***whatever***+

7 I can't **remember** where we used to this,
8 but you used to have like a needle?
9 Some sort of but they were flat needles.
10 And you had to hold it a certain way: and you put the tobacco?
11 Iver: Mmm hmm
12 Ellie: And the kids used to help
13 everybody used to help+
14 and they used to my dad used to put them outside on a rack?
15 and let them dry out ...
16 and he used to sell ... that.
17 and he used to make money from that as well.
18 very tough life.
19 Iver: tough life yeah
20 Ellie: but very h- I think it was a ***harder*** life on my ***mother***.
21 because she had to ... bring us up at the same time?

Ellie is remembering her childhood here, and in line 3 breaks an interview frame by asking the interviewer if she shares the same memories. Even though the interviewer doesn't, Ellie continues to use a voice that includes the interviewer by using the generalized pronoun *you* which in this case also has connotations of including the interviewer. As shown in Ellie's vowel chart plot (Figure 11), the (er) tokens from this passage are the most backed save one. Note in line 6 Ellie's use of the extender *whatever*, with rising intonation, used to draw the interviewer in by relying on a shared extended family structure. Note also that she uses the term aunties rather than a more formal or generic term like 'extended family.' *Aunties* then includes a diminutive which also helps connect to the interviewer.

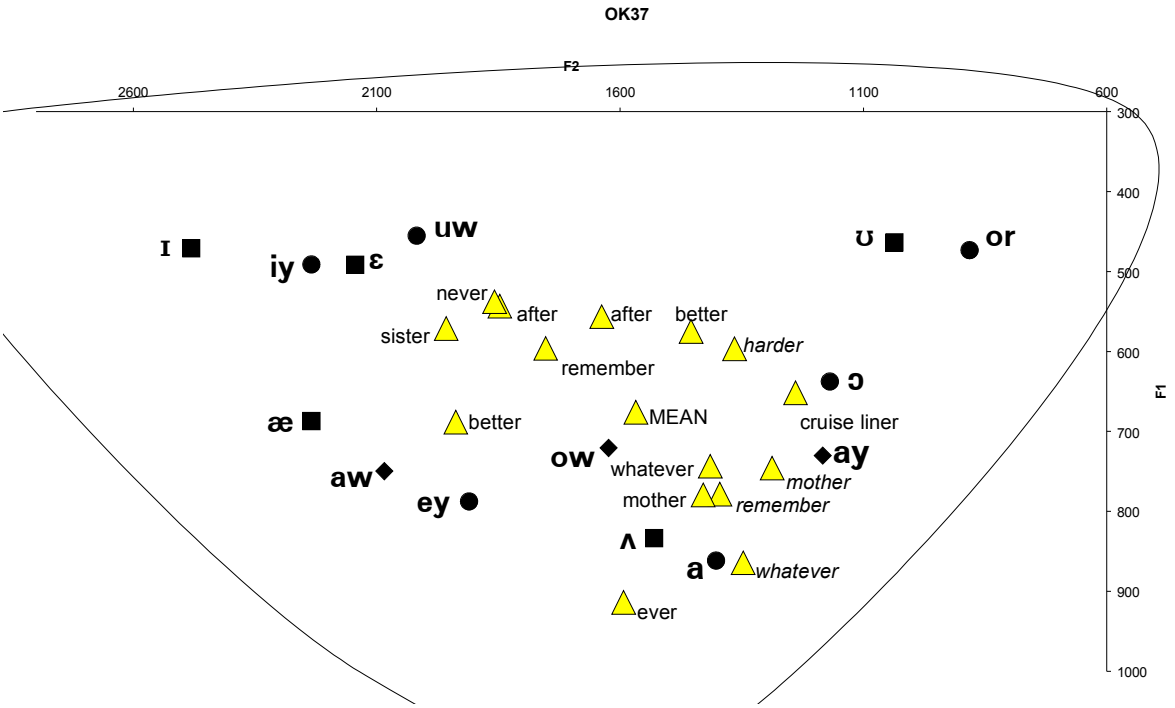

Figure 11: Plot of Ellie's tokens in an F2/F1 vowel space.

These two examples support the notion, therefore, that a backed/lowered (er) indexes and helps to create a stance of connection and solidarity, and can be used as a device for creating involvement with the speaker. That non-powerful, migrant group(s), should develop methods for creating these kinds of stances with one another is not surprising, and there are of course many other examples, perhaps most obvious is that of AAVE. Brown (19XX) also suggests that subordinate groups (in her article it is women) are more likely than dominant or equal groups to use positive politeness strategies for signaling connection. This function is not the same as saying "I am Greek" (or a woman, or Black...). It is related to the position of these groups, but is used to celebrate the common experiences (and suffering) of the members of a subordinate group.

This analysis assumes some contrast with either situations in which there is no sharing of similarity, or when Ellie's high and front tokens are used. In fact, most high and front tokens are concentrated in a section of the interview in which Ellie is sharing common experiences with Ouranita, which would seem to offer counter-evidence to the claim that an open (er) is used to signal solidarity. This view misses the point: that (er) is a resource for doing solidarity; one can

create solidarity with an open (er) especially if the phonetic context highly disfavors it. In this case, other parts of the style are not present, and the phonetic contexts disfavor an open (er): None of the instances in this passage fall phrase finally, nor does Ellie pause after any of them to use a rising intonation. There is one exception: Ellie uses *ever* phrase-finally with rising intonation, and as shown in Figure 10, this token is in fact quite open (as far back as the mean, and quite low).

This brief investigation into examples in context also suggests that it is not all or average (er) values that are important, but that it is the rising intonation, discourse patterning, and open (er) that contribute together to the stance; the stance is created not by one linguistic feature, but a bundle of features with their indexicalities working in concert with one another. Another speaker, Philip (OK32), shows the longest average length and, as shown in his vowel plot in Figure 12, he also has a very open (low) articulation. He, however, takes a different kind of stance than the women, emphasizing his joining of the 'mainstream' culture of Australia. He uses HRT in almost every phrase, however, and it is this HRT that is mostly responsible for his longer length. This very frequent use of HRT, however, suggests that he is using it more as a discourse connector than an interpersonal stance indicator.

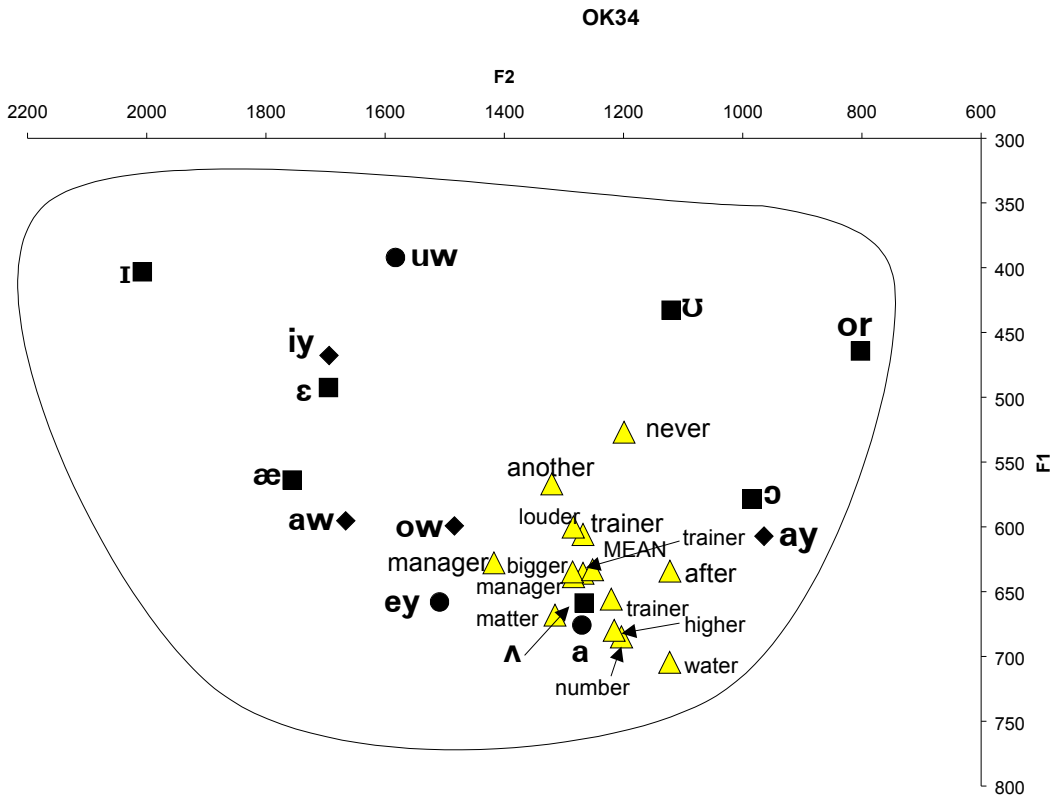

Figure 12: Plot of Philip's tokens in an F2/F1 vowel space.

Another way to test the interactional functioning of (er) is to focus on how any extreme uses are employed by an Anglo speaker. This use is also evidence that the stance meaning for (er) may be extending to the wider speech community. By investigating what kinds of stances an Anglo is taking when using these variants, we learn whether these uses are similar to the non-Anglo uses, and therefore whether this variant may be either in the incipient stages of spreading to the wider community, or stabilized as a more general marker of ethnicity and stance in Australian English. More importantly, we learn what kinds of indexicalities are attached to it, which will tell us more about why it is spreading.

Mary

Mary (OK28) is a young Anglo woman, and she impressionistically has a very 'Anglo' sounding accent. However, she does exhibit one of the longest and most back averages of any of the Anglo

speakers, partially because of two tokens of the word *better*, in which the /t/ is glottaled and (er) is backed and lowered. This backing is shown in the plot in Figure 13. In these instances, she is finding common cause with the interviewer as a woman:

Excerpt 3

1 OK: Did you find that the guys in year 11 are nicer?
2 Mary: I don't know any year...elevens.
3 I know the year twelves,
4 they seem just as bad.
5 he he
6 but since I've known them in year eight they are getting ***better***
7 but they're still very...annoying hn hn

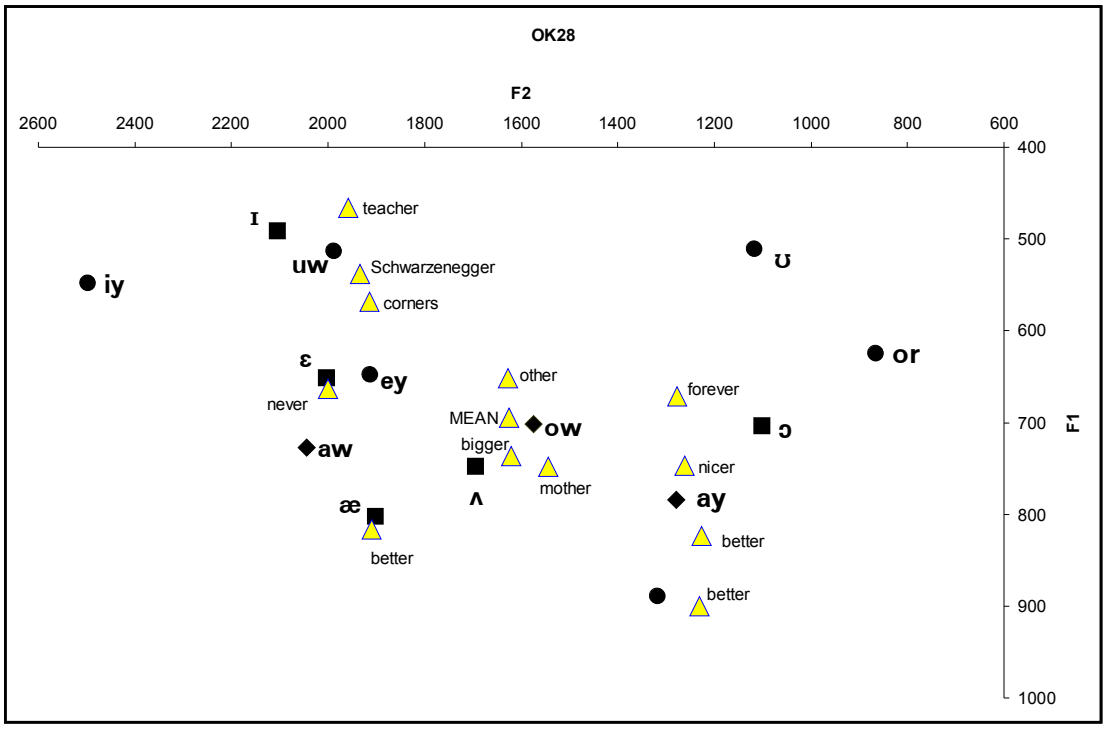

Figure 13: Plot of Mary's tokens in an F2/F1 vowel space.

The other token of better, in fact the lowest and most back, is when she is swapping stories about Auburn with the interviewer. Here she comments that she has seen more police patrols, saying "lately you've seen more...seems better." In both of these examples, she has a common connection with the interviewer, based on neighborhood residence and on gender.

Mary's most front and high tokens all show a contrast with Ouranita. *Teacher* and *corners* both are used in a discussion about school and teachers, which divides Mary from Ouranita by age and the fact that Ouranita is herself a secondary school teacher. The item *Schwarzenegger* is a token from the reading passage, which is again a situation that separates the interactants in their roles as researcher and subject, as older and younger. Mary thus uses the most extremely open articulations when she and Ouranita are sharing a commonality, and less open articulations when they are separated. These uses thus support the notion that the open (er) is a signal of solidarity, and may be spreading to Anglo speakers in this manner.

Summary and Implications

In sum, I return to the issues outlined at the start of the article with respect to NAE, and offer here some tentative conclusions.

Linguistic description: Is NAE a coherent variety? The data here suggest that we can identify a number of co-occurring linguistic features in some Australians' speech that can be identified as NAE. In fact, I have argued that we cannot use just a backed (er) or a high rate of HRT as a single diagnostic feature of this variety. More linguistic description is needed, however, particularly in terms of Anglos who do not reside in areas populated by large numbers of non-Anglos.

Sociolinguistic variation: While the differences between the Anglo and non-Anglo population in Auburn/Fairfield are not as stark as in the US for race, there is a difference between non-Anglo and Anglo speakers. There is particularly a difference between Greek speakers and other groups. This is consonant with Horvath's (1985) findings, who in many cases found the Greek speakers to be in the lead of the changes that she identified. This result suggest that in some way the Greek community in Sydney is innovating and/or leading the changes that are and have taken place over the last thirty years.

Change: There is some evidence of change. While the overall regression showed only a minimal effect for age (F2 in men), there may nevertheless be a more complex pattern of change at work. In the Greek population, as shown in figures 4 and 5, there is clear movement by younger speakers to a more open and back articulation, while this apparent change is followed by the

Anglo community clearly only for F1. It is possible that the open articulation is spreading, while the back articulation is becoming prevalent only in the Greek community. More data with more speakers is necessary for this question to be answered definitively. However, the use of some extreme low and back variants by an Anglo speaker suggests that (er) is spreading to the Anglo community, at least those in contact with non-Anglos.

Indexicality: I have suggested that (er), and perhaps even the variety more generally, is not indexical of 'wog,' or 'Greek,' but rather one of positive politeness, connection, and solidarity. One question that has not been raised explicitly, but will be on the minds of many readers, is the identity of the interviewer. Since Ouranita is a middle-aged, middle-class (teacher), Greek woman, are the effects found simply those of accommodation (or disaccommodation)? Put in these terms, the answer is yes. But accommodation misses the the nuances of how this linguistic feature is deployed, and the actual indexicalities it brings to a conversation. The speakers are not merely trying to talk more or less like Ouranita, but they are taking specific stances toward Ouranita. Thus, even though Ouranita's identity is helping to shape the language used by the interviewees, this effect is not a 'distortion' of the data, as long as we keep these in mind. Sociolinguists often repeat the mantra that there is no ideal speaker-hearer, but we often fall into this trap of assuming there is one (especially in the search for the the ideal, or most authentic, 'vernacular' speaker). But our primary data – language production – always occurs in a specific context, and that context will always include addressees, even if imagined (as pointed out by Schilling-Estes 1998). I have not ignored Ouranita's identity here, but rather used excerpts from the interviews to understand what kinds of stances a subsample of interviewees take with her to understand more fully how this variable, and this variety, is used in Sydney.

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Appendix: Regression results

F2 for men only, Anglo residual

Dep Var: F2 N: 182 Multiple R: 0.667 Squared multiple R: 0.445
Adjusted squared multiple R: 0.391 Standard error of estimate: 135.971

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	1121.894	83.714	0.000	.	13.402	0.000
FCONS	65.111	36.599	0.177	0.340	1.779	0.077
PSON	-298.806	90.356	-0.692	0.077	-3.307	0.001
FLAB	-121.124	47.407	-0.159	0.870	-2.555	0.012
PHIC	440.555	96.307	0.953	0.078	4.574	0.000
FHIC	218.696	73.728	0.312	0.303	2.966	0.003
PBKC	-440.850	88.077	-0.757	0.147	-5.005	0.000
FBKC	-214.740	94.470	-0.238	0.308	-2.273	0.024
PNAS	247.579	102.410	0.367	0.146	2.418	0.017
PCONT	-47.365	25.171	-0.136	0.642	-1.882	0.062
FCONT	83.572	37.628	0.220	0.344	2.221	0.028
PLAT	217.837	101.081	0.257	0.237	2.155	0.033
FLAT	-352.255	84.429	-0.258	0.879	-4.172	0.000
AGE	**3.545**	**1.676**	**0.155**	**0.623**	**2.115**	**0.036**
CLS	**13.970**	**5.122**	**0.205**	**0.594**	**2.727**	**0.007**
FACT	38.535	25.206	0.095	0.872	1.529	0.128
GRK	**-80.426**	**23.736**	**-0.223**	**0.780**	**-3.388**	**0.001**

F1 for men only, Anglo residual

Dep Var: F1 N: 182 Multiple R: 0.778 Squared multiple R: 0.605
Adjusted squared multiple R: 0.567 Standard error of estimate: 76.891

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	497.701	48.607	0.000	.	10.239	0.000
LGTH	201.598	103.674	0.104	0.829	1.945	0.054
FCONS	-45.139	20.097	-0.183	0.361	-2.246	0.026
PCOR	34.668	14.483	0.130	0.808	2.394	0.018
FCOR	-54.411	27.827	-0.212	0.203	-1.955	0.052
PSTR	-61.494	19.238	-0.169	0.860	-3.196	0.002
FSTR	-39.700	24.164	-0.119	0.454	-1.643	0.102
PHIC	43.958	16.824	0.142	0.812	2.613	0.010
FHIC	-70.957	25.602	-0.151	0.805	-2.772	0.006
FCONT	-39.722	26.331	-0.156	0.225	-1.509	0.133
PLAT	42.458	28.815	0.075	0.931	1.473	0.143
FLAT	85.689	48.540	0.094	0.850	1.765	0.079
AGE	-1.787	1.020	-0.117	0.538	-1.751	0.082
CLS	**10.603**	**3.141**	**0.232**	**0.506**	**3.376**	**0.001**
CONV	**47.211**	**19.734**	**0.139**	**0.704**	**2.392**	**0.018**
LEB	**33.479**	**15.271**	**0.116**	**0.860**	**2.192**	**0.030**
ITAL	**149.434**	**30.921**	**0.401**	**0.347**	**4.833**	**0.000**

F1, Women, Anglo residual

Dep Var: F1 N: 149 Multiple R: 0.780 Squared multiple R: 0.608
Adjusted squared multiple R: 0.576 Standard error of estimate: 88.635

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	804.558	55.449	0.000	.	14.510	0.000
LGTH	188.022	120.742	0.094	0.793	1.557	0.122
PCONS	-112.073	55.269	-0.116	0.875	-2.028	0.045
PANT	72.671	21.688	0.200	0.803	3.351	0.001
FANT	-135.350	23.672	-0.410	0.558	-5.718	0.000
FHIC	-133.130	25.279	-0.312	0.816	-5.266	0.000
FCONT	-55.742	23.299	-0.167	0.590	-2.392	0.018
PLAT	110.402	52.510	0.114	0.969	2.103	0.037
GRK	**-64.8617.865**	**-0.213**	**0.828**	**-3.630**	**0.000**	
ITAL	**-122.113**	**24.677**	**-0.300**	**0.778**	**-4.948**	**0.000**
NARR	**61.326**	**22.642**	**0.151**	**0.924**	**2.708**	**0.008**
HRT	**68.713**	**22.698**	**0.183**	**0.784**	**3.027**	**0.003**

F2, women, Anglo residual

Dep Var: F2 N: 149 Multiple R: 0.550 Squared multiple R: 0.303
Adjusted squared multiple R: 0.252 Standard error of estimate: 221.402

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	1800.306	64.769	0.000	.	27.796	0.000
FCONS	182.948	56.918	0.318	0.517	3.214	0.002
FVCE	-144.770	67.919	-0.241	0.397	-2.132	0.035
PANT	-183.803	64.690	-0.269	0.563	-2.841	0.005
PBKC	-232.275	90.867	-0.238	0.583	-2.556	0.012
PCONT	-77.778	38.064	-0.151	0.930	-2.043	0.043
FCONT	177.048	57.850	0.282	0.597	3.060	0.003
FLAT	-360.523	137.665	-0.198	0.880	-2.619	0.010
NARR	**-180.851**	**56.795**	**-0.236**	**0.917**	**-3.184**	**0.002**
FACT	-69.117	43.741	-0.118	0.905	-1.580	0.116
HRT	**-95.886**	**52.640**	**-0.136**	**0.910**	**-1.822**	**0.071**

Length regression, Anglo residual

Dep Var: LGTH N: 331 Multiple R: 0.482 Squared multiple R: 0.232
Adjusted squared multiple R: 0.203 Standard error of estimate: 0.057

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	0.146	0.015	0.000	.	9.990	0.000
FCONS	-0.037	0.012	-0.264	0.328	-3.077	0.002
FVCE	0.024	0.013	0.167	0.305	1.880	0.061
FLAB	-0.043	0.017	-0.163	0.602	-2.575	0.010
FCOR	-0.038	0.016	-0.257	0.215	-2.428	0.016
PSTR	-0.016	0.010	-0.080	0.957	-1.594	0.112
FSTR	0.036	0.013	0.172	0.601	2.719	0.007
FHIC	-0.021	0.013	-0.091	0.730	-1.584	0.114
GRK	**0.031**	**0.008**	**0.225**	**0.706**	**3.856**	**0.000**
LEB	**0.027**	**0.008**	**0.182**	**0.762**	**3.234**	**0.001**
CLS	**-0.004**	**0.001**	**-0.154**	**0.778**	**-2.758**	**0.006**
CONV	**-0.013**	**0.009**	**-0.075**	**0.950**	**-1.492**	**0.137**
HRT	**0.016**	**0.009**	**0.092**	**0.898**	**1.766**	**0.078**

[i] I must point out, however, that Horvath's use of the continuum allowed to have a common scale for all variants. This common scale allowed her to perform a Principle Components analysis on all variables, which then suggested what sociolects were present in her data. Had Horvath not used the continuum, this innovative analysis would not have been possible.

[ii] For the purposes of this article, "first generation" will refer to the a person who migrates to Australia as an adult. A "second generation" person is the offspring of a parent who migrated. Thus, a second generation speaker may in fact not have been born in Australia, but migrated with their parents at a young age. "Third generation" refers to a person who was born on Australian soil of parents who did not migrate at the age of majority.

[iii] For example, there were four categories for ethnicity: Anglo, Greek, Italian, and Lebanese. Each token was coded for all of these. If the speaker is Lebanese then the token has a value of 1 for the Lebanese variable, and 0 for the rest. One category must be left as the residual category, and is not included in the analysis. If the other categories are significant to the regression model, this result is interpreted as indicating that the variable in the model is significantly different than the residual category. For example, to test whether Greek, Italian, and Lebanese speakers are each different from Anglo speakers, the Greek, Italian, and Lebanese variables are included in the model; Anglo is the residual category. If the regression finds, for example, that the Greek variables significantly affect F1 or F2, then the fact that a speaker is Greek is predictive of F1 or F2.

[iv] We can think of this backing as openness as well, and it will correlate with longer length for articulatory reasons as well; one must open the jaw fairly wide to be able to achive the back pronunciations achieved by the Greek speakers.

[v] The interviewer, Kristina, and Ellie all began their lives growing up in a country town and soon after moved to the city, or living a suburb of Sydney that became urbanized as they grew up.

[vi] Transcription conventions:

((text))	<text> was not heard reliably
te:xt	an elongated segment preceding the colon
...	a short pause (not measured because it is not relevant to the analysis)
TEXT	extra prominence through intensity, pitch, or length (i.e., stress)
text+	a rise-fall-high rise intonation pattern
text?	a rising intonation pattern
text	bold words are those containing an (er) segment
text	bold italic words are those containing and (er) segment measured for the quantitative analysis