

## **An intonational change in progress in Australian English**

GREGORY GUY, BARBARA HORVATH, JULIA VONWILLER,  
ELAINE DAISLEY, AND INGE ROGERS

*Linguistics Department  
University of Sydney*

### ABSTRACT

Many speakers of current Australian English often use a high-rising intonation in statements. This usage, which has been termed Australian Questioning Intonation (AQI), has a nonpropositional, interactive meaning (checking for listener comprehension) and interacts with the turn-taking mechanism of conversation. A quantitative study of the use of AQI in Sydney reveals that it has the social distribution characteristic of a language change in progress: higher rates of usage among working-class speakers, teenagers, and women. Real time data confirm this, showing that the form was almost nonexistent in this speech community two decades earlier. The social motivations of this innovation are examined in terms of local identity and the entry of new ethnic groups into the community, and possible linguistic sources are discussed. The utility of quantitative methods in studying meaningful linguistic variables is demonstrated. (Australian English, language change in progress, intonation, sociolinguistic variation, social class, social motivation)

### INTRODUCTION

For all the work that has been done on linguistic change and language history, there is one facet of language whose history is almost entirely unknown, namely intonation.<sup>1</sup> This is due to the unavoidable reliance in historical linguistics on written materials, which are notoriously poor at indicating much about the intonational contours of the spoken language. Since there will never be any way to collect new data on the intonation of the past, the only remedy is to examine the intonation of the present using the modern techniques for the study of change in progress. In this way we may be able to, in Labov's (1975) terms, "use the present to explain the past," and lay the foundations for a more dynamic theory of intonation.

One potential case of intonational change in progress at the present time is to be found in Australian English (AE). This is the fairly common use of a "questioning" intonation – phonetically a high rising terminal contour (HRT) – in

declarative clauses, where some other contour, particularly a falling one, would otherwise be expected. This usage of the HRT in declaratives has been termed "Australian questioning intonation" (AQI) by Bryant (1980). What makes it remarkable is that the intonation does not convert the declarative into a yes-no question, contrary to the usual English pattern. As we shall see below, the intonation in this context in AE appears to have a quite different meaning.

Several things point to the likelihood of this intonation being an innovation. First, there is the simple fact of its novelty: The fact that it is found today in AE despite its being uncommon or unattested in most other modern English dialects or in previous stages of the language constitutes at least a *prima facie* case for innovation.<sup>2</sup> In addition, there are previous linguistic studies by McGregor (1979) and Bryant (1980) implying that AQI is a change in progress. And finally, there is the popular view of this phenomenon, which suggests that it is a recent development. Adult Australians will claim, for example, that they didn't say it when they were young, or that it is a (possibly deplorable) speech habit of today's youth. It is commonly believed to be a characteristic of the speech of teenagers and young adults, and to be used more by women than by men, both of which are suggestive of a change in progress.

It is possible, then, that AQI is a recent change, and may still be in progress. But how can this be conclusively proven or disproven? If it is a change, where did it come from and what does it mean? It was to investigate questions such as these that the present study was undertaken.

The basic evidence for any change in progress is the characteristic social distribution of the innovative linguistic feature. The core of the present study is therefore an investigation of the social distribution of AQI, looking for the age grading and sex and class differences in its use which are typical of a new and spreading feature. This is an examination of what Labov calls "distribution in apparent time" (1966:318), and in the present study it was based on a stratified sample of sociolinguistic interviews collected in Sydney between 1978 and 1982.

"Apparent time" evidence by itself, however, is not proof of change in progress. Additional evidence from "real time" is required, comparing an earlier stage of the language with the data from the present. In this regard, we will also report the results of an examination of materials collected in Sydney over twenty years ago, in 1959-60, for the Mitchell and Delbridge (1965a) survey of the speech of Australian adolescents. Together the two studies provide compelling evidence for the resolution of the questions under consideration.

#### DEFINING THE INTONATION

The intonational usage we are investigating has to be defined in three ways: by its phonetic nature, by its syntactic frame of occurrence, and by its meaning or function. Phonetically it is a high rising terminal contour, the contour termed

"tone 2" in Halliday's (1967) analysis of English intonation. In our instrumental studies, it typically showed an F<sub>0</sub> rise of at least 40 percent, beginning on the last tonic syllable of the tone group and continuing sharply upwards through any subsequent syllables. We consider these contours to be emically equivalent to the English HRT contours normally used in polar (yes/no) questions. This conclusion is based not only on impressionistic studies, but also on extensive instrumental work by one of us (Vonwiller). In this regard, we are not entirely in agreement with the previous researchers, McGregor and Bryant, who imply there may be a distinctive phonetic quality to these HRTs. While it is possible there are differences of an etic nature, we treat the HRT in declarative clauses in AE as the same tone unit - tone 2 - as the HRT in interrogatives.

The relevant syntactic frame in this case is the declarative clause, whether elliptical or not. Thus we are excluding from consideration any HRTs in interrogatives, which would constitute true questions, as well as any imperatives, exclamatives, and so on, where, of course, the HRT would be unlikely to occur anyway. Elliptical declaratives were included even when the clause was reduced to a single word or phrase, as in (1). (Instances of AQI are represented throughout by an upward pointing arrow together with italicizing the portion of the utterance over which the rise occurred. Other intonations are shown by conventional punctuation only.)

1. Interviewer: What's your name?  
 Informant: Maria Martinetti ↑

The semantic part of the definition of this phenomenon - its meaning and communicative function - has been discussed in some detail elsewhere (Guy & Vonwiller 1984), but will be briefly recapitulated here. The meaning of this intonation in the cases we are concerned with is an *interactional* one; in other words, it functions in that part of the linguistic system which speakers use to interact and jointly construct a discourse. We see the specific meaning as being to check whether the listener has understood what the speaker has said. In this respect, it differs from the standard English usage of a rising-tone-in-declarative-clause, which has the effect of converting a statement into a question, as in (2), which could be paraphrased as an interrogative (2')

2. Harry's coming to dinner tonight?  
 2'. Is Harry coming to dinner tonight?

This standard device has a *propositional* meaning: It questions the propositional content of the carrier clause. Like all English dialects, AE has this construction, but it is not the usage we are concerned with here. That AQI does not create questions like (2') can be seen from examples like (1) above, where, of course, Maria was not asking what her own name was, but rather was making a statement, and (intonationally) asking whether that statement had been understood.

Another example of this is in text (3), which occurred in the middle of a series

of questions about children's games. The informant named a type of handball, which the interviewer said she had never heard of. So the informant then described the game as follows:

3. It's sort of a game, right, you play with a *tennis ball* ↑ (mmm) And you're supposed to – um, it's four *squares* ↑ Right? And you have a *king* ↑ He's in charge, he *serves* ↑ (mmm) And the queen and the rich and the poor.

The four uses of AQI in this passage, like the single instance in (1), are clearly different in meaning from the rising intonation in (2), even though the contour may be phonetically equivalent. The declarative clauses that carry them are still statements about the game, made by the only person in the interaction who has any knowledge of it, the informant. So rather than questioning the proposition, these HRTs are in effect expressing the interactional meaning "Do you understand me?" This metapositional question is asked by the intonation while the lexicogrammatical content of the utterance simultaneously makes statements about the game.

The interactional nature of this meaning is evidenced by several aspects of its use. First of all, since AQI is a *request* for verification of listener's comprehension, it constitutes the first part of an adjacency pair (Schegloff & Sacks 1973). Bryant (1980), using videotaped interviews, showed that AQI is almost always responded to by interlocutors, whether verbally, as in the two confirmatory "mmm's" in text (3), or kinesically, by means of eye-contact, head-nod, and so forth. Second, the occurrence of AQI in the middle of extended turns at talk (as in 3), and the very nature of the responses it elicits, are further evidence of its specific interactional meaning. A true propositional question ordinarily *ends* a turn at talk and is followed by an informative response from the interlocutor. But AQI allows only a minimal confirmatory response (or alternatively, a minimal expression of incomprehension, such as a quizzical look), and can potentially be followed only by additional new information from the same speaker. Its meaning is therefore analogous to tag questions such as "you know?", or the "right?" which also occurs in (3).

The use of a rising tone in declaratives without the propositional meaning of "polar interrogative" is cited by various authors (e.g., Lakoff 1975:17; Jarman & Cruttenden 1976; Ladd 1978:63, 212) as occurring in other English dialects. But these usages generally differ in some respect from AQI, either in phonetic detail or in the assigned meaning. In Belfast, for example, Jarman and Cruttenden report rising tones on a majority of declaratives, so the meaning is simply unmarked "declarative." In the American examples of Lakoff and Ladd, the purported meanings are given as deference, hesitation, tentativeness, and so on. Such meanings are clearly inadequate to account for the linguistic and social facts of the usage of AQI: its functioning in turn-construction, the kinds of responses it elicits, and the social situations in which it is used. Furthermore, the phonetic detail of the rise may be different; the American examples can start

lower, rise more slowly, and terminate at lower levels than the high rising tone we are describing, which involves a swift upward trajectory, often penetrating the highest reaches of the speaker's frequency range.

We do not wish to claim that "AQI" is a feature unique to the English of Australia. In fact, we would not be surprised if the verification-seeking meaning we discern in AQI were found to be possible in certain situations for most dialects of English, since it seems a modest and natural extension of the English intonational meaning system. Anecdotal reports from Canada, California, and the southern United States support this view. But we are suggesting that, to our knowledge, it is used with the characteristic meaning we have described more widely and more often in Australasia than in any other part of the English-speaking world.

The use of a high-rising contour in declarative clauses with this interactional meaning raises the question of potential ambiguity between it and the more common meaning of "polar question." If the two meanings are conveyed by emically equivalent contours in identical syntactic frames, how does the listener know which is intended? In our experience, confusions of this sort do not occur among people who are users of AQI or familiar with it, although we have observed confusion among, for example, Americans newly arrived in Sydney. An answer to this question cannot be obtained from our corpus, since there are few questions of any sort by informants and barely a handful of polar questions formed by HRT in declaratives. But it is our observation that contextual clues usually disambiguate between the two meanings. First, the polar question meaning is usually anaphoric in some way, often repeating or referring to a previous utterance by the interlocutor, dealing with knowledge possessed primarily by the interlocutor – that is, a "B-event" (Labov & Fanshel 1977). Furthermore, in turn-taking terms it will often be located at the end of a turn, followed by a substantive turn for the interlocutor. But the interactive meaning of AQI will be semantically and pragmatically very different: usually occurring on *new* information possessed primarily by the speaker (an "A-event"), making no reference or anaphora to the interlocutor's previous discourse. Furthermore, it usually receives a minimal, perhaps nonverbal response from the interlocutor, with the floor basically continuing to be held by speaker for a further substantive turn.

If these clear contextual and textual differences were not sufficient to disambiguate between the two meanings, we might expect structural change to occur: for example, phonetic differentiation of the contours or disuse of the contour for one of the meanings. In view of the relative rarity of HRT as polar question, and the existence of other devices to create polar questions, the latter outcome is probably the more likely, but we have no evidence to suggest that this is happening or will ever need to.

The fact that this intonational usage in AE is associated with a specific interactional meaning brings to mind the questions raised by Lavandera (1978), Ro-

maine (1981, 1982), and others in connection with the quantitative study of meaningful variation. These scholars have suggested that variation across forms that are potentially different in meaning requires a different analytical approach from methods such as the "sociolinguistic variable" that have been applied to the study of phonological variation. One reason is that variants with different meanings pose a practical problem in defining the outer envelope of variation, of deciding what counts as a potential, but unrealized instance of a given phenomenon. Labov's early work on phonological variables did this by holding meaning constant and looking at what were "different ways of saying the same thing." But in looking at cases of syntactic variation, Lavandera and Romaine felt that the related forms they were investigating in fact meant different things.

Various theoretical problems arise from this, such as what different kinds of meaning are at issue here, and where the variation is to be located in the grammar. In Lavandera's view, the main consequence is to restrict the use of the concept of a "linguistic variable" as a structural unit. Variant forms with different meanings may have some linguistic relationship, but it is not the same one that obtains between alternant pronunciations of a single phoneme, and the choice among them must presumably be made at some deeper level of the grammar.

We believe that AQI is an excellent site for the investigation of this issue, as it involves a "phonological" variable (intonation) which is also meaningful. The type of meaning involved is, as we have seen, interactional, rather than propositional. The example sentences in (1) and (3), were they uttered without the HRT, would be constant in propositional meaning, but they would be radically altered in their effect on the construction of the interaction, in that they would then *not* express a request for verification of comprehension. In this respect, the present case differs from the morphosyntactic variables considered by Lavandera and Romaine, but it is similar to them in that in neither case does the choice of a variant have a *primarily* social meaning, implying something about the speaker's status or the style or context of the utterance. Nor does the meaning of AQI depend on its frequency of use; every instance of it conveys its meaning. So in these respects, the variable use of AQI does involve the same kind of theoretical problems raised by Lavandera and Romaine.

Therefore, in view of the type of meaning it expresses, the use or nonuse of AQI cannot be considered a "sociolinguistic variable," a structural unit in the sense of Labov (1966). But this does not mean that we cannot study such usage quantitatively. We can always use quantitative means to investigate the *social* distribution of a linguistic phenomenon, and we can quantitatively investigate the *linguistic* distribution of a variable provided that we can identify some choice point in the grammar where the variants are selected or generated – which is equivalent to saying that we can resolve the practical problem described above of identifying nonoccurrences as well as occurrences. In the present study, both types of distribution are examined. The practical problem is resolved by using a

formal definition of the variable, a model of where in the grammar the selection of AQI occurs which allows us to identify nonoccurrences.

The basics of the formal definition of the variable have been given above. The defining envelope of the variation is the declarative clause and the unit of variation is the *tone group*, an intonational unit which approximates the syntactic unit of clause, but is not necessarily in a one-to-one relationship with it. (Tone groups, and the intonation contours themselves, were defined in accordance with Halliday [1967].) Any instance of the HRT contour in a declarative clause was counted as an occurrence of AQI, and all other contours in declarative clause tone groups were counted as nonoccurrences. A few rare examples of true questions like example (2) above were found in the data and were excluded from the corpus by pragmatic and interactional criteria.

The model underlying our quantitative analysis locates the variability at that point in the generation of each declarative clause where division into tone groups and selection of intonation contours occurs. At the beginning of each tone group, the speaker has a potential choice as to which tone to use, and our quantitative study was looking at the likelihood of choosing the high rising tone 2, as opposed to any other. The fact that such a choice is interactionally meaningful will affect the interpretation of the results, but not the utility of the method. The results reported below must be interpreted as reflecting probabilistic constraints on the selection of the HRT to express the verification-seeking meaning, and *not* as either the purely meaningless choice of an intonational allophone, nor as the decision to express the meaning regardless of what means (e.g., lexical or intonational) is used to do so.

This model of intonational variation might be considered oversimplified. The meaning expressed by intonation is not always just overlaid on the meaning of the lexicogrammatical content of the utterance, but rather may be a complex function of tone, syntax, lexicon, and situation. And there may well be points in a discourse where one is *not* free to use tone 2 in declaratives, where, in other words, AQI is categorically absent. This might be the case, for example, at certain points in a narrative, such as the dramatic peak and resolution. We are investigating such matters, but our present understanding is not adequate to identify where AQI might be categorically present or absent. This is, therefore, another potential limitation on the interpretation of our findings, but the main effect should be to add a bit of statistical "noise" by including as potential occurrences some tone groups in contexts which really might not allow HRT. Such noise should be relatively evenly distributed across social groups, so its effect should be only to obscure, but not substantially bias, the picture presented below.

Previous studies of this intonation in AE have been undertaken by two linguists: McGregor (1979) and Bryant (1980). Both of these works agree with the present study as to the meaning of the variable and its phonetic and syntactic definition. Both scholars are also of the opinion that HRT use in declaratives is a

relatively recent innovation and is still spreading through the speech community, and both give anecdotal evidence in support of this view. But their actual quantitative results are not entirely conclusive on this point. McGregor, working in Sydney, reported a sharp decline in AQI use among sample speakers over the age of twenty-five. Hence, he suggested a change in progress that began among children and adolescents five to ten years prior to the start of his survey in 1977 – that is, a projected starting date in the late 1960s or early 1970s. These conclusions are challenged by Bryant, however, on the grounds that when McGregor's data are broken down by sex and class, the age distribution is not so clear. Bryant's own data, collected in Canberra in 1980, do not show the sharp age-grading McGregor finds in Sydney, but Bryant still thinks that AQI is a relatively recent innovation.

Both of these studies share an important limitation in that they classify every speaker as a *user* or *nonuser* and make no attempt to examine relative *frequencies* of use. By this classification, a person who used AQI once in an hour of speech would be treated as equivalent to the girl quoted in (3) who used it four times in twenty seconds. Studies of this sort can only give a rough approximation of the social distribution of the phenomenon. Resolving the question of change in progress will require an examination of individual frequencies of use in a substantial sample population, which is what the present study attempts to do.

#### STUDYING CHANGE IN PROGRESS

If Australian English is currently undergoing an intonational innovation with respect to AQI, this should be reflected in the social life of the language today. What methods exist that would enable us to find out whether or not this is so? What kinds of evidence will show whether or not there is a change in progress? The methods that have been developed for the study of change in progress rely essentially on three kinds of evidence, which we will call social, historical, and linguistic.

*Social evidence* is the kind most readily available to the investigator. It is the social distribution of the linguistic feature under investigation throughout a speech community, along social dimensions such as age, class, and sex. The most important of these is *age*; most reported studies of changes in progress show some degree of age stratification – young people use the innovative form more and older people use it less. Age stratification would in certain circumstances be a necessary condition for change in progress, but we should be clear that it is not a *sufficient* condition. By itself, it is not conclusive, because it will only arise when people become relatively fixed in some linguistic trait in their youth and do not alter it in adulthood, so that the speech of a sixty-year-old man today can give us reliable evidence of how young adults were speaking forty years ago. In other words, using age differentiation as evidence of change in

progress assumes that it results from phylogenetic, rather than ontogenetic processes.

Now for many linguistic traits this has been shown to be true (see Labov 1981), but there are other cases where age-grading may result from people simply changing the way they speak as they get older, throughout their lifetimes – that is, from ontogenetic developments. Consider for example vocabulary: People tend to go on learning new words throughout their lives, but the fact that a given word is not known to a majority of young people does not necessarily mean that it is about to disappear from the language; rather it may mean that they just have not happened to encounter it yet but will do so eventually. Age stratification by itself will not allow us to distinguish between a changing language with unchanging individuals, and a stable language with changing individuals.

Another important social dimension for the study of change in progress is *class*. Labov observes (1966: Ch. 9, 1980:254) that changes in progress often show a "curvilinear" social class distribution; that is, the innovation is used most often (and first) by the "interior" social groups – the upper working and lower middle classes – and less (and later) by groups both higher and lower on the social scale. His hypothesis is that the interior groups have a positive social motivation for adopting the new forms, which have a local, possibly "covert," prestige as markers of "local identity" – of belonging to a particular locale or social group. The noninterior classes at either end of the social scale presumably lack this positive evaluation of markers of local identity, or, particularly in the case of the higher status groups, respond more to other prestige norms, more overt and possibly imported from outside the local speech community. Consequently, an innovation is driven forward by the middle of the social scale, resulting in the "curvilinear" social distribution which can be abstractly represented as in Figure 1.

Labov's view of the social class distribution of linguistic innovations, and indeed his concept of the social motivation of linguistic change, has been contested by Kroch (1978:21–22), who proposes that the social class differentiation of sound changes results not from the positive *advancement* of the innovation by the interior groups, but rather from the *resistance* to change by the highest status groups. His view is as follows:

Dominant social groups tend to mark themselves off symbolically as distinct from the groups they dominate and to interpret their symbols of distinctiveness as evidence of superior moral and intellectual qualities . . . in the case of pronunciation they . . . mark their distinctiveness in a negative way – that is by inhibiting many of the . . . processes . . . that underlie regular phonological change (18).

We might summarize Kroch's position as saying that the dominant social groups show, in effect, a linguistic conservatism that parallels their political

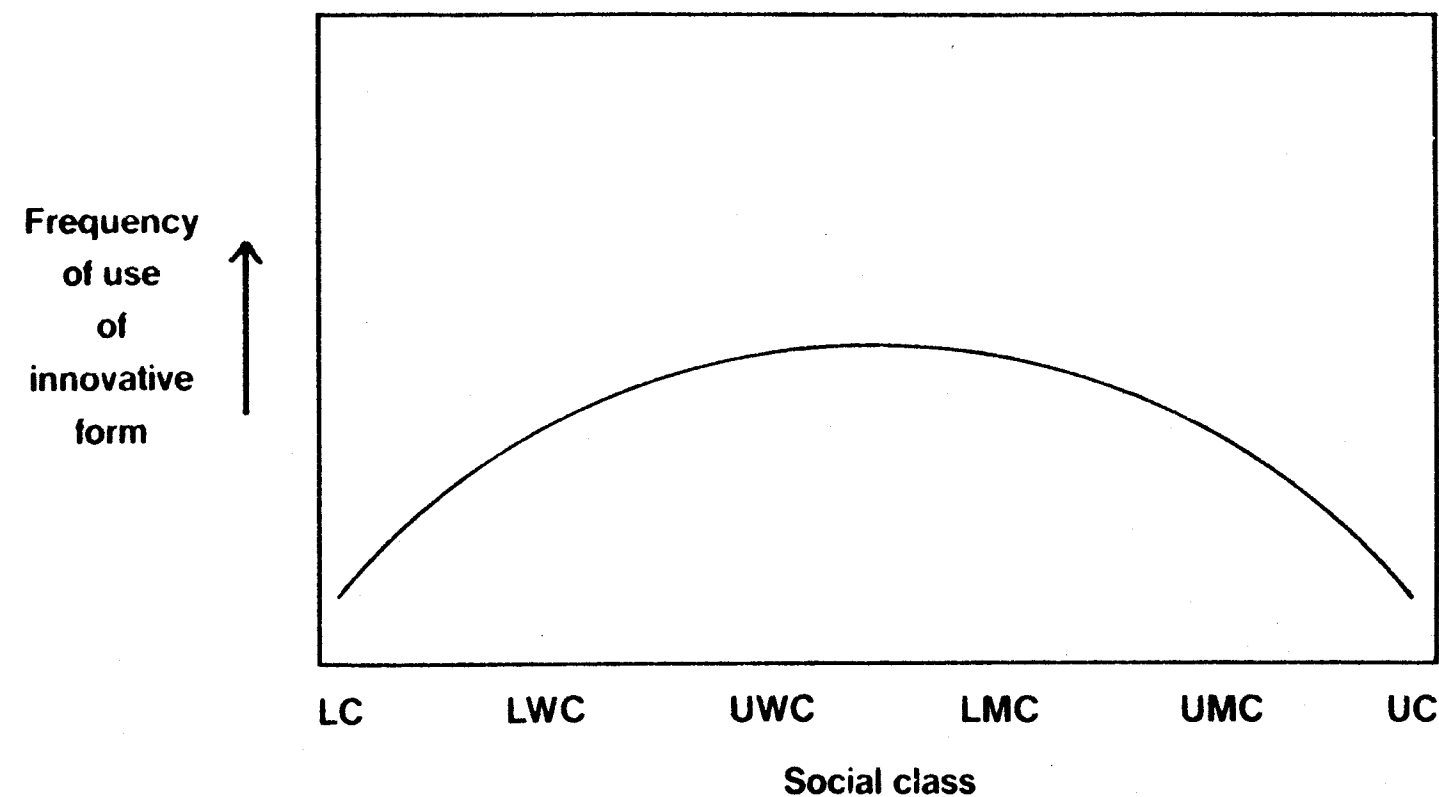


FIGURE 1: "Curvilinear" social class distribution of a change in progress.

conservatism and that derogates novel linguistic forms. Absent from Kroch's view is any positive motivation for the interior groups to deliberately advance a change. Consequently, if resistance to change varies directly with social status, the social class distribution of a change in progress should be essentially linear rather than curvilinear, with highest use in the lowest status groups and progressively lower rates of use in higher status groups.

We will return to this issue below in considering our own findings, but for our present purposes, we may note that innovations do not normally originate with the upper classes, nor do they enter language by spreading uniformly through all social classes simultaneously, but rather show an initial concentration in one particular innovating class, with lesser rates of use in those groups that acquire the form later.

A third social dimension which is relevant to the study of change in progress is *sex*. It has been observed that women are often in the vanguard of linguistic change (Labov 1982:78-79), and, in the general population, will be seen as using the new form more than men. This is not invariably the case; male-led innovations have been reported. But in general, a sex differentiation in the use of a form is often associated with change.

The last social dimension to be considered is *ethnicity*. Ethnic groups often have a higher density of communication within the group than without, and may have differing kinds and amounts of contact with other languages. Labov found that in New York City, certain ethnic groups led in some changes and lagged in others (1966: Ch. 8). Since the ethnic divisions in Australia today are quite marked, this is another factor which will be considered in the present study.

These, then, are the social indicators of change in progress: differentiation by age, class, sex, and ethnicity. In themselves they are not conclusive proof of change in progress, but a particular constellation of all of these, in conjunction

with the other kinds of evidence to be discussed below, constitutes a compelling case for linguistic innovation.

The second kind of evidence for ongoing linguistic change – *historical evidence* – is evidence from "real time," historical information about the state of affairs in an earlier stage of the language. If, for example, it can be conclusively established that language X lacked a certain feature fifty years ago, while it has it today, then there must have been an innovation in the interim. Of course, in intonational change, we have the problem mentioned at the outset, namely that historical information is rather sparse. Written materials will not be particularly useful, so in this area one can rely only on recorded materials from an earlier time or on prior linguistic descriptions.

The third kind of evidence is *linguistic evidence* – the linguistic distribution of the supposed innovation across various conditioning environments. The idea that such contextual distribution can reveal something about linguistic change is based on the work of C.-J. Bailey (1973). His theory is that features entering a language move through the linguistic system in regular and predictable ways. Some environments will be more favorable and the changes will happen there first; others will be less favorable and later. So a change in progress should show a particular linguistic profile, with its usage concentrated in the favorable early environments. However, to apply this theory to a body of data always requires some independent, noncircular way of defining what environments are favorable and early, as well as some way to differentiate stable sociolinguistic variation from change in progress. In our present primitive state of understanding of intonational change, we have no such principled basis for defining favorable environments, so such evidence will not be utilized in the present study.

#### METHODS

The data for this study were drawn from Horvath's corpus of recorded sociolinguistic interviews with 180 speakers from the Sydney metropolitan area (Horvath 1985). This is a stratified sample with five speakers in each of thirty-six cells defined according to age, sex, class, and ethnicity. Three social classes are covered: lower working, upper working, and middle, following Congalton's (1962, 1969) classification of occupational status in Australia. The ethnic groups included the three most numerous in Australia today: people of Italian, Greek, and Anglo-Celtic ancestry.<sup>3</sup> In the original sample, only two broad age-groupings were used, teenagers and adults, with most of the adults falling into the forty- to fifty-year-old range. For a subsample in the present study, however, we will break the age range down more finely, because of the anticipated relationship between age distribution and change in progress.

From Horvath's corpus we have studied the HRT usage of 130 speakers, covering all the subdivisions of the sample. To control for the possibility of a native/nonnative speaker difference in the use of this intonation, we first studied

separately the fifty-seven native English speakers of Anglo-Celtic origin, but found no important differences between them and the other speakers in the sample other than those reported below in our discussion of ethnicity.

The data were extracted from the recordings and codified by phonetically trained researchers (the five coauthors), who experienced little difficulty in reliably identifying instances of the contour. To ensure the reliability of the data, in view of the number of different people involved in the coding, extensive training sessions and reliability tests were conducted, until better than 90 percent agreement was obtained among all researchers, working independently on a test passage, as to what was included as an HRT and how each one was classified in our coding system. In reviewing the reliability test results, we found a majority of the disagreements to be "oversights," where some researcher had omitted a token found by others, rather than substantive conflicts of opinion on tokens noticed by all. In addition to these preliminary steps, regular consultation on doubtful cases was undertaken during the course of the coding, and those that could not be resolved were dropped from the corpus. Finally, during the analysis of the data, the tokens collected by each coder were separately identified and statistical comparisons made among the five coders' data pools. No significant differences were found among the various coders, suggesting that good reliability had in fact been achieved.

Using these methods, a total of 107,685 tone groups in declarative clauses were examined, of which 1,724 were HRT contours, for an overall frequency of occurrence of 1.6 percent. These were analyzed using the Sankoff VARBRUL 2 program (Rousseau & Sankoff 1978; Sankoff & Labov 1979) for four social factor groups (age, sex, class, and ethnicity) and two linguistic factor groups (test type, length of turn).<sup>4</sup> The social factor groups were as defined above in the description of the corpus: sex included factors for male and female; class comprised factors for lower working, upper working, and middle; and ethnicity included Anglo-Celtic, Greek, and Italian. The factor group for age consisted just of the two factors teenagers and adults for the entire corpus, but was subdivided more finely in the more intensive analysis of the Anglo-Celtic speakers. In that analysis, the age spectrum was broken down into the following categories: 1) younger teenagers (11-14 years); 2) older teenagers (15-19); 3) younger adults (20-39); older adults (40+). Because of the structure of Horvath's corpus, there was a paucity of speakers in the younger teens and younger adults age ranges, but enough data were available to refine the picture of the distribution in apparent time.

The two linguistic factor groups were designed to investigate some of the constraints on where the interactional meaning of this form was most likely to be expressed. The text type factor group was introduced because our preliminary investigations suggested that the type of discourse had a strong influence on the use of HRT in declaratives. We noticed, for example, a preponderance of instances occurring in narratives as compared with other types of discourse. We

used the following relatively general classification of text types, based primarily on the type of question used by the interviewer to elicit a given passage from the informant:

1. *Fact*. Factual texts, usually short, without evaluation or explanation, in response to questions such as "What's your name?" or "Where do you live?"
2. *Opinion*. A text relating the informant's personal views on some subject, usually in response to a question "What do you think . . . ?"
3. *Explanation*. Texts giving a *reason* for something, usually in response to a question "Why . . . ?"
4. *Description*. A text describing something (e.g., a primary school, a childhood game) usually in response to a question "How . . . ?" or "Describe . . ."
5. *Narrative*. Following Labov and Waletzky (1967), a narrative was defined as any account of personal or vicarious experience containing a temporal juncture. Such texts were classified as narratives regardless of the stimulus question, although there were several questions in the interview protocol specifically designed to elicit narratives, usually of the form "Tell me about . . ."

The remaining linguistic factor group, length of turn, was investigated because of the apparent interactional significance of AQI. If it serves to elicit feedback from the listener, then it is intimately connected with the turn-taking mechanism of conversation (Sacks, Schegloff, & Jefferson 1974), and we hoped that looking at turn length would elucidate this connection. The classification of turn lengths was as follows: 1) single word; 2) elliptical (partial) clause; 3) full clause; 4) multiple clauses.

It may occur to the reader that other factors might also serve to illustrate this involvement with the rules of turn taking, such as the interlocutor's response, repetition of the AQI until a confirmation of comprehension is received, and so forth. As mentioned in note 4, we have collected observations of such phenomena, but they will not be presented in this quantitative study for methodological reasons. For example, many confirmative responses by the interlocutor (indicating he or she has understood the AQI utterance) are executed nonverbally, as Bryant (1980) showed using videotapes. Hence they would be undiscernible on our audiotapes. Turn length was the only factor relevant to turn taking which could be easily and reliably coded for all nonoccurrences as well as all occurrences of AQI.

#### THE SOCIAL DISTRIBUTION OF AQI

The most important piece of social evidence as to whether or not AQI represents a change in progress is its age distribution. Our data on age distribution are given in Tables 1 and 2. In Table 1, we compare teenagers and adults for the total sample population of 130 speakers. The difference in both frequency and probability of AQI use is clear and very pronounced. The frequency of use by teen-

TABLE 1. *AQI use by teenagers and adults*

	Instances of AQI	No. of tone groups	% AQI	Probability of AQI use
Teenagers	1,642	71,790	2.29	.74
Adults	82	35,895	.23	.26

agers is ten times the figure for adults, and the VARBRUL probability figures also show the teenage group as much more likely users (.74 vs. .26).

A finer analysis of the age distribution in the subsample of fifty-seven native English speakers of Anglo-Celtic ethnicity is given in Table 2. There we see the teenagers and adults both subdivided into younger and older age groupings, giving four separate categories in the analysis. The results show a slight rise as we proceed from the younger teens to the older teens, followed by an essentially straight line decline through the adult groups. Adults over forty use AQI very rarely indeed: Only about two-tenths of one percent of all tone groups in declaratives are tone 2s, which is about one-tenth of the frequency of use found in the older teenagers.

These results are entirely consistent with the hypothesis that AQI represents a change in progress that began within the last twenty to twenty-five years. Anyone who is now over forty years of age was older than twenty two decades ago and therefore had presumably "fixed" their linguistic system and would resist using a subsequently introduced feature such as HRT in declaratives. Hence today, these people use AQI at a very low rate, if at all. Those people who are now between twenty and thirty-nine may have witnessed the introduction of this innovation during their years of language acquisition, however, and therefore some of them show a moderate use of the new form. And finally, people who are now in their late teens represent the leading edge of this change, the social group which has most extended its own usage of the innovation and has also added to its ranks the largest relative number of new "recruits" to AQI use. (The slight decline in the youngest age group may be due to the fact that these children have not yet fully formulated their own linguistic systems and are perhaps still show-

TABLE 2. *AQI use in four age groups (speakers of Anglo-Celtic ethnicity only)*

Age group	Instances of AQI	No. of tone groups	% AQI	Probability of AQI use
11-14 yrs.	79	5,032	1.6	.64
15-19 yrs.	306	15,067	2.0	.67
20-39 yrs.	24	4,386	.5	.51
40+ yrs.	49	19,642	.2	.21

TABLE 3. *AQI use by social class*

Social class	Instances of AQI	No. of tone groups	% AQI	Probability of AQI use
Middle	273	36,852	.7	.40
Upper working	673	39,518	1.7	.51
Lower working	778	31,315	2.5	.59

ing some influence from the AQI-less speech of their parents' generation in addition to the influence of their peers and older siblings.)

As we mentioned above, another important feature of changes in progress is the social class distribution. Table 3 gives the distribution of HRT use in declaratives across the three social classes distinguished in this study. For the data as a whole, this shows an essentially linear pattern, with AQI use inversely related to social status: the higher the social class the lower the likelihood of HRT use in declaratives. But when we break the data down by sex and class, as in Figure 2, we find a somewhat different picture. What we have here is a typical Labovian "curvilinear" pattern for the men, with the highest rate of HRT use in declaratives coming in the "interior" social group – the upper working class – while for the women we still have a simple linear pattern, with the highest rate of use coming in the lowest status group.

How do these findings fit the two theories we have considered (Labov 1980 and Kroch 1978) pertaining to the social distribution of linguistic innovations? First of all, they are consistent with the hypothesis of change in progress. There is a clear social differentiation in the occurrence of AQI, with the most use

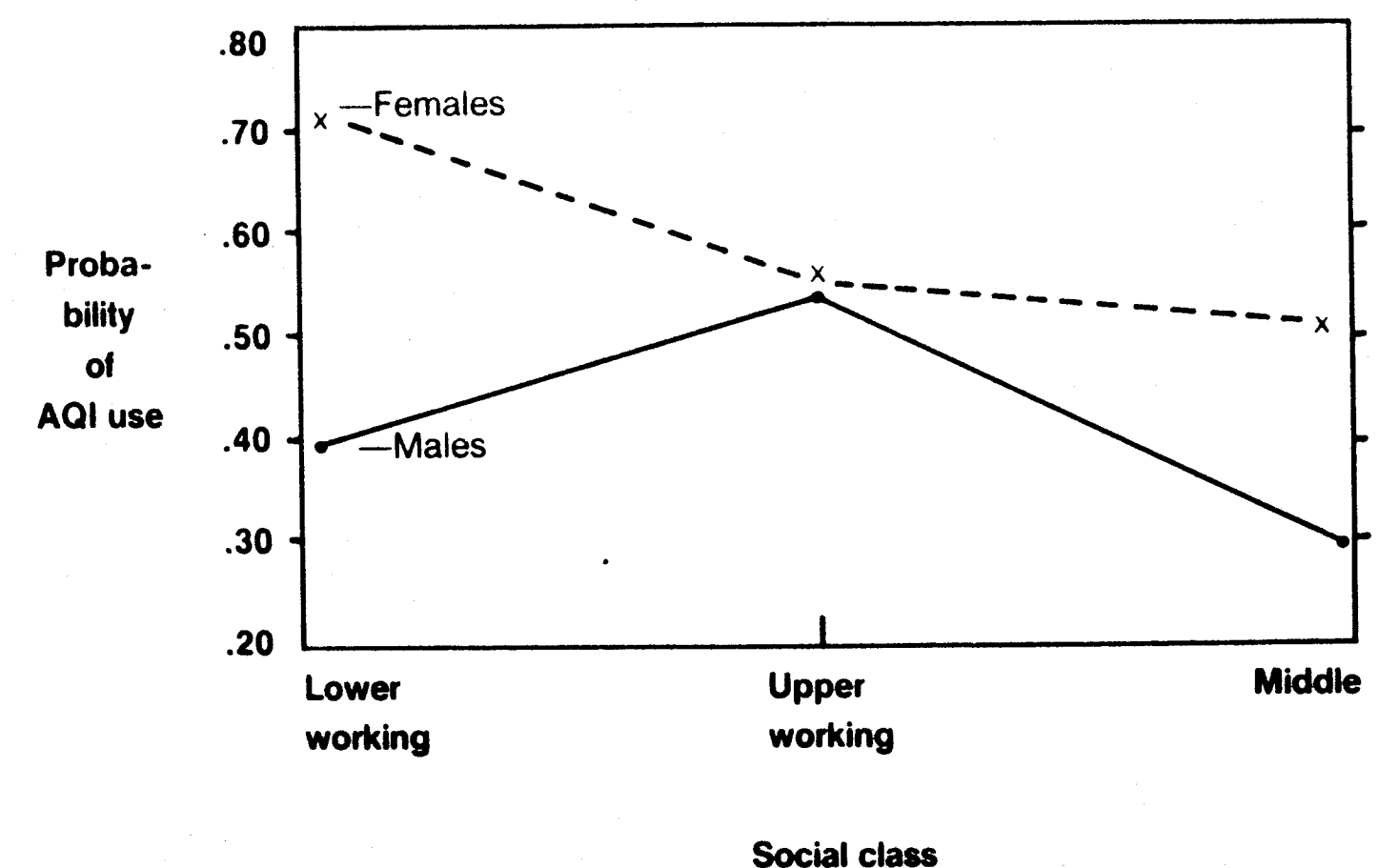


FIGURE 2: Probability of AQI use by class and sex.



coming in the (broadly defined) working class, who are the presumed originators of the change. In this respect, both Labov and Kroch would concur.

But what of the two points on which Labov and Kroch disagree – the curvilinear versus linear patterns and the positive versus negative social motivations? The social class patterning in our data is, for different subpopulations, both linear *and* curvilinear, so both theories would in this respect be partly confirmed and partly disconfirmed. From Kroch's viewpoint, the one inconsistency would be the unexpectedly low rate of AQI use among the lower working class males. In a simple linear model, with highest use correlating with lowest status, the lower working class male group in Figure 2 should have a probability of AQI use *higher* than that of the upper working class males, that is, a figure of, say, .60 or higher. This is the anomaly that converts an otherwise linear pattern into a curvilinear one. Kroch (personal communication) has observed similar "anomalies" in other data sets, with the "curvilinear" pattern appearing only for males, just as in our data, as the result of unexpectedly low rates of use of an innovation by lower working class males. His explanation is that resistance is involved here also, but here the resistance is based not on class but on *sex*. As we have noted, women tend to lead most linguistic changes, and Kroch suggests that it is these female-led innovations that lower working class males tend to resist; that they resist them because they think of the new forms as being characteristic of women, rather than of their class as a whole.

This explanation is presently speculative, but it is consistent with our findings, including those to be presented below dealing with the sex distribution, which show women leading in the use of AQI. With this modification, then, Kroch's theory will accommodate our findings. Labov's viewpoint, on the other hand, naturally accounts for the curvilinear pattern found for the male speakers, but does not predict the linear pattern found for the females. By this view the "anomaly" in Figure 2 is the high rate of use by lower working class females, who, if they lack the local prestige associated with innovators (Labov 1980:261), should have a somewhat lower rate of AQI use than do our upper working class speakers.

This issue cannot, presumably, be resolved within the framework of Labov's views on linguistic change without looking at factors such as the local status and communication networks of the speakers, and the overt and covert evaluations of the innovative form. We do not have information on the communication networks of our informants, but we have conducted subjective reaction tests in the Sydney speech community on the status of AQI (Guy & Vonwiller 1984). These show both positive and negative evaluations of this intonation. It is negatively evaluated in terms of general social prestige on scales such as job suitability, but positively evaluated on some affective scales such as the perceived friendliness of the user. Thus it may have *both* the generally negative evaluation by the speech community which Kroch's theory assumes *and* the covert association with local solidarity that Labov discusses.

A full resolution of these matters is beyond the scope of the present paper, but it does not seem implausible, in the light of these data, that *both theories are true*, that both a positive, driving social force and a negative, resisting one are involved in the spread of AQI, and indeed, in linguistic innovations in general. The two views are by no means antithetical. A given innovation could simultaneously be positively evaluated by the working class as a marker of class or neighborhood solidarity and negatively evaluated by the upper class and other groups influenced by them in order to mark *their* distinctiveness by virtue of their linguistic conservatism. In fact, such a simultaneous contradictory evaluation is implicit in Labov's views of "overt" versus "covert" prestige, "change from below with correction from above," and so on. What seems to be called for here is a consideration of the work that has been done on the spread of other types of (nonlinguistic) innovations.

The sex distribution of a form is, as we have seen, an important factor in the study of change in progress. In our total sample, female speakers show a significantly higher rate of use of HRT in declaratives than males, as can be seen in Table 4. The frequency of use by women is about double the figure for men (2% vs. 1%), and the VARBRUL probability value is also significantly higher for the women (.59 vs. .41). In crosstabulations of the data this higher rate of use by women persists for all subdivisions by age, class, and ethnicity, except for the upper working class, where, as we can see in Figure 2, they are equal. So if this is a change in progress, it is being led by women.

The last aspect of social distribution to be considered is ethnicity. Table 5 shows the results for the three ethnic groups in our study. For two of these groups, the Greeks and Italians, the raw frequency scores are appreciably higher, but this is an artifact of a skewed age distribution: These two groups were composed predominantly of teenagers (since the large immigration to Australia from Greece and Italy began only after World War II, there are very few Greek- or Italian-Australians over the age of thirty-five who speak English natively). The probability figures correct for this and show only minor variation among the three groups in likelihood of AQI usage. The major difference among these ethnic groups is found in the cross tabulation of class and ethnicity, shown graphically in Figure 3. Here we see that the linear class pattern appears for the Italian and Greek groups, while only those of Anglo-Celtic ethnic origins show the curvilinear pattern (and in fact, as we have seen, it is mainly the males within

TABLE 4. AQI use by sex

Sex	Instances of AQI	No. of tone groups	% AQI	Probability of AQI use
Male	561	53,769	1.0	.41
Female	1,163	53,916	2.2	.59

TABLE 5. *AQI use by ethnic group*

Ethnicity	Instances of AQI	No. of tone groups	% AQI	Probability of AQI use
Italian	750	31,152	2.4	.46
Greek	516	31,866	1.6	.52
Anglo-Celtic	458	44,667	1.0	.52

this group). Another interesting feature of this figure is the large difference between the Greek and Italian groups in the upper working class, a difference which is absent in the other two classes.

What is the significance of these results? They are perhaps most remarkable for their uniformity. There are a number of things which, a priori, might have led us to expect a greater ethnic diversity than we actually find here. As newcomers to the Australian scene, the Greek and Italian immigrants in the early postwar period suffered discrimination of various sorts and tended to reside in ethnically concentrated neighborhoods. These aspects of their social circumstances would militate against their smooth linguistic assimilation. Residential concentration would limit contact with English speakers. Discrimination (and the fact of being nonnative speakers) would accord them a marginal social status which would make them unlikely leaders in linguistic innovation within English. But nevertheless, the Greek and Italian communities in our sample today are remarkably similar to the Australians of British or Irish extraction in their treatment of AQI. Especially among the Australian-born English-speaking children of Italian or Greek parents, we find a virtually complete assimilation of this intonational

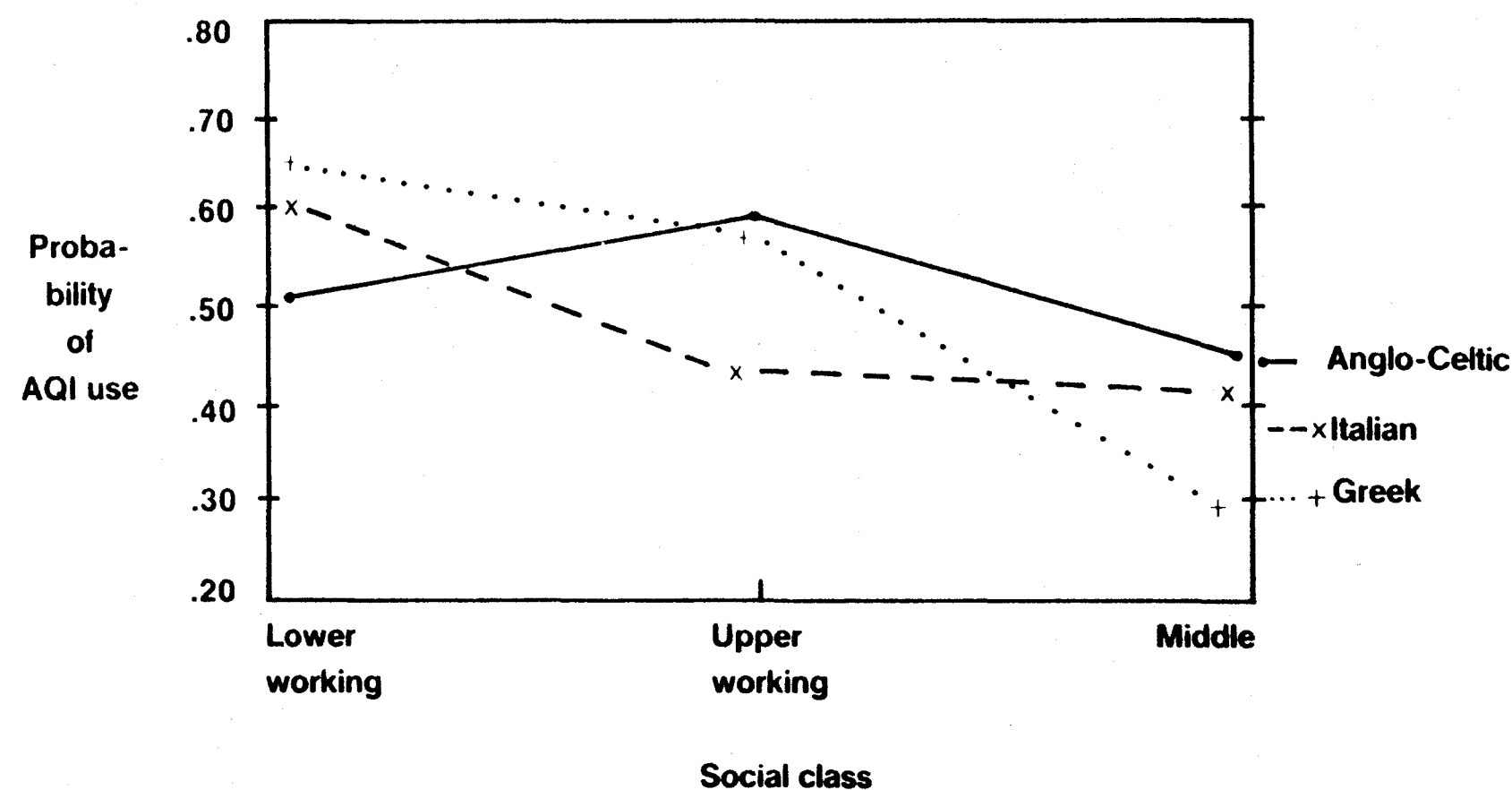


FIGURE 3: Probability of AQI use by class and ethnicity.

usage. The only respect in which these migrant communities do not seem fully assimilated is the lower working class male rejection of the innovation (hence the absence of a curvilinear class pattern for the Greeks and Italians). The one other divergence noted above, the large difference in the upper working class between the figures for the Greeks and for the Italians, remains puzzling, but we should note that the assignment of class status to the Greek and Italian ethnic groups was more problematic than for the Anglo-Celtic Australians. The social status of an Australian is *not* entirely independent of their ethnic origin, with recent migrants still the target of some prejudice. Therefore, the social class figures for the Greek and Italian ethnic groups may contain a somewhat higher amount of analytical error. The most interesting question, of whether the arrival of these new ethnic groups in the Australian speech community actually contributed to the development of this innovation, we will leave for consideration below.

## EVIDENCE FROM REAL TIME

The above results show that AQI has all the patterns of social distribution that are commonly associated with a change in progress. There is age-grading, with the highest rate of use found in the older teenagers; there is social class differentiation, with the highest rate of use occurring in the working class, which both Labov and Kroch believe to be typical of internally evolved linguistic change; the women are leading the men, which is typical of most linguistic changes reported in the literature. But, as we have said, evidence from the synchronic social distribution of a linguistic variable is not by itself sufficient to make a case for change in progress. However suggestive such evidence may be, it cannot rule out the possibility that the observed pattern is one of stable sociolinguistic variation, which persists through time and which involves a change in the behavior of individuals throughout their own lifetimes. In order to conclusively eliminate this possibility, we require what we have called historical evidence, or evidence from "real time." That is, we must be able to show whether or not, and in what way, speakers in this community used the variable of interest at some time in the past.

In the present case, such evidence is afforded us by the archives of the Mitchell and Delbridge (M&D) survey of the speech of Australian adolescents, which are housed in the Phonetics Laboratory of Sydney University. This survey (Mitchell & Delbridge 1965a, 1965b) was conducted between 1959 and 1961, approximately twenty years before our own interviewing (1978-82). It involved short interviews (typically two to five minutes in duration) with thousands of fifteen- to seventeen-year-olds from all over Australia who were students in their last year of high school. We examined about half of the tapes collected in the Sydney metropolitan area, which covered 674 students, of whom only 26 (or 3%) showed any use of the HRT in declarative clauses. In a quantitative study of a subsample of 65 students we found 8 instances of AQI out of 2,630 tone groups, amounting to about 0.3 percent. This is substantially lower than the rate

of use we find among teenagers today (2.3%), but it is closely comparable to the rate of use in our present-day sample of twenty- to thirty-nine-year olds, which is 0.5 percent! This is, of course, the age group in which M&D's teenagers of twenty years ago now find themselves (a person 17 in 1960 would be 37 in 1980).

These facts imply two things: First, the reason for using age-grading as evidence of "distribution in apparent time," the assumption that people remain relatively fixed in their linguistic behavior after reaching adulthood, appears to be true as regards the use of AQI. And second, these data confirm that there is a change in progress in Australian, or at least Sydney, English, involving increasing use of HRT in declarative clauses with the meaning of "Do you understand?" This feature was virtually absent in the speech of the Sydney teenagers interviewed by M&D two decades ago, but is today, as we have shown, widespread in that age group, while still rare in the speech of older informants.

Several other points regarding the Mitchell and Delbridge study are worthy of note. First, as we have noted, their sample consisted primarily of students in their last year of high school, which means it would not be typical of the general population. A substantial fraction of Australian children leave school before the last year of high school, mostly bound for employment or vocational training. Consequently, by the final year the middle class and college-bound children are overrepresented. Therefore, the M&D sample would have contained a marked preponderance of middle class children and a concomitant deficiency of those of working class origins. So if, as we believe, the AQI innovation originated in the (broadly defined) working class, it could have been more robust in 1960 than the M&D data seem to imply.

The second noteworthy point concerns the phonetic quality of rising intonations in the M&D data. We found an unusual number of contours that were difficult to classify in Halliday's system, usually because they involve an anomalous rise somewhere in the tone group. For example, there were several that were very similar to the HRT except for a plateau or brief drop at the end. Others had rises of intermediate height, less than the 40 percent or more increase in  $F_0$  that we find in the HRT. We called these "atypical rises," and it would be tempting to consider them a phonetically intermediate step in the development of the modern AQI. However, alternative explanations are possible. M&D, in their analysis of these data, noted the frequent occurrence of an unusual intonation contour they called the "interview tune," which involved a noticeable rise. They felt it was generated by the artificiality of the interview situation and meant roughly "I'm finished with that question; what's next?" This interview tune appears to include both what we consider instances of AQI and what we called atypical rises. It is clear to any observer that many of these interviews sound intonationally artificial. They were conducted in most cases by the teachers in the schools, who of course did not have the benefit of the subsequent major advances in the methodology of the sociolinguistic interview. In some cases, the students

had evidently been told in advance to prepare something to say, which therefore sounds like a recitation of a list of clauses, with the usual listing intonation rise at the end of each statement. So, although it would be most interesting to have been able to trace the phonetic evolution of an intonational change, it could be that the atypical rises are simply distorted data resulting from what we now recognize to be faulty interview techniques. If, as we suppose, the present-day AQI results merely from an extension of the existing high rising tone of English to a new syntactic context with a modified meaning, then there is no reason to suppose that it ever had a phonetic form any different from the other HRTs of English.

#### THE LINGUISTIC CONSTRAINTS

The uneven distribution of AQI across different text types, which we had noted in our preliminary investigations, is confirmed by the results given in Table 6. The relatively complex verbal tasks of telling a story (Narrative) and describing one's primary school or relating the rules of a childhood game (Description) are highly favorable to the use of AQI, showing frequencies of use in the neighborhood of 2.8 percent and VARBRUL probabilities of .67 and .70, while the less intricate tasks of giving simple factual information (Fact) or offering an opinion (Opinion) disfavor the use of this intonation, with frequencies of AQI use as low as .4 percent and probabilities of .30 and .33.<sup>5</sup> Explanation, at 1 percent and .50, falls in between these two extremes. We interpret these findings as being a consequence of the interactive meaning of AQI. In a complex verbal task such as a narrative or a description of the rules of a game, where all the information conveyed is new to the hearer, the overall comprehension of the whole story or game may often depend crucially on the comprehension of each step in the telling. Narratives in particular ideally have a dramatic structure: tension building to a climatic resolution. Listener involvement during the stage-setting and plot-development is vital to this effect. Therefore, these are tasks where it is most important for a speaker to check that the listener is understanding what is being said, and one of the vehicles young Australians use for achieving this is AQI, which has the social meaning of seeking verification of listener's comprehension.

TABLE 6. *AQI use by text type*

Text type	Instances of AQI	No. of tone groups	% AQI	Probability of AQI use
Fact	103	24,086	0.4	.30
Opinion	160	28,067	0.6	.33
Explanation	61	5,792	1.1	.50
Description	1,297	45,988	2.8	.67
Narrative	103	3,752	2.7	.70

TABLE 7. *AQI use by length of turn*

Turn length	Instances of AQI	No. of tone groups	% AQI	Probability of AQI use
One word	6	2,522	0.2	.34
Elliptical	33	3,824	0.9	.59
One clause	41	7,974	0.5	.44
Multi-clause	1,644	93,365	1.8	.63

On the other hand, in the least favorable text types for AQI use – Facts and Opinions – there is not much intricate structure. The Fact texts typically already have a question–answer structure. This means that it will rarely be necessary to offer additional opportunities for requesting clarification to the listener (the interviewer), since the floor will normally revert back to the interviewer anyway at the end of each brief text. The Opinion texts in our data rarely contain a great deal of content other than “phatic communion,” so again the need for feedback regarding informational content is low. In general, the use of AQI would seem to be correlated to the complexity of the verbal task: Where this is high, involving a lot of information new to the listener and an extended turn at talk by the speaker, AQI use is also high; but where complexity is low, AQI use is also low.

This finding is also confirmed by the results for the remaining linguistic variable, length of turn, which are given in Table 7. There we see that the shortest turns, consisting of only one word, have the lowest probability of AQI use, whereas the longest turns, consisting of a number of clauses, have the highest probability. As Schegloff notes (1981:73), extended turns at talk have to be jointly constructed by speaker and listener; the unmarked rules for conversational interaction are “designed to minimize turn size.” The use of AQI in effect acknowledges this by offering the hearer a brief turn to intervene in the discourse, with the expectation that they will only use it to seek clarification of something the speaker has said, thus returning the floor immediately to the speaker, who may then proceed with an extended turn at talk for the purpose of carrying out a complex verbal task. Following Schegloff, AQI is thus, in effect, a request for a “continuer” – a solicitation of the listener’s consent to an extended turn for the speaker.

#### CONCLUSIONS

In current Australian English, the use of a high rising terminal contour in a declarative clause has developed a specialized meaning having to do with the interactional nature of conversation: requesting verification of the listener’s comprehension. In terms of the rules governing the organization of turn taking in conversation, it often has the effect of securing the listener’s cooperation in the construction of an extended turn at talk for one speaker to carry out a relatively

complex verbal task. From the social and historical evidence available – the synchronic social distribution of this form and a comparison of the present situation with an earlier stage of the language represented by the Mitchell and Delbridge (M&D) data collected in 1960 – it appears that this innovative use of HRT in declaratives is a change in progress in Australian English, which evidently got under way in Sydney within the last twenty to twenty-five years.

The findings supporting this view are as follows: First of all, the M&D tapes show that this intonational usage was very rare in the speech of teenagers around 1960. Second, our present-day data show that, although still rare in the speech of people who were teenagers in 1960, the form is now very common among the teenagers of today. These two facts lead to the twin conclusions that individuals do not change their behavior much in respect of this form in the course of their adult lifetimes, and that the form must have come into common use in Sydney since 1960. Third, the form shows the class and sex distributions that are commonly associated with change in progress, namely, women use the innovative form more than men, and use is inversely correlated with social class.

These data bear on an issue that has been discussed in some detail in this paper, the social class distribution and social motivation of linguistic change, particularly the theories of Labov and Kroch in this regard. Each of these theories accounts for much of what we have found, and we have suggested that they are not incompatible with each other. While we do not have the data to fully resolve the matter, our findings are consistent with the view that both positive and negative evaluations are involved; that the working class is advancing and extending the use of AQI and has a positive local evaluation of it, while at the same time the dominant social classes are resisting and stigmatizing the new form, and by virtue of their position as the setters of community-wide standards, have assigned it a negative overt status.

#### *Meaningful variation*

Several other theoretical and methodological issues were raised in the course of this paper. One was the matter of whether potentially “meaningful” variation such as we are dealing with here can successfully be treated using the same methods as were developed for the study of mainly meaningless phonological variation. Although this question is still the subject of some theoretical debate, it has essentially been answered in the affirmative by the sheer number of worthwhile studies which have been done dealing with matters “above and beyond phonology” (Sankoff 1973). Insofar as we were able to successfully define the variable, identify the choice points governing its use, and delimit the outer envelope of potential occurrences, the present study also serves to prove the same point. It would seem that the method is a valid one for the study of the use and spread of meaningful variants. What must be altered is not the method but the interpretation. It would be misleading to claim here that we are dealing with, as Labov (1972:188) puts it in connection with phonological variation, “differ-

ent ways of saying the same thing." It is true that the propositional meaning of the utterances we have examined would in fact be unchanged whether or not a high rising terminal contour was used, so in that sense they would be different ways of saying the same thing. But the interactive meaning, and the effect on the rules of conversational turn taking, would be markedly different. So as regards what this intonation signals, what we are in fact looking at is *whether one way of saying one thing is used or is not used* by given speakers in given linguistic contexts; in other words, whether at a given point in a discourse, namely the beginning of each tone group in a declarative clause, the speaker chooses to express a particular interactive meaning by the choice of one intonational contour as opposed to the others available.

One thing that makes an intonational variable such as this one useful in investigating these matters is that it is so easy to identify the points where this meaningful choice must be made. For a meaning that cannot be intonationally coded, say, one that must be expressed by a word or phrase, it might be difficult to say where in a discourse it might have been used and what counts as a nonoccurrence. But with intonation, since it is impossible to utter anything without using some intonational contour, a speaker is faced with a clear choice about what contour to use at the beginning of every intonational phrase, or tone group. Perhaps it is the absence of such clear boundaries, rather than an intrinsic problem of semantics, that has hindered some studies of meaningful variation.

One point raised in this regard by Romaine (1981:17, 19-22) and Dines (1980) merits further mention here. Both these authors propose as a possible approach to the study of variation above the phonological level that one might investigate all the possible ways of expressing a given meaning (in the sense of "discourse function"), perhaps examining in what contexts the various possible expressions of a given function are each preferred. Such a semasiological study would be an interesting companion to the present study, which is more onomastic in nature. One could look at all the ways of expressing the interactive meaning identified for AQI, including perhaps "Right?" "you know," "Do you understand?" and so on, and study the general frequency of occurrence of the *meaning*, as well as the patterns of use of its various formal realizations. But the fact that such an investigation is possible does not invalidate the methods or the findings of the present study, which looks at the frequency of use and social distribution of a single, innovative form.

Another issue raised at the outset was the development of a historical linguistics of intonation. In the present study we have concluded that there was no innovation on the phonetic level, but rather that an existing phonetic form, the HRT contour, was utilized in a syntactic frame where it had previously been uncommon, with an alteration or extension of the meaning it had previously had in such a frame. This meaning was not new, however; there already existed several other ways of expressing it in the language. So the innovation consisted of a novel match-up between form and meaning, expressing an existing meaning

in a new, perhaps more efficient way. This suggests the questions, is this typical of intonational change? Are there ever any intonations which are *phonetically* new? Probably there are, but the scope for phonetic variability is clearly more limited for intonation than it is for, say, segmental units. Variation in  $F_0$ , is one dimensional; it can only go up or down, and even the range of emically different time sequences of ups and downs appears to be drastically limited. Halliday identifies only five distinctive simple tones for English: rise, fall, level, rise-fall, and fall-rise. The maximum number of distinctive tones identified in tone languages depends in part on the theoretical perspective of the analyst, but a figure of ten or twelve seems generous, and systems of only three or four tones are much more common. So it may be that, phonetically speaking, it is rarer to find something truly new under the intonational sun. But since there are many different meanings available, perhaps most intonational changes that we will be able to observe will in fact be changes in the meanings encoded by the rather limited preexisting inventory of phonetic contours.

#### *Linguistic origins*

Finally, no discussion of a linguistic innovation would be complete without a consideration of its origins. In any study, this will be a complex area, encompassing such issues as the linguistic source, the social motivation, and the actualization and implementation of the change. Our study of AQI has touched on most of these areas, although we lack the information to resolve them all. This section will therefore be somewhat speculative, as we examine the various possibilities.

Let us consider first the possible linguistic origins of AQI. One possible source that we have mentioned is a kind of phonetic evolution of the contour. For example, one might hypothesize that it began with the level or slight midrise contour used in English declaratives for continuation (which are used in extended texts to help speaker retain the floor even across a pause), and then in order to indicate its different function, it evolved higher and higher terminal rises. However, as we have seen, there is little evidence that AQI ever had a phonetic form different from the normal English tone 2, and consequently we have ruled this out as a possible origin.

A second possibility that we have mentioned is that the present-day interactive meaning of the HRT contour in declaratives in Australian English arose as an extension of the general meanings of this contour in English, a shift from questioning the proposition to questioning the hearer's knowledge of that proposition. It is not, after all, the mere occurrence of this contour in the declarative syntactic frame that is novel in English, but rather the *meaning* of such a conjunction of intonation and syntax. And when an HRT is used in a declarative in other English dialects, its meaning already has some metapositional overtones; the intonation in "He's rich?" does not just mean "Is it true that . . . ?" but also ordinarily implies that the speaker is surprised, that some "fact" he or she thought was true has just been contradicted. So even in this general English

usage, an HRT-in-declarative already has some metapositional meaning which makes reference to the state of knowledge or belief of a participant in the discourse, in addition to the propositional meaning of questioning the proposition. To get from there to the meaning of AQI would have required a loss of the propositional meaning and a shift in focus of the metapositional meaning from the speaker to the hearer. One possible intermediate step in this extension or shift in meaning is the deferential meaning described by Lakoff (1975:17), who gives as a hypothetical example a woman who is asked by her husband when dinner will be ready and replies "six o'clock?" The intonation here has no propositional meaning (it does not question whether the proposition "Dinner will be ready at six o'clock" is true), but does have a metapositional meaning of "Is that all right with you?" It does not secure an extended turn at talk for the speaker, and it focuses on the hearer's assent rather than his comprehension, but in several respects is similar to AQI.

As an account of the linguistic origins of AQI, this "shift in meaning" hypothesis leaves several unanswered questions. If the meaning of this intonation is going to shift, why did it shift in this way and not some other? In the absence of relevant evidence which could suggest an answer to such questions, this "explanation" would remain speculative. However, it is not necessarily incompatible with what we feel is the most plausible account of the linguistic source of AQI. This is that the high rising intonation of AQI is in effect an elliptical expression of a tag question with the same meaning, such as "You know?" or "Right?" from which all formal content save the intonation has been omitted. As an explanation of the phenomenon, this hypothesis has the advantage of relating AQI to lexically explicit forms which occur widely in English having exactly the same meaning and interactive function that AQI does, and which have the essential formal similarity to AQI of the HRT intonational contour. By this view, the innovation which gave rise to AQI was a simple, and in effect recoverable, ellipsis of the lexical content of the tag, leaving its marked intonation to be carried by the main clause. The parallel use of tags with AQI in texts such as (3) lends further support to this hypothesis.

#### *Social origins*

These accounts of the linguistic sources of AQI still leave untouched the problems of social motivation and actuation of the change. If any of them were possibilities inherent in the linguistic system, we would still want to know why they were never realized at any other place or time in the history of English. We have discussed at some length the possible social motivations of "local identity" and group distinctiveness that may lead some classes to adopt or resist an innovation, but these have to do primarily with the *implementation* phase of the change, with reacting to a new form after it has already been "invented." Now, however, we would like to consider what motivates the original invention.

One possibility that must always be considered is that the form under investi-

gation was not really invented here and now, but was already in existence, perhaps in another place, and was only just now imported or widely adopted here. In the present case, the here and now is Sydney in the last three decades. The most plausible possible "external" source is other regions of Australia. Although our data show a clear recent and rapid spread of AQI in Sydney, that does not prove that the form first originated there. Aside from Bryant's study of Canberra, we have no systematic information on this form in the rest of Australia, other than anecdotal observations of individuals (some of them middle aged and older) using it whom we have encountered briefly in our own travels in various areas of the country. So we cannot rule out the possibility that AQI was previously well established in some rural area, or some other city, and has just been imported into Sydney in recent decades. However, neither do we have any strong reason to believe that such is the case. Similarly, we cannot rule out the possibility that the form has existed in Sydney for a long time at a very low frequency of use, but has only just recently begun to be used more widely and more often. But neither of these logical possibilities would serve as a *resolution* of the actuation problem; they would merely alter its sociotemporal locale.

One concrete proposal concerning actuation of linguistic change is Labov's suggestion that much linguistic change appears to be set in motion by "the entrance of new ethnic and racial groups" into a speech community (1980:263). This is related to his concept of the emblematic function of innovation. The arrival of new groups alters the established order of group roles and identities, and may thus provide the occasion for a renewed assertion of group identity by means of some linguistic marker of distinctiveness, namely an innovation. This idea of Labov's is very illuminating as regards the nature and timing of AQI, especially when one considers the recent social history of Australia. In the first two decades after World War II, Australia experienced the entry of new social groups into its speech communities on a truly massive scale. Between 1947 and 1961, Australia received an average of over 200,000 immigrants a year, into a domestic population that was less than 7-1/2 million at the end of the war. Immigration was contributing an average of 1 percent increase per year to the Australian population during this period (Australian Bureau of Statistics 1973:132). Most of these people came not from Britain, the original colonial power and source of immigrants, but from places like Greece, Italy, Yugoslavia, Turkey, Lebanon, and so on, with very different languages and customs. Was it the arrival of all these new groups, most of them nonnative speakers, which motivated the rise of AQI in Australian English within a decade or so of the onset of the postwar immigration? If so, it would be a fascinating demonstration of Labov's hypothesis.

A related, but more speculative explanation of the actuation of this change depends on the observation that this particular change involves the development of an efficient way for checking for clear channels of communication, of asking "Do you understand?" The need to do this was surely very high in Australia

during the 1950s and early 1960s, when several million nonnative speakers were being absorbed into the AE speech communities. We do not have the evidence to decide such matters, but they raise interesting new possibilities in the area of understanding how and why languages change.

## NOTES

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2. There are several references in the literature to other dialects of English which use rising tones in declaratives, some of which are mentioned later in this paper. However, none of these other usages are, to our knowledge, identical to AQI in all respects including phonetic form (a high rise equivalent to that used in polar questions), meaning (seeking verification of listener's comprehension), and interactive use (normally to construct an extended turn at talk for speaker).
3. We are using the term "Anglo-Celtic" to include all native speakers of Australian English whose ancestry derives from the islands of Great Britain and Ireland, including the English, Irish, Welsh, and Scottish. We do not thereby wish to deny the existence of national and ethnic differences among these peoples, but rather to emphasize the relative linguistic and cultural unity that, in the Australian context, differentiates them collectively from people of other national and ethnic origins, such as the Italians and Greeks.
4. Certain other factors were also investigated and found to be insignificant, such as the sex, nationality, and individual identity of the interviewer and the identity of the data coder. We have also collected but not yet analyzed information on such things as whether the interviewer produced an audible response to the AQI, whether the speaker paused after producing it, and whether the AQI occurred in isolation or as part of a chain of such intonations, as in text (3).
5. We do not wish to suggest that opinions are necessarily, as a genre, lacking in complexity. However, most of the texts we are identifying as opinions were structurally simple, consisting mainly of evaluative and affective comments.

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