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Creating a New Town koine: Children and language change in Milton Keynes

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ABSTRACT

Koineization – the development of a new, mixed variety following dialect contact – has well-documented outcomes. However, there have been few studies of the phenomenon actually in progress. This article describes the development of a new variety in the English New Town of Milton Keynes, designated in 1967. The article is structured around eight "principles" that relate the process of koineization to its outcomes. Recordings were made of 48 Milton Keynes-born children in three age groups (4, 8, and 12), the principal caregiver of each child, and several elderly locally born residents. Quantitative analysis of ten phonetic variables suggests that substantial but not complete focusing occurs in the child generation. The lack of linguistic continuity in the New Town is demonstrated, and the time scale of koineization there is discussed. Finally, it is shown that demography and the social-network characteristics of individuals are crucial to the outcomes of koineization. (Language change, language variation, dialect contact, koineization, English dialects, child language, New Towns.)*

It has long been recognized that many types of change affecting the language of a community diffuse gradually across geographical space and through human populations. However, they do not do so automatically and mechanically; there is a social and geographical orderliness about the spread that suggests the presence of what Labov (1972:162) calls "social embedding." In other words, the spread of a change mirrors certain aspects of social structure. However, as many sociolinguists now realize, we need to go to the individual to understand the behavior that leads to the adoption or rejection of potential changes. As J. Milroy 1992 points out, it is SPEAKERS who both innovate and adopt. If this is true, the propagation of change must be a direct consequence of the interaction between individuals – mediated, of course, by numerous social, social-psychological, and psycholinguistic factors that affect those individuals in a particular encounter. Viewed from this standpoint, the vast majority of interactions involve language contact – or, within a single language community, dialect contact, where the latter is defined as the contact

Stage	Type 1	Type 2	Type 3
1	prekoine	prekoine	prekoine
2	↓	stabilized koine	stabilized koine
3	↓	↓	expanded koine
4	nativized koine	nativized koine	nativized koine

FIGURE 1: Developmental continua of a nativized koine (from Siegel 1985:375).

between speakers of any mutually intelligible language varieties (Trudgill 1994:13).[1] Before short-term interactions between speakers of similar varieties can lead to permanent language change, the social conditions must be right for the instantaneous and often transient acts of linguistic convergence or divergence between the speakers (Giles & Coupland 1991) to translate into quasi-permanent changes in speech habits, or "long-term accommodation" (Trudgill 1982, 1986).

THE SOCIAL EMBEDDING OF KOINEIZATION

Siegel's 1985 framework

This article is concerned with the social conditions for language change, especially the time depth of the dialect contact involved. It is also concerned with some of the social-psychological and psycholinguistic factors that affect the linguistic consequences of contact. We look at a particular, rather dramatic form of dialect contact: koineization following the mass settlement of a rather sparsely populated area. This is what Siegel (1985:364) calls an "immigrant koine," as distinct from a "regional koine," where the new variety exists side by side with the contributing dialects. Koineization, according to Siegel's most general definition (1993:6), refers to "the linguistic processes that occur when different dialects or closely related subsystems come into contact." These processes may lead to the emergence of a koine, which he defines as

> the stabilized result of mixing of linguistic subsystems such as regional or literary dialects. It usually serves as a lingua franca among speakers of the different contributing varieties and is characterized by a mixture of features of these varieties and most often by reduction or simplification in comparison. (1985:363)

In the "immigrant koine" case, clearly, there is only a very limited sense in which the koine "serves as a lingua franca among speakers of the contributing varieties": this implies a degree of bidialectalism that is probably rare. However, Siegel suggests four stages in the developmental continuum of nativized koines which provide a framework against which all cases of koineization can be compared. Figure 1 reproduces this framework.

Siegel explains these stages as follows (1985:373–74). The PREKOINE stage is where "various forms of the varieties in contact are used concurrently and inconsistently. Leveling and some mixing has begun to occur . . . but few forms have emerged as the accepted compromise." STABILIZATION occurs when new norms have been "distilled," and a new compromise subsystem – i.e. a variety related on one or more linguistic levels – has emerged, but it is not used for in-group communication. A koine may become a literary language or a standard, in which case it is said to be EXPANDED. Finally, it may become NATIVIZED, in which case it acquires all the functions of a normal first language; it may be subject to further elaboration, as well as to changes that are not ascribable to the dialect mixture.

Importantly, the two middle stages can be bypassed altogether. This is the case for Fiji Hindi (Siegel 1987) and Høyanger Norwegian, both of which therefore fall under Type 1 in Figure 1 (Omdal 1977, Trudgill 1986:95–106, Siegel 1993). Siegel's framework can be taken as a partial model of the time variable in koineization. However, in the present article we focus on differences WITHIN TYPE 1 – in that we will be identifying factors which lead to variations in the route, the speed and the degree of the linguistic "focusing" (Le Page 1980) that precedes the emergence of a nativized koine.

The role of children in koineization

Most studies of koineization are post-hoc, in that they examine the outcomes of the process several generations after the original migration. However, by focusing on a British "New Town," Milton Keynes, just 20 years after it was established, we can treat koineization not as a *fait accompli*, whose stages must be reconstructed (Trudgill 1986, Siegel 1987, Mesthrie 1993, Britain 1997a), but as a dynamic and complex process that can be investigated as it takes place, using a carefully designed corpus.[2]

Central to the main study reported here is the role of children in koineization – for two broad reasons, the first psycholinguistic and the second social-psychological. Adults are thought to have passed a "critical period" for language acquisition (see Lenneberg 1967 and the largely confirmatory discussion in Rondal & Edwards 1997:129–30), and so are not likely to be able to make major grammatical and phonological changes to their speech after migration. Data from second language (L2) acquisition research similarly suggests a gradual deterioration in language-learning aptitude, leveling off at about the age of 16, with the ability to acquire a native-like accent disappearing first (see Gass & Selinker 1994:239–46). Changes made by adult second-dialect acquirers,[3] who are the adult group of relevance to koineization, involve simplification; this includes a loss of irregularity in morphology, a reduction in the number of grammatical categories, and an increase in invariable word forms (Mühlhäusler 1974, cited in Trudgill 1986:103; Mühlhäusler 1980, cited in Siegel 1985), as well as the acquisition of "easy" features, such as small changes in vowel quality and lexical and morpholexical borrowing (Kerswill 1994a:155–58;

1996a:200). Contrasted with this is the considerable plasticity of children's phonologies and grammars up to, approximately, puberty. For fuller discussion, see Trudgill 1992, 1994, 1996a; Chambers 1992, 1995:162–63; and Kerswill 1996a.

These psycholinguistic factors are inevitably mediated by the changing social psychology of the child from infancy to post-adolescence. Children's social identities develop rapidly during this period as they pass through the "life course" (summarized by Giddens 1989:82–85): they move from a strong attachment to the caregiver; they go through the transitional stage of adolescence, in which individuals see a conflict between their wish to behave as adults and their treatment by the adult world as children; and they arrive at the verge of adulthood, with the incipient need to make independent life-decisions. Each stage is reflected in differences in language use that are associated particularly with changes in the child's orientation to other people. Starting from a parent-centered orientation, young children expand their range of social contacts to other, often older children, eventually forming distinctive teenage peer-groups, with their attachment to youth culture and opposition to adult norms. Linguistically, this is reflected in a greater preference for non-standard speech in the mid-teens, at least in Britain (Portz 1982; cf. Nordberg 1972, cited in Romaine 1984:107, for related findings in Sweden). It has been argued that it is this stage that is most influential from the point of view of the genesis of linguistic innovations, if not their geographical spread (Aitchison 1981:180, 1992, 1994, Kerswill 1996a, Eckert 1997:163; see also Deser 1989 for a spectrographic study suggesting that teenagers align with peers rather than parents in vocalic variables).

Growing children's changing orientation to different groups of people must be seen as part of their maturing SOCIOLINGUISTIC COMPETENCE – a term which we adopt from Ervin-Tripp 1973, and which we define as the knowledge of the forms, the symbolic functions, and the social distributions of language varieties current in the speech community. The processes that underlie the formation of new language varieties will be linked to these developing capabilities on the part of the child. For this reason, it is important for us to understand the overall sociolinguistic context of a particular case of koineization.

By contrast, adults tend to have more fixed social identities, which they bring with them to the new location. They are therefore less motivated to change their speech habits than are children – a tendency compounded by the psycholinguistic constraints to which we have already referred. The potential linguistic effect of prior social identities is graphically demonstrated by Auer et al. 1997, who show how a former GDR resident's accommodation to a western German dialect reflects the decrease – followed, unusually, by the increase – in his identification with people from his eastern German home town.

With certain provisos, then, it is the migrants' children who are central to the linguistic focusing that precedes the formation of any new, stable variety, as has been pointed out by a number of linguists (cf. Lanham & Prinsloo 1978:19, Trud-

gill 1986:95–96, Mesthrie 1993:39). This is probably an uncontroversial statement, and it means that children should be the main focus of study. However, the details of the process of focusing are likely to be complex. In particular, we must consider the age at which children and adolescents can acquire new dialect features, as well as the age at which they form stable peer groups in which new norms can be forged. We must also bear in mind the contribution of the parents' dialects to the mixture. Clearly, adults adapt to different language environments, though their accommodation is subject to constraints. Children brought up in a migrated family have, as primary input, language varieties originating elsewhere, albeit modified ones; and it would be surprising if this fact did not have consequences for their future language development. Thus Aniansson (1996:112), contrasting the speech of the children of incomers to a Swedish town with that of the children of locally born people, finds significantly stronger local vernacular features in the latter than in the former.

The wider social and historical context

All this must be seen against the background of the wider socio-historical process behind each new settlement, and that will be a central theme of this article. Much of the argumentation surrounding the development of both pidgins and koines involves the notion that it is adult language or dialect contact that leads to the simplification processes typical of both. Thus Trudgill 1994 draws a distinction between this situation and supposed long-term child language contact, where changes – especially convergent ones, as in *Sprachbund* phenomena – can take place without simplification. Much of the argument to be developed in this article concerns the relative importance of children and adults for the outcome of dialect contact. However (to anticipate that argument), it seems to us that, while this distinction is clearly insightful, its use to explain particular cases must be much more nuanced than has often been the case. This is true because, in most cases of settlement, there will be children among the arrivals, and children will be born to the adult migrants.[4] These youngsters will quickly form a new "native" speech community; and the degree of linguistic focusing they achieve as the first generation of natives will depend on a wide range of linguistic and demographic factors, especially the proportion of children to adults in the earliest years of settlement. We will raise the topic of the effect of children vs. adults again in our discussion of particular dialect contact cases below.

Thus we need to know the exact linguistic and social history of the location from the time of the start of the mass settlement to the time when a koine emerges. This history covers the following:

(a) The original population of the area: its size, its social characteristics, and its speech forms.

(b) The size of the incoming population in relation to the original population.

(c) The abruptness of the settlement: Was it sudden and finite, or did it continue over a long period? Did it continue after koineization had taken place?

(d) The proportion of children to adults among the incomers and the original population, and the rate at which children were born to the incomers after migration.

(e) The continued contacts of the incomers with their place of origin: Did they break off relations with their original home completely, or did they maintain links with it to the exclusion of new, local contacts?

(f) The social characteristics and ethnicity of the incomers: Did they come to take up specific jobs, e.g. in a new industry? Were they socially mixed? Were they an ethnically distinct group?

(g) The speech of the incomers: Was it diverse or homogeneous? Was it similar to that of the native population? Were some SOCIAL dialects better represented than others?

Although finding fairly precise answers to these questions is scarcely possible at the present state of knowledge, such an investigation will in principle allow us to explain the character of a particular case of koineization.

EFFECTS OF MIGRATION ON LANGUAGE CHANGE

We argued above that dialect contact forms the mechanism of the spread of most linguistic changes. In this section, we examine a number of cases where dialect contact has been HEIGHTENED by the presence of migration – leading in some cases, but not all, to koineization. The respective roles of children and adults will be assessed.

Contact involving L2 speakers

In the first two cases, contact is not between native speakers of a language but involves non-native speakers.

Afrikaans. In this language we can observe features also found in pidgins – specifically, an extreme simplification and reduction (i.e. loss of formal categories) in the verb morphology, as well as simplification of noun plural marking, as compared with the Dutch parent dialects. In these respects Afrikaans resembles a koine as well as a de-creolized creole. Trudgill 1996b claims that, despite this, the simplification was not the result of either of these processes (though koineization surely could have played a role), but rather to the presence of relatively large numbers of adult learners of the language in its early years, who presumably were instrumental in passing it on to both ethnically Dutch and non-Dutch children.

Israeli Hebrew. The modern language is a "revived" classical language which now performs all the functions of a community vernacular. Contact was ENTIRELY between L2 speakers, yet developments followed a pattern familiar from koineization (indeed, Blanc 1968:238, in his account of the development of Israeli Hebrew, refers to the language as a "koine," a position accepted by Siegel

1997:129–30). As pointed out by Glinert (1989:10, cited by Kerswill 1994a:12), there has been considerable reduction in the phonological inventory, as compared to the liturgical language. Like many other Semitic languages, Biblical Hebrew distinguished the pharyngeal consonants /ħ/ and /ʕ/ and the velar /x/. Neither /ħ/ nor /ʕ/ was acquired by the majority of the (adult) Ashkenazi immigrants, whose first languages were European. Instead, they merged /ħ/ with /x/, a phone widely found in European languages, and deleted /ʕ/ altogether. It can in fact be claimed that there was koineization in Hebrew, too. The Sephardic Jews, who had an Arabic substrate, used the pharyngeals in their Hebrew vernacular. In the majority, high-status vernacular, the pharyngeals have been leveled out, despite being widely regarded as correct.

Unlike Glinert, Ravid 1995 investigates some of the processes behind these changes. Her study of language acquisition in Hebrew is extremely revealing in that it examines the role of children in the establishment of new spoken norms. She claims that Modern Hebrew is morphologically more opaque (irregular) than its antecedents because of the "phonological erosion" which followed its being "revived as a spoken medium using a new phonological system only loosely related to that of Classical Hebrew, with entire phonological classes being obliterated" (1995:133). Thus she finds, among child learners, the development of non-standard reanalyses of morphological classes which are promoted by the principles of "Transparency, Simplicity, and Consistency," but are constrained by literacy and the "literate propensity towards marked structures" (1995:162). In the immediate post-1945 period, adult L2 Hebrew speakers transmitted the language to children, who nativized the input (doubtless according to a route similar to that suggested by Ravid). Significantly from the point of view of koineization, this stabilization is evidently still not complete, even though the majority of Israeli children now have native Hebrew-speaking parents. The reason for this slow focusing, compared to some cases of dialect contact (see below), may well lie in the fact that the original input two generations ago was an "interlanguage" (Selinker 1992), which may have caused greater problems of learning for the nativizing children.

Contact between L1 speakers

Koineization in Siegel's sense can occur only following contact between native speakers. Of course, not all such contacts, even following migration, lead to this outcome. In this section, we discuss a number of migration-induced dialect contact cases, bringing out the demographic, social, and linguistic parameters that lead to particular outcomes. To anticipate: We find that focusing occurs in either the second or the third generation (the children or grandchildren of the migrants).

The English Fens. Britain's study (1997a,b) of the variables (ai) and (ʌ) in a dialect contact situation is particularly interesting because of the huge difference in the time it took each variable to focus. In the 17th century, two populations

migrated to a newly drained area of eastern England. As it happened, these people came from either side of two isoglosses. One defined the boundary between two reflexes of Middle English /i:/ in words like *kite* and *slide*: [ɑɪ] to the northwest and [əɪ] to the southeast. The other isogloss defined the border between areas with and without an opposition between /ʌ/ and /ʊ/, as in *cut* and *put*. He argues that the former conflict was fairly quickly resolved by the "reallocation" of the two variants to pre-voiced and pre-voiceless environments, respectively. However, the clash between dialects with and without the /ʌ/ – /ʊ/ opposition led to an unstable situation that is only now becoming focused. Reasons adduced to explain this time difference have to do with the relative salience and complexity of the features (Britain 1997a). From our point of view, two points are relevant. The first, of course, is that, in any case of koineization, we must be aware of differences in the potential for different features to focus. Second, Britain argues that the social structures of the 17th century militated against rapid focusing, even for (ai):

> Children in such a scenario [that of extensive dialect mixing] are in the position of having to focus a new norm from a diffuse target variety spoken in a speech community only beginning to develop new social groupings . . . The fact that this process in the sparsely populated Fens began well before education was universal (no school environment, therefore, to encourage the development of wider peer group norms) further impedes focused koine development. (1997a:165)

In fact, Britain posits that it is only in the third generation (the grandchildren of the migrants) that focusing is achieved (1997b:37, 41) – although, inevitably, no direct evidence is available.

Texas. Thomas's data (1997) on (ai) show the loss of the stereotypically Southern US monophthongal /aɪ/ (as in *kite*, *slide*) in heavily urbanized areas of Texas is in line with the claim that mass migration can lead to the simplification of phonologically complex rules. In traditional, rural varieties, monophthongal /aɪ/ is found only before voiced consonants and word-finally – and as such resembles Fenland (ai). The loss of the allophonic split in cities, with their large and recent in-migrated populations, can be ascribed to simplification. In sharp contrast to the Fens, the societies Thomas describes are presumably open and mobile; large numbers of children and young adults, typical of in-migrant communities, afford a high possibility of forming new social relationships. In the case of the children, these relationships would doubtless result in school- and neighborhood-based peer-groups. Thomas provides statistical evidence of substantial in-migration; the fact that just over half of the parents of his child subjects were from outside Texas reflects the scope and recency of the migration (1997:326). If Thomas's simplification hypothesis is correct, then we should assume that the focusing on

the new, simplified norm took place rapidly among the first native-born children, despite children's attested ability to acquire relatively complex features.

The main study to be reported in this article describes a social context which, in one way, is similar to metropolitan Texas: Individuals do not form dense, closed networks, but open ones with links outside the community. We provide direct evidence that focusing can take place by the second generation – the first child generation in such a community.

Høyanger, Odda, and Tyssedal. The development of new towns on the shores of fjords in western Norway in the period 1915–25 (Sandve 1976, Omdal 1977) saw the mass migration of Norwegians to linguistically near-virgin territory. Because of their relative isolation for several decades, owing to poor communications, these single-industry ore-smelting towns constitute a "virtual laboratory" for the study of koineization. Added to that is the fact that we have accurate figures on the regional origins of the migrants and on the rate of population growth in the early years. The twin towns of Odda and Tyssedal are particularly interesting because of the very different regional provenances of the incomers, which led to radically different koines developing just five kilometers apart (see Kerswill 1996b for a discussion of Sandve's 1976 data). In all three towns, we find leveling – the reduction of the number of variants of a particular phonological, morphological or lexical unit – as well as simplification (see also Trudgill 1986:98–106 on Høyanger).

As we shall see below for Milton Keynes, migration to Høyanger was rapid, though absolute numbers were small. The population grew from just 120 in 1916, rising to 953 in 1920 when the factory was opened, and to 2,216 in 1930 (Sandøy 1987:158; Arne Olav Nygard, p.c. 1997). There is also evidence of a high birth rate. Yet there is strong evidence that focusing took place only in the third generation (the grandchildren of the migrants). Omdal states: "The first generation who were born and grew up in Høyanger . . . do not speak a unified dialect. Their speech bears the imprint of their parents' dialects . . . To find a unified dialect, one must look to the next generation" (1977:7, our translation). Possible explanations for this initial failure of focusing may lie in two factors. First, there was a considerable linguistic difference between the input varieties, much greater than in the US or in Milton Keynes. Second, there seems to have been quite strong social segregation, with managers and professionals living in housing separate from that of the industrial workers – though their children attended the same school. Importantly, this separation happened to coincide with considerable dialect differences; the unskilled workers came from the same *fylke* (county) as Høyanger, but skilled workers, managers, and professionals came from the east (Byrkjeland 1991; Arne Olav Nygard, p.c. 1997). As a result, it is likely that koineizing tendencies were slowed, at least between the two main social groups (though focusing WITHIN each group could well have taken place early). Only later was there convergence between the groups, as social and geographical allegiances became

more oriented toward the new community. As Trudgill (1986:103–4) argues, there would have been linguistic accommodation between adults; and the strategies adopted by them would have included some of the simplificatory features found in the later koine (such as those documented by Kerswill 1996c in the speech of West Norwegian adult migrants in Bergen). However, as already pointed out, we take issue with Trudgill's contention (1994) that simplification occurs only where the dialect contact is between adults; in this, as in other new communities, the proportion of children is relatively high, and we must not discount the possibility that children might have contributed to the simplification. What we can say is that the children present would have had a highly diffuse adult model, which already contained SOME simplification and leveling resulting from the adult accommodation strategies noted above. An equally relevant factor, however, is the likelihood that the initial social separation prevented the formation of close peer-groups involving children from either side of the social divide, with the result that focusing in the town as a whole could not take place until later. We shall, however, argue that the presence of a high proportion of children and young people in a new town accelerates the process of koineization.

The Dutch polders. Scholtmeijer's research (1992, 1997) on phonetic variables in emerging varieties of Dutch, in new settlements in three polders[5] reclaimed from the Zuyder Zee in 1930, 1942, and 1957, reveals a very different pattern from that of the Norwegian new towns. In each case, it seems that there was a distinct break between the settlers' strongly regional dialectal speech and the speech of their children, who came to speak a highly standardized form of Dutch, with relatively few traces of the dialect/accent of the older generation. These traces are greatest in the oldest polder. Scholtmeijer concludes that the parents' speech is irrelevant for the development of the children's speech, and that there is no question of any new dialect in the polders which might be an amalgam of the varieties from the "old land" (1992:107–8). His data suggest that he may be overstating the case for the absence of new varieties; however, he ascribes the trends he finds to the need for a language variety for external communication (1992:145) and the strong impact of schooling in the standard (146). There are probably other factors not directly cited by him as reasons – especially the continued contact with surrounding districts, through commuting and use of services, as well as the general tendency toward dialect leveling and standardization in the Netherlands (cf. Hinskens 1992:394). The apparently abrupt shift of speech variety between the settlers and their children is, we shall argue below, also true of Milton Keynes.

Children in Spitsbergen. Mæhlum's study (1992a,b) of the highly diffuse dialectal situation in the Norwegian Arctic territory of Spitsbergen (Svalbard) is instructive because it allows us to see what children do when there is no possi-

bility of a stable adult model, or even a stable childhood peer group. A family's stay in the territory lasts on average about ten years; furthermore, families spend long summer breaks on the Norwegian mainland, usually in their place of origin. Hence children have an "unclear dialect identity" (Mæhlum 1992b:123), expressing identification both with the "home" town or village and with Spitsbergen. These children apparently retain a much stronger influence from their parents' speech than do children elsewhere (1992b:121), just as Omdal observed for the first native-born Høyanger children. Linguistically, the children are heterogeneous and internally inconsistent – engaging in code-switching, dialect mixing, and the use of a version of mainland standard East (Oslo) Norwegian, all as "strategies of neutrality," and deployed to show degrees of identification with interlocutors and situations. Children also vary in the degree to which they have adopted their parents' dialects, depending on their orientation toward their family or their peers. From our point of view, what we learn from this study is the importance of demographic stability for the establishment of new norms, even among children. It is also shows us the kinds of linguistic strategies adopted by children in extremely diffuse speech communities. These strategies show the children's great linguistic adaptability, as compared to adults, as well as their active use of a very wide (and probably quite un-adult) range of variation to forge individual identities in the absence of stable peer groups.

Summary

From the preceding discussion, it is clear that the following factors influence the outcome of dialect contact:

(a) The proportion of children to adults in the immediate post-settlement years: Where there is a high proportion of adults, simplification and reduction will occur more readily than otherwise, and focusing will not take place until the third generation. Where there is an unusually high proportion of children (as in most cases of migration), there MAY be a lack of simplification, as well as the presence of focusing in the second generation; however, these tendencies can be overridden by factors b–c.

(b) A high degree of linguistic difference between the contributing varieties and the complexity of individual dialect features found in the mix: The presence of these factors will retard focusing.

(c) The presence of the possibility of forming new social networks among children and younger people: These possibilities are influenced by demographic factors such as high density of population, a "critical mass" of population, and the presence of universal schooling – all of which promote rapid focusing.

(d) A highly normative approach to mother-tongue literacy: This will hinder "natural" processes, including simplification, and will delay focusing (cf. Modern Hebrew).

THE MILTON KEYNES STUDY

New Towns in Britain

> The British New Towns Programme has been arguably the most striking example yet seen of an attempt at comprehensive social and physical and by implication economic planning in this country or in most of the west. (Aldridge 1979:29)

The notion of a New Town is not new. While Plato, Aristotle and Thomas More all wrote of new urban utopias (Schaffer 1970), it was not until the late 19th century that the first housing developments were built by enlightened employers for workers: Port Sunlight in Liverpool, and Bourneville near Birmingham. Later, in reaction to the appalling housing conditions in 19th-century London, Ebenezer Howard developed his ideas on the ideal city: a "garden city," a complete social and functional structure, limited in size to 30,000 people, self-sufficient in terms of jobs, spacious and well laid out. Forming a private company, he established the Garden Cities Association in 1902, and soon afterward the garden city of Letchworth was established. In 1920, he joined with Frederick Osborn to build Welwyn Garden City. The two garden cities were not immediately successful, however, and shareholders waited 20 years for their first dividends.

The economic hardship and uncertainty of the interwar years, followed by the destruction of large parts of the inner cities in World War II, led many to reexamine the social and economic basis of society. As Schaffer suggests:

> Perhaps never before or since in British history has there been such widespread and informed interest in economic and social affairs among the broad masses of the people of all ages, classes and levels of education. With this political understanding that enabled the nation to be mobilised in an all-out war effort against fascism came the equal determination that there was to be no return to the unemployment, slums and planless chaos of the thirties. (1970:8)

In 1940, Lord Reith was appointed Minister of Public Works and Buildings with special responsibility for reconstruction after the war. Under the wartime coalition government, a Central Planning Authority was established; and this was soon followed by a new Ministry of Town and Country Planning, whose responsibility was to frame and execute "a national policy with respect to the use and development of land throughout England and Wales." In 1944, Professor Abercrombie produced his Greater London Plan, which recommended the construction of satellite towns within 20 to 50 miles of the center of London, to house one million people. In 1945, Lewis Silkin was appointed Minister of Town and Country Planning in Attlee's government; and in November 1946, the New Towns Act was passed, which gave the government overall responsibility for planning and development. Almost immediately, the first New Town, Stevenage, was designated. Since then, 35 New Towns have been designated,

although not all have materialized. Milton Keynes is the latest and most ambitious of these developments.

In the period between the construction of Stevenage and Milton Keynes, design ideas changed significantly. The planners of the first wave of New Towns designated in the 1940s – Stevenage, Crawley, Hemel Hempstead, Harlow, and Basildon – were very much influenced by the ideas of Howard, Osborn, and the Garden City movement. They were limited in size, self-contained wherever possible, and organized into neighborhood units – focused around local centers with community halls, shops, schools, and pubs. However, the rise in car ownership, along with doubts about whether neighborhood planning really did engender a sense of local identity, led to a second wave of New Towns, designed to provide a compact, unified, and strictly urban way of life. In Cumbernauld, Corby and Skelmersdale, built in the 1950s, high-density houses cluster around a single multi-level town center. By the 1960s, however, social policies had changed; the postwar requirement to rehouse large numbers of people, displaced by war or housed in inadequate dwellings, no longer applied. The guiding principle of the third wave of New Towns, then, was to provide freedom of choice in housing, work, and leisure. High-density housing was rejected in favor of a more dispersed system of linear developments; houses were concentrated on either side of central traffic roads, with facilities such as shops and schools at regular intervals. Milton Keynes, the best-known and largest of the third wave of New Towns, has low-density housing and is built on a grid system; but it also incorporates elements of earlier planning schemes, with an extensive, centrally located city center, and with large green areas of trees and grass distributed throughout the city.

Milton Keynes

> The rational in us admires its logic; the romantic in us fears its order. (Bendixson & Platt 1992:viii)

Milton Keynes, named after the village of the same name, was officially designated in 1967. It is situated in the north of the county of Buckinghamshire, on a site of about 8,900 hectares, at a central position roughly 80 kilometers from London, Oxford, Coventry, and Cambridge; it is usually referred to as the first "new city" in Britain. The population of the area under development, which included three small towns – Bletchley, Wolverton, and Stony Stratford – as well as thirteen villages, was 40,000 in 1967, and was projected to rise to 250,000 by the end of the millennium, although this last figure was later revised to 210,000. In spite of some local opposition from the existing small towns – and from several rural parishes, who did not relish the thought of being outnumbered by thousands of Londoners – building progressed so rapidly that, by 1975, some 6,000 construction workers were employed in the city. By 1991, the Milton Keynes Development Corporation had created 83,000 jobs, built 44,000 houses, and planted 14 million trees and shrubs.

TABLE 1. *Population by age group: Milton Keynes and England & Wales, 1990 (adapted from MKDC 1990).*

Age	Milton Keynes		England & Wales	
		%		%
0–4	13,000	8.9	3,400,000	6.7
5–15	25,000	17.2	6,800,000	13.4
16–19	8,900	6.1	2,800,000	5.5
20–24	12,400	8.5	4,000,000	7.9
25–39	39,600	27.2	11,100,000	21.9
40–49	19,100	13.1	6,700,000	13.2
50–RA[1]	13,100	9.0	6,500,000	12.8
RA–74	9,400	6.4	5,800,000	11.5
75+	5,300	3.6	3,600,000	7.1
TOTAL	145,800	100	50,700,000	100

[1]RA = retirement age: male 65, female 60

Demography

Age. In 1990, the year in which the project reported here began, the population of the new city was approximately 145,000 (though the 1991 Census, which considered an area somewhat larger than the borough of Milton Keynes, put the figure at 176,330). While migration accounts for 80% of the city's population growth, it is also true that the general fertility rate in Milton Keynes is considerably higher than the national average, with 67 births per 1,000 women aged 15–44. Not surprisingly, the city's population profile is relatively young; 25% of the population is under 15 years old, compared with 20% in the rest of England and Wales, while 43% falls into the 15–39 age group (vs. 36% elsewhere; see Table 1). The proportion of people over 60 in the new city is half that in the rest of England and Wales. In the period between 1981 and 1990, the number of schoolchildren aged 5–15 in the city increased by 32%, in sharp contrast with the national figure, which showed a decrease of 14%. Similar trends were perceptible among young adults aged 16–24, whose numbers in Milton Keynes increased by 54% in the 1981–90 period, while their numbers remained static in the rest of England and Wales.

Geographical origins. In the period 1967–88, 76.2% of all migrants to Milton Keynes were from the southeast of England, and of those, half were from London; see Table 2. More recently, however, the numbers of migrants from Greater London has been declining, and there has been an increase in migration from the surrounding counties of Buckinghamshire, Bedfordshire, and Northamp-

TABLE 2. *Geographical origins of Milton Keynes population (MKDC 1990).*

Area of previous residence	% Population
Immediate sub-region (15 min drive)	3.4
Rest of Buckinghamshire	5.2
Southern Counties	32.4
London	35.2
TOTAL SOUTHEAST	76.2
Rest of UK	19.9
Overseas	3.9

TABLE 3. *Geographical origins of the mothers in the sample families.*

Mother's birthplace	12-yr-olds (%)		8-yr-olds (%)		4-yr-olds (%)		Total (%)	
MK conurbation	0	(0)	2	(12.5)	3	(18.5)	5	(10.3)
Rural Buckinghamshire	2	(12.5)	1	(6.2)	1	(6.2)	4	(8.3)
Southern Counties	2	(12.5)	2	(12.5)	3	(18.7)	7	(14.5)
London	8	(50.0)	7	(43.7)	3	(18.7)	18	(37.4)
Rest of UK	3	(18.7)	3	(18.7)	5	(31.2)	11	(22.8)
Outside UK	1	(6.2)	1	(6.2)	1	(6.2)	3	(6.2)

tonshire. These changes in migration patterns are reflected in the regional origins of our sample families. The proportion of London-born people among the parents of the oldest children in our sample is 50%, whereas only 18.7% of parents of the youngest children were Londoners originally; see Table 3.

Socio-economic profile. Reith and the early planners believed very strongly in two guiding principles: first, "balance," meaning that each new town should be a microcosm of contemporary society, with each stratum represented; and second, "self-containment," meaning that each new community should provide all that is necessary for work and daily living. Almost twenty years after its designation, the 1988 MKDC Household Survey showed that the socio-economic profile of Milton Keynes is largely similar to that of Great Britain, although the proportion of the working population in the non-manual categories is slightly higher than in the rest of the country; see Table 4. By 1988, the proportion of professionals, employers, and managers had increased to 20% of the total working population. It should be noted here, however, that our sample was made up of children whose parents were largely manual workers; see Table 5.

TABLE 4. *Socio-economic profile of Milton Keynes and Great Britain, 1988 (MKDC 1990).*

	Milton Keynes %	Great Britain %
Professional	6	5
Employers & Managers	14	14
Intermediate non-manual	37	32
Skilled manual	22	25
Semi-skilled manual	17	19
Unskilled manual	4	5
	100	100

TABLE 5. *Distribution of sample families by socio-economic group.*

Non-manual	4%
Skilled, semi-skilled, and unskilled	56%
Unemployed or disabled	40%

Milton Keynes in a dialect-geography perspective

Milton Keynes lies in an already extensively leveled dialect area, a fact that has certain consequences for the study of koineization there, as we shall see. It is situated on the boundary between what Trudgill (1990:63) identifies as the South Midlands and Home Counties Modern Dialect areas. (The term "Home Counties" refers to the counties surrounding London, and includes Buckinghamshire.) Using data from the *Survey of English Dialects* (*SED*: Orton et al. 1962–71, Orton, Sanderson & Widdowson 1978), Trudgill finds that these areas are the most innovative of all, in that the forms of traditional speech have moved furthest from those of Middle English. This fact is explored by Hernández-Campoy 1996, in his use of geographical models of cultural diffusion to explain the relative innovativeness or conservatism of Trudgill's sixteen dialect areas. The Home Counties dialect area includes London, which is thought to be the origin of many of the cited changes. There is evidence that the artery running northwest from London, through the Midlands, was already the most important communications link in the 18th century (Thrift 1990, cited by Hernández-Campoy 1996:116). The reason why this artery is the conduit of linguistic innovations is readily seen: People traveled along this axis, bringing innovations to the social groups who were open to such influences in the communities they came into contact with (cf. Milroy & Milroy 1992 on the importance of such "weak ties" for the spread

of linguistic changes). Southeastern dialect leveling persisted during the 20th century, too (Edwards 1993:215–16); and as we shall see, it continues today independently of the presence of New Towns, though doubtless accelerated by the population mobility they fostered (Williams & Kerswill 1999).

For the village of Stewkley, about eight kilometers south of Milton Keynes, *SED* records reveal some traits of traditional speech in the area:

(a) Rhoticity (/r/ in *arm* etc.). The border between rhotic and non-rhotic areas lies close to Stewkley.
(b) The Southern opposition between /ʌ/ in *cut* and /ʊ/ in *put*. (Almost uniquely in England, a small lexical set including *foot*, *soot*, and *brook* contain /ʌ/.) The area with no opposition lies about 50 kilometers to the north.
(c) Southern /ɑ:/ in items corresponding to the lexical set of *path*, *cast* etc.
(d) Simplification of initial /wʊ/ to /ʌ/ in *wood*, *woman*. This and the use of /ʌ/ in *foot* etc. are features peculiar to this area (see Upton & Widdowson 1996:16–17); they have now been lost.
(e) No *l*-vocalization in items like *hill*.
(f) Dropping of initial *h*.
(g) Glottal stop for intervocalic /t/. (This is an innovative feature now general in much of Britain.)

Information like this allows us to establish the degree of linguistic continuity between a New Town and its hinterland (see below).

Method

The methods used in the research were in the Labovian quantitative tradition. To investigate sociolinguistic maturation and to measure the extent of focusing, a sample was constructed that included a range of age groups. However, while this would appear at first sight to be an apparent-time design, the different age groups cannot be said to represent stages in the emerging dialect (as it would be possible to demonstrate with adult speakers), since the children's own phonologies were still developing.

Sample. A socially homogeneous group of 48 children (eight boys and eight girls from each of three age groups – 4, 8, and 12), who had been born in Milton Keynes or who had moved there within the first two years of life, was recorded initially in 1991. In addition, the principal caregiver of each child was recorded. In 46 cases, this was the mother; the two remaining children were cared for by an aunt and the father, respectively. The children attended a nursery, a first school, and a middle school, respectively, in two adjacent neighborhoods; these were among the first developments in the New Town, with a high proportion of the housing available for rent. Given the housing type and employment patterns, it was anticipated that there would be a range of identifiable regional accents. The

selection procedures, which involved approaching schools and parents and requesting volunteers, gave a representative sample within the parameters of age and sex. In the case of the 4- and 8-year-olds, all of whom attended the local school, this meant that, with the exception of one or two children who declined to take part, we recorded all the children in those age groups in that area. A breakdown of the migration patterns of our sample families shows that they can be said to be representative of the Milton Keynes population as a whole; see Tables 2 and 3. However, in terms of socio-economic status, the sample families did not span the social spectrum, but formed a homogeneous group employed mainly in manual occupations and living in rented housing; see Table 5.

Data. The aim of the recordings was to obtain a range of speech styles for each child. The first stage of recording, carried out between January and July 1991, was the more comprehensive. The second, in late 1992, enabled us to log changes and to obtain further data on certain variables. The children were recorded in their schools, in friendship pairs, carrying out several activities: reading a word list (8- and 12-year-olds); carrying out tasks to elicit single words (identifying objects blindfold, answering quiz questions); doing connected speech tasks ("spot the difference pictures," map reading); taking part in interviews; and interacting with their peers in the playground and in the classroom. The parents were interviewed for approximately one hour in their homes – the aim being to record a sample of fairly informal speech, which could be compared with that of their offspring, and to obtain biographical data on the regional origins and social practices of the family.[6] To obtain samples of the dialect spoken in the area before the construction of Milton Keynes, six elderly residents who had lived all their lives in the area were recorded. In addition, the *SED* provided further information on the nearby village of Stewkley.

The data were transcribed auditorily by AW, and cross-checked by PK (interviews, 20–30 tokens; elicitation tasks, 10–15 tokens; reading task, at least three tokens). The transcription phase for each variable began with the authors agreeing on a set of variants and their auditory criteria. Scores for the 10 variables in each style were calculated for each of the 96 subjects, and were entered in three data bases – Children 1991, Children 1992 and Parents – on a Sun computer at Reading University. Statistical tests, including t-tests, ANOVA, MANOVA, correlations, and Principal Components analyses were carried out on the data using the SAS package.

Variables. Following a pilot study in a socially mixed district of Milton Keynes, 10 phonological variables were selected for the main study. The chosen features are characteristic of southern English speech, and evidence indicates that they are already involved in variation and change. The variables are listed below.

Consonants

(th) word-initial, word-medial, word-final voiceless /θ/, as in *three*, *nothing*, *tooth*, where the dental fricative can be replaced by [f]. This process and that represented by (dh), below, are often referred to as "*th*-fronting."

(dh) word-medial, word-final voiced /ð/, as in *feather*, *smooth*, which can be replaced by [v].

(h) word-initial /h/ in lexical words, like *hat*, which can be deleted. Often referred to as "*h*-dropping."

(t) word-medial /t/ which is often replaced by a glottal stop [ʔ], as in *letter*, *bottle*. Often referred to as "*t*-glottaling."

Vowels

(ɔ:) the vowel in *thought*, *horse* etc., which can be diphthongized to [oʊ].

(u) the vowel in *book*, *foot* etc., which can be fronted, lowered, and unrounded to, e.g., [ə].

(u:) the vowel in *move*, *goose* etc., which can be centralized to [ʉ̟:] or fronted to [y:].

(au) the vowel in *mouth*, *now* etc., which can have a wide range of pronunciations, including a Received Pronunciation (RP)-like [aʊ] and more localized variants [æʊ], [a:ə], [ɛ:], [ɛʊ̟], and [ɛɪ].

(ou) the vowel in *goat*, *moan* etc. Older pronunciations of this vowel have a high back offset, giving e.g. [əʊ] or [ʊɤ]. The variable concerns the fronting and unrounding of the second part of this diphthong, to give e.g. [ʊʏ] or [ʊɪ].

(ai) the vowel in *my*, *price* etc. This ranges from [ɔɪ], through [ɑɪ], to [a̲ɪ].

PRINCIPLES OF KOINEIZATION

"Principles" as general behavioral tendencies

In an earlier essay (Kerswill & Williams 1992) we presented ten "principles of dialect contact," based on our own and other published data. In this article, we adapt these principles to make them more specifically applicable to koineization. The notion of a "principle" has been used by Chambers (1988, 1992) in a rather similar context; our indebtedness to his work and to that of Trudgill 1986 will be obvious. Chambers discusses the acquisition of second-dialect features by a group of Canadian children who had moved to England, and he uses the term "principle" to capture the tendencies he observes. For example, his first Principle of Dialect Acquisition (1992:677) states: "Lexical replacements are acquired faster than pronunciation and phonological variants." He goes on to compare the Canadian children's acquisition of specifically British lexical items (such as *queue* for *line-up*) with British pronunciations (such as [tə′mɑ:təʊ] for [tə′meɪroʊ]); the latter lags behind the former quite markedly. Chambers's data are essentially

quantitative: children acquire the features gradually, not in a completely uniform order. Thus we are not dealing with rule-governed behavior in a strict sense, even though the data could probably be fitted into an implicational scale. Instead, there are tendencies for behavior to be modified in a certain way.

It seems to us that one reason why these principles are not rules lies in their motivation. As will be clear from the preceding discussion of dialect contact, we need to bring to bear a variety of factors to account for our own principles of koineization. Mainly these are sociolinguistic, but they are also psycholinguistic – in particular, developmental. There is no reason at all why such diverse explanations should lead to categorical scaling, or to clear rule-governed relationships involving linguistic features in a contact situation.

Outcomes, individuals' long-term accommodation, and sociolinguistic factors

As we have suggested, there is a prima-facie relationship between individuals' long-term accommodation and post-contact varieties. This is true because the latter are the product of one or two generations' collective long-term accommodation. Thus we expect to find linguistic outcomes that are the reflexes of individual behavior of two or more generations earlier. Added to this are sociolinguistic factors, which intervene between individuals' ability to accommodate and the formation of the new dialect. At least two groups of principles must therefore be established, reflecting (a) the outcomes of contact, and (b) the accommodatory strategies of migrants and their children. To these we add a third, concerned with the time-scale of koineization. The remainder of the article will be structured around eight principles, which are summarized below.

Outcomes in post-contact varieties:

(1) Majority forms found in the mix, rather than minority forms, win out.
(2) Marked regional forms are disfavored.
(3) Phonologically and lexically simple features are more often adopted than complex ones.

The migrants and the first generation of native-born children:

(4) Adults, adolescents, and children influence the outcome of dialect contact differently.
(5) The adoption of features by a speaker depends on his or her network characteristics.

The time scale of koineization:

(6) There is no normal historical continuity with the locality, either socially or linguistically. Most first and second generation speakers are oriented toward language varieties that originate elsewhere.
(7) From initial diffusion, focusing takes place over one or two generations.

(8) Because of sociolinguistic maturation, the structure of the new speech community is first discernible in the speech of native-born adolescents, not young children.

OUTCOMES IN POST-CONTACT VARIETIES

We begin with the outcomes, rather than the processes, because it is easier to understand the latter with the hindsight afforded by the new dialects themselves.

The three principles under this heading are concerned with LEVELING and SIMPLIFICATION. As mentioned above, we take "leveling" to refer to the reduction in the number of variants (usually originating in different dialects) of a particular phonological, morphological, or lexical unit (cf. Trudgill 1986:98 for a similar definition). "Simplification" refers to an increase in morphological regularity, an increase in invariable word forms, and a decrease in the number of morphological categories. In addition, "simplification" covers morphological and lexical transparency (cf. Trudgill 1986:103).

Principle 1: Majority forms found in the mix, rather than minority forms, win out.

This principle and the following one ("Marked regional forms are disfavored") have similar effects, in the sense that the stock of variants for a given linguistic unit – phonological, morphological, or lexical – as they occur in the immediate post-settlement period, is reduced to just one, or to a very small number.

It comes as no surprise that features found in the majority of the (southeastern non-standard) "input" varieties are also found in full measure in Milton Keynes. Thus the children in our sample have mainly [f] for /θ/, [v] for intervocalic /ð/ (Trudgill 1990:75–80, J. Milroy 1996, Kerswill & Williams 1997, Williams & Kerswill 1999), and [ʕ] for intervocalic and final /t/. A number also have the labiodental [ʋ] for /r/ (here there is evidence of a very recent spread, cf. Trudgill 1988, Docherty & Foulkes 1996); and [h] is also variably "dropped." A further indication of the mainstream nature of the accent is the absence of postvocalic *r*. This was present in the 1950s in Stewkley, as we saw above, and was also used by some of the elderly people in our sample. This feature has been lost in the southeast, and (among younger people at least) is now largely restricted to rural western and southwestern speech.

Principle 2: Marked regional forms are disfavored.

Previous studies of new dialect formation show that forms which have a restricted regional currency, or which are stereotyped as such, generally do not appear in the new variety. This can be illustrated through typical vowel realizations in Milton Keynes and elsewhere, listed in summary form in Table 6. In section (i), the Milton Keynes children have a vowel that is phonetically intermediate between those of some or all of the other varieties. Thus the vowel represented by *price* (cf. Wells 1982) is rarely monophthongized to [ɑ], and the qualities of the *palm*, *trap*, and *strut* vowels are not as peripheral as the broad

TABLE 6. *Vowels in working-class speech in Milton Keynes and selected other locations, together with RP.*

Word class (Wells 1982)	Milton K. 4–12 yr olds	Milton K. 80–85 yr olds	Stewkley 1950s (Orton et al.)	London (Wells 1982)	Norwich (Trudgill 1974)	Reading (Williams & Kerswill 1999)	RP (Wells 1982)
(i) MK children's vowels are intermediate or RP-like:							
PRICE /aɪ/	ɑɪ	ɔɪ ~ ɑɪ	ɔɪ	ɑɪ ~ ɑː	ʌɪ	ɔɪ ~ ʌɪ	a̲ɪ
PALM /ɑː/	ɑ̟ː	aː ~ a̲ː	äː	ɑː	aː	aː ~ ɑ̟ː	ɑ̟ː
TRAP /æ/	æ ~ a̟	a	a	ɛ ~ ɛ^{ɪ}	æ ~ æ^{ɛ}	æ ~ a̟	æ ~ a
STRUT /ʌ/	ɐ ~ ɐ̲	ə̲	ʌ	a ~ a̲	ʌ̟ ~ ɐ	ɐ ~ ə̟	ɐ
(ii) MK children's vowels variably show London pronunciations:							
MOUTH /ɑʊ/	aʊ ~ aə ~ æʊ ~ ɛː	ɛɪ	ɛ̈	æʊ ~ æː	æʉ	ɛɪ ~ aʊ ~ æə	a̲ʊ
THOUGHT /ɔː/	o̟ʊ ~ o̟ː	o̟ː	ɔː ʊə^{r}(words with /r/)	o̟ʊ	o̟ː	o̟ʊ ~ o̟ː	ɔ̟ː
GOAT /əʊ/	ɐʏ ~ ɐɪ ~ ɐʊ (rare)	ə̟ʏ ~ ə̟ʊ	ʌʊ/ʊə (2 phonemes)	æ̲ɤ	ʌu/oʊ/ʊ (3 phonemes)	æ̲ʏ ~ ə̟ʊ	əʊ̈ ~ ə̟ ɤ

TABLE 7. *Variants of (au).*

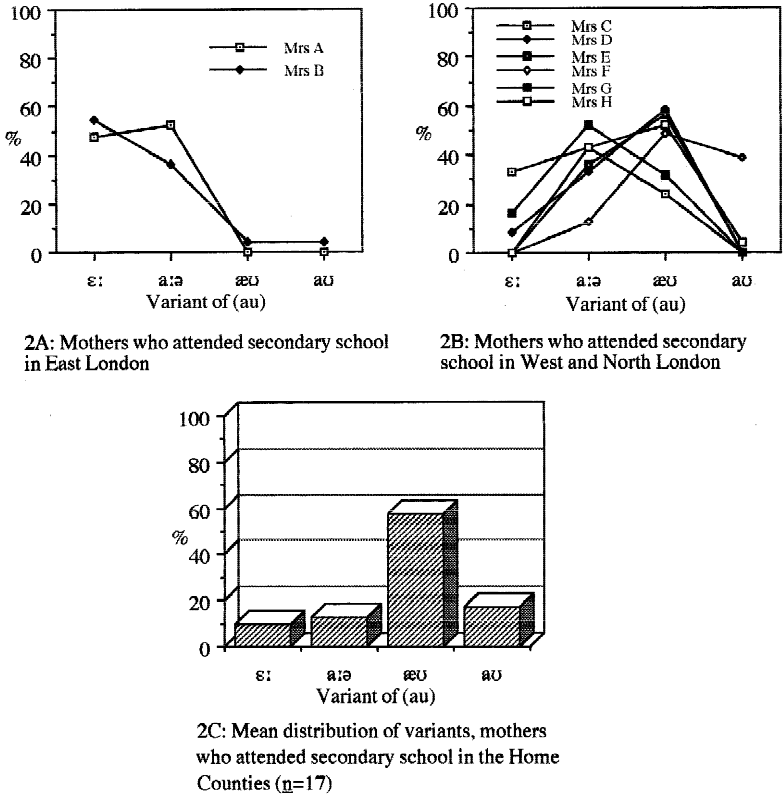
Variant 1:	[ɛ:]	London 1
Variant 2:	[a:ə]	London 2
Variant 3:	[æʊ]	Home Counties (southeast)
Variant 4:	[aʊ]	Received Pronunciation

London variants. Indeed, the lack of fronting of the *strut* vowel in our data is surprising, in view of the fronting that Trudgill (1986:50–52) has noted in East Anglia, a region to the east of Milton Keynes and similarly close to London. The London variants of all these variables are found in the speech of some of the London parents – though rarely in that of their children, with the exception of those few who are strongly oriented toward their London relatives (the effect of a child's network orientation will be discussed under Principle 5, below). Section (ii) of the table shows, however, that both London-like and non-London variants are found for some vowels. We will discuss the vowels of *thought* and *goat* in later sections.

We turn now to the vowel of *mouth* – the variable (au) – which shows a particularly interesting pattern. Table 7 shows the variants that we felt we could reliably identify.

Figure 2 shows the percentage use of the four variants by mothers from the southeast who attended secondary schools OUTSIDE Milton Keynes. We have not shown the data for the eighteen caregivers who attended secondary school outside the southeast.[7] The mothers have been divided into three groups, according to the location of the schools: East London ($n = 2$; Fig. 2A), West and North London ($n = 6$; Fig. 2B), and Home Counties ($n = 17$; Fig. 2C). For clarity, this figure shows the mean frequencies for the seventeen subjects. As can be seen, the two women from East London almost exclusively use London monophthongs or centering diphthongs, while the Home Counties mothers use a high proportion of [æʊ]. The women from North and West London show an intermediate usage.

Fig. 2 gives a partial picture of the input varieties with respect to (au). What of the emerging new variety? To maintain comparability, we restrict our comments to the speech of females. Figure 3A shows the distributions of the same variants for the Milton Keynes-educated mothers; they were on average just 12 years older than the girls, whose scores are shown in Fig. 3B. Both groups of young females have a very high use of Variant 4 [aʊ], almost to the exclusion of other variants – this is the "new dialect" of the young females. Strikingly, the majority form among the in-migrant mothers, [æʊ], is now a minority form among the schoolchildren. We shall see that this development is common to much of the south of England, and is part of regional dialect leveling.



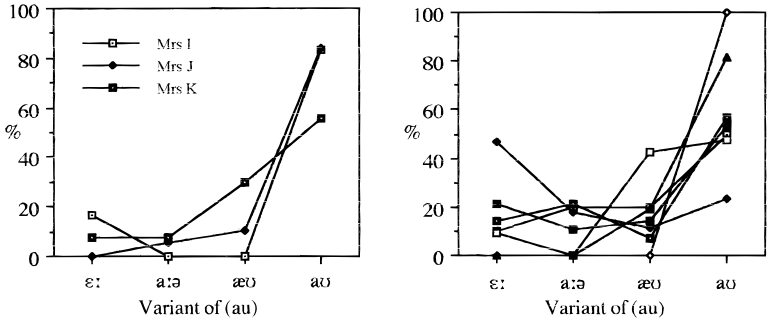
2A: Mothers who attended secondary school in East London

2B: Mothers who attended secondary school in West and North London

2C: Mean distribution of variants, mothers who attended secondary school in the Home Counties (n=17)

FIGURE 2: Southeastern input varieties for (au): distribution of variants in speech of in-migrant mothers (interview data).

A further comment needs to be made concerning the relatively high use of [a:ə] by the Milton Keynes girls and by the East London mothers: Why is this variant used by both groups, when they do not share other variants? One can argue speculatively that [a:ə] has different sociolinguistic statuses for adults and children. As we shall see in the discussion of Principle 8, the children seem to treat the interview as a somewhat more informal event than the caregivers do. If so, then the children's use of [a:ə], unlike that of the mothers, can be seen as a reduced, fast-speech variant of [aʊ], and not as a distinct variant with a different social distribution and evaluation. If we are right, then Variant 4 ([aʊ] and its reduced counterpart [a:ə]) has a still higher frequency among the girls than Fig. 3B suggests.



3A: Mothers who attended secondary school in Milton Keynes

3B: Girls attending secondary school in Milton Keynes (n=7; Age: 13-14)

FIGURE 3: (au) in the new dialect of Milton Keynes: Distribution of variants in the speech of young women and girls educated in the new town (interview data).

In terms of koineization, what is happening is that the children are faced with an input composed of different variants, all of which have particular regional and social distributions. In principle, none is associated specifically with Milton Keynes. They select one variant, [aʊ], which becomes the main variant of the new, stable variety of the town. Since this is also a standard, or RP, variant, this adoption can be viewed as a strategy of neutrality; cf. Mæhlum's discussion (1992b) of a similar phenomenon in Spitsbergen. But, as Fig. 3B shows, leveling is not complete, since both [ɛː] and [æʊ] are sometimes used by a number of the girls. The degree and speed of leveling is a topic we will return to under Principle 7, while further data on this vowel will be used in a discussion of the continuity of local dialect transmission under Principle 6.

Principle 3: Phonologically and lexically simple features are more often adopted than complex ones.

As we have seen, there is a great deal of evidence for simplification of complexity in dialect contact, especially where adult dialect contact is predominant (Trudgill 1994). Morphological complexity in phonology is found, for instance, in the application of the Scottish Vowel Length Rule (McMahon 1994:61–62), whereby long vowels are found before a morpheme boundary, as in *tied*, and short ones otherwise, as in *tide*. An example of lexical complexity is the tensing and raising of short *a* in Philadelphia English (Payne 1980), which is both phonologically conditioned and lexically irregular.

There is little or no evidence of simplification in Milton Keynes. Part of the reason is that it is difficult to find clearly complex phonological features in South-

ern British English varieties; in any case, there are probably no DIFFERENCES, with respect to complexity, between any of the southeastern mainstream urban dialects which form most of the input to the new dialect; this fact is undoubtedly due to the extensive leveling that has already taken place in the region. However, there is a possible candidate for complexity in these varieties. We discuss this under the next principle, which is the individual-speaker correlate of Principle 3.

THE MIGRANTS AND THE FIRST GENERATION OF NATIVE-BORN CHILDREN

Principle 4: Adults, adolescents, and children influence the outcome of dialect contact differentially.

As we have already seen, existing evidence strongly suggests that different age groups (young children, adolescents, and adults) can influence outcomes differentially, for a number of social, social-psychological, and developmental reasons. The BALANCE of these influences in a particular case depends on the demographic mix of ages, as well as on social network characteristics. In Høyanger and in the Fens, we saw that focusing took place only in the third generation; an intermediate second generation (the children of migrants) showed diffuseness, and the final new variety showed simplification. It was suggested that, for somewhat different reasons, this could be explained in terms of a social structure not conducive to the rapid formation of social networks both in Høyanger and in the Fens. In Høyanger, this was reinforced by large dialect differences. In both cases, we can assume that the modified varieties of the adult migrants formed an important input for the children, with the result that the outcomes included simplification.

In Milton Keynes, these inhibitory social factors apply to a lesser extent – at least with regard to the social group that forms the subject of the study. There is, as we have seen, a relatively high proportion of children to adults – possibly a prerequisite for rapid focusing. Importantly, information on friendship patterns, gained through the sociolinguistic interviews, showed the children's high interest in their peer relationships (Principle 5). If we add to this the fact that the linguistic differences between the majority of the input varieties are small, then we can expect to find clear signs of focusing already in this generation of children – and we will provide evidence that this is so, under Principle 7. Before this, we look at the acquisition of an arguably complex phonological feature; it will be remembered that the appearance of such features after dialect contact may be evidence of contact between child speakers.

There is, as already noted, rather little evidence of complex features in the initial dialect mix in Milton Keynes, and certainly few DIFFERENCES with respect to complexity. One possible candidate for complexity, however, is the morphologically conditioned use of a front vs. a back allophone of /əʊ/ in words like *Roland* and *rolling*, as described for London by Harris 1990. It is instructive to see whether, and at what age, it is acquired by children whose parental dialects

did not contain it; in so doing, we can judge whether focusing can in principle take place with respect to this feature in the speech of the first child generation, provided there is a sufficiently large number of incomers whose speech contains it. In the speech of many Londoners and others in the southeast, the monomorphemic word *Roland*, along with *polar*, *Cola*, *solo* etc., has a front allophone (approximately [æʊ]) of the vowel /əʊ/, while the dimorphemic *rolling* (composed of *roll* + *ing*) has the back allophone [ɒʊ] also found in the basic *roll*. This is arguably a complex feature, since it requires the speaker to have recourse to the morphological structure of the word. An extensive study of the feature carried out in Stage 2 showed that the vast majority of the children (35/41) did have the front vowel in words with the same structure as *Roland*, i.e. *Polo* and *polar* (though not in *Roland* itself – probably because the name was unfamiliar – coupled with the fact that, in the fieldworker's (AW's) accent the word has a back diphthong. The fact that all the children had a back diphthong in *rolling*, *roller* etc., showed that they had the distinction.

The prevalence of the *Roland*/*rolling* split should not surprise us, in view of the preponderance of migrants from London and the southeast. However, important information about acquisition can be gained by looking at individual cases, especially those who did not make a clear distinction (including some who were not part of our sample).[8] There is evidence that the feature can be acquired at a young age by children whose parents do not use it. Indeed, ALL children of native English-speaking parents in the two older age groups had the split, including several whose parents were not from the southeast. This is not the picture for the youngest group, of whom three with non-southeastern parents either failed to use the split consistently, or showed no evidence of it. We can tentatively infer from this that some children acquire the feature after the age of 4 or 5; in fact, we have evidence of this in the speech of James, a boy whose phonology was mainly Scots at age 4, and southeastern by age 6 (his case of accent shift will be discussed under Principle 6). We cannot, however, draw strong conclusions about any upper limit to the acquisition of the split, except to mention the 9-year-old daughter of Sri Lankan parents, who had lived in England for only two years, and who used the front allophone in BOTH sets of words – a pattern found in some RP speakers. Whether she has acquired the RP pattern as such is impossible to say. Three sons of Ugandan Asian parents show that, in any case, the peer group may be decisive in the acquisition of this local accent feature. Two, twins aged 9, consistently used the BACK allophone for all instances of /əʊ/, while a 14-year-old had the split; the twins named only other Asians as friends, while the older boy named mainly non-Asian children, and was in turn named by them.

What of the complexity of this feature? We have suggested elsewhere that its acquisition might be aided by an opposing principle, that of morpheme invariance (Kerswill 1996a:196). If so, then its ready learnability is understandable, and we are unable to conclude anything about the acquisition of complex features. What close examination of this feature has shown is that, with so many

children in the New Town learning it from their parents' dialects, focusing is easily achieved in the first child generation, through the willingness of the other children to acquire it.

Principle 5: The adoption of features by a speaker depends on his or her network characteristics.

The importance of social network characteristics for the transmission of language change has been mentioned already. Essentially, a close-knit network will resist the adoption of changes, unless these changes come via an "insider" who also has "weak ties" elsewhere (Milroy & Milroy 1992). On the other hand, a close-knit network will accelerate changes once they have been accepted into it. Thus we can look for a possible link; individual children's use of features presumed to be innovations may be linked to the same children's network characteristics, in particular their integration into a peer group.

We base our discussion on the variable (ou), the fronting and unrounding of the offset of the diphthong /əʊ/ in words of the *goat* class, a process already illustrated in Table 6. In the speech of most of the Milton Keynes children – and in that of some of the youngest, locally born mothers – /əʊ/ has a mid-low, central unrounded onset in the region of [ə̟], [ɐ] or [æ̝], and a high front or central offset with variable rounding: [ʏ] or [ɪ]. For London, Wells (1982:309) writes that similar vowels have a "flavour of 'refined' Cockney," and Beaken 1971 reports that these vowels are used only by girls. London is normally said to have [ɐɤ̆] (Wells 1982:308–9). Second-element fronting is certainly a feature found among younger speakers elsewhere in the southeast, and it is probably spreading – though we have seen no studies of it. Anecdotally, we have noted frequent instances of cross-generational misunderstandings, such as the mishearing of *coke* as *cake*. It seems to be paralleled by a similar development in RP, where /əʊ/ has long been undergoing a fronting and unrounding of the FIRST element (Wells 1982:293–94). Wells does not mention the second element, but informal observation of young RP speakers suggests fronting and unrounding of this element as well. This gives rise to vowels such as [ə̟ʏ] or even [ə̟ɪ], these vowels being differentiated from their non-RP southeastern counterparts by the relative closeness of their first element.

To quantify the realization of this vowel, the following variants were established, and index scores were allocated as shown (index scores will be used in a discussion of individual speakers, below). Unlike the variants of (au), the three southeastern variants of (ou) – index scores 1, 2, and 3 – exist on a single phonetic continuum.

(ou) 0:	[oː], [oʊ]	(Northern and Scottish realization)
(ou) 1:	[əʊ], [əʊ̟], [ɐʊ], [ɐʊ̟]	(older Buckinghamshire and London)
(ou) 2:	[ɐʏ], [æ̟ʏ]	(fronting)
(ou) 3:	[ɐɪ], [æ̟ɪ]	(fronting and unrounding)

TABLE 8. *Distribution of variants of (ou) across sample (%) (children: elicitation tasks; adults: interviews) (from Kerswill & Williams 1994:21).*

	[ɐɪ], [æɪ]	[ɐʏ], [æʏ]	[əʊ], [əʉ̟], [ɐʊ], [ɐʉ̟] (also [oː], [oʊ])
4-year-olds	13.5	30.2	55.7
8-year-olds	12.9	53.6	33.3
12-year-olds	3.0	68.6	28.2
Caregivers	3.5	37.3	60.0

Age effect among children: $p < .001$ (MANOVA)
All children vs. adults: $p < .001$ (t-test)
Sex: not significant

For each subject group, proportions of each variant were calculated for individual speakers, and the group means were calculated. For each subject, at least 10 tokens were transcribed. Table 8 shows the distribution of these variants.

We discuss the importance of these overall scores under Principle 8; for now, we note the following:

(a) In Milton Keynes in the early 1990s, the feature was far more advanced than among London children 20 years previously.

(b) It affects boys as well as girls, though probably to a lesser extent (in the elicitation tasks, the 24 girls had a mean of 63.3% fronted vowels,[9] the 24 boys 49.3%).

(c) It affects older children more than younger children (a point to be discussed below; see Figure 10 below).

We now look at individual scores in order to gain an insight into the extralinguistic factors that lie behind them. Our approach is to look at the social profiles of individual speakers, particularly the "high" and "low" scorers in each group. The discussion is qualitative, and as such may not be generalizable. However, the patterns we detect are fully corroborated by other studies, in particular that of L. Milroy 1980 and two studies of in-migrants, Bortoni-Ricardo 1985 and Kerswill 1994a. The index scale is that given above: 0 on this scale represents absence of fronting, while 3 represents maximum fronting.

(a) High scorers, aged 12. Four 12-year-old girls score between 2.0 and 2.2. All the mothers have lower scores than their daughters – three only slightly, and the fourth with back monophthongal realizations. All the girls are relatively sociable, with friends in the school. One has extensive contacts with her grandparents; the other three have no close relations with non-nuclear family members.

Two boys in this age group are high scorers, with 2.2 and 1.8, respectively; their mothers' scores are 1.6 and 1.4. Both have slightly older sisters. Neither has extensive contacts with the family, but both are popular at school. One cited mainly girls as his friends, and was in turn cited by them.

(b) Low scorers, aged 12. Two girls have low scores of 1.4 and 1.3, which are very close to those of their mothers. One of the girls was described as "shy." As a member of a strict Christian group, she has little contact with popular culture. She also has few contacts with her family other than her mother. The other girl is also not family-oriented, but has good relations with neighbors and school-friends. Two boys are low scorers, at 1.4 and 1.2, respectively; their mothers score 1.4 and 0.2. The first boy is a loner and was not cited by anyone as a friend. His parents are Londoners, and he has one younger sister. Other than his parents, he has very few contacts with family members. The second boy is also a loner, though to a much lesser extent than the first boy. He too has few contacts with non-nuclear family.

A clear pattern emerges from these descriptions. The main factor is the child's orientation toward the peer group. All the high scorers (including the 8-year-olds not discussed here) are very well integrated into a (mainly school-centered) group of friends; they are sociable and are often cited as friends by other children. By contrast, the low scorers are somewhat distanced from their peers. There seem to be different reasons for this: either the child has a reserved personality, perhaps coupled with poor relationships at home; or, for reasons to do with the family's beliefs, the child is not exposed to the mainstream of popular culture, and becomes an outsider. However, a child's contacts with non-nuclear family members seem to be largely irrelevant to the (ou) variable, since peer-orientation seems to override all other factors. The fact that it is the sociable and peer-oriented children who are in the lead in this change parallels findings made in a rather different context: it is not the socially peripheral, lower-class groups who innovate, but groups with more resources and more extensive social contacts (Trudgill 1974:104).

It is possible to go further in the quantitative analysis by studying the overall effect on the children of the caregivers' degree of (ou)-fronting. This gives us an impression of the relative importance of parents and peer group. Figure 4 shows the correlation of the children's scores with those of their caregivers. There is a very weak association between the children and caregivers, largely because of the two children (4-year-olds) at bottom left. Visual inspection of the remainder of the diagram shows no association at all; indeed, the overall correlation is not significant. This suggests that, for 8- and 12-year-olds, the principal caregivers' pronunciation of this vowel has no effect on that of their children. Instead, the children are generally oriented toward Milton Keynes; differences in their integration into peer groups are by far the stronger predictor of performance on this variable.

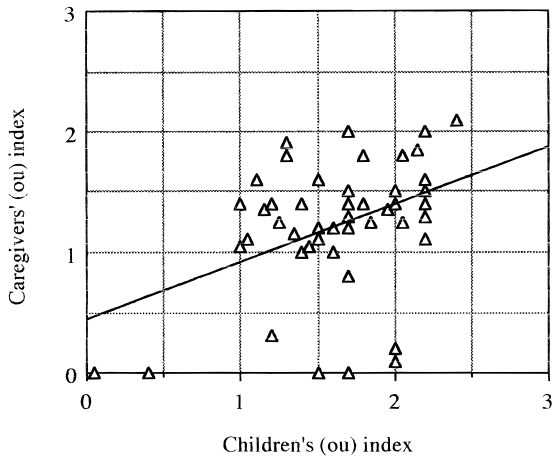


FIGURE 4: Correlation of children's and caregivers' (ou) indices.

THE TIME SCALE OF KOINEIZATION

Principle 6: There is no normal historical continuity with the locality, either socially or linguistically. Most first and second generation speakers are oriented toward language varieties originating elsewhere.

Under this principle, we look at the time factor from three angles: change in relation to the traditional speech of the area; change between generations after the establishment of the New Town; and finally, change within an individual's phonology.

The breakdown of the geographical origins of our families shows that 8.3% of the parents were born in rural Buckinghamshire, while 10.3% had been born in the Milton Keynes conurbation (see Table 3). Some of the latter group had grown up in Bletchley; they were themselves largely the children of migrants who moved from Acton, Willesden, Hendon, Wembley, Harrow, and other parts of the London area in the wake of the 1944 Town and Country Planning Act, when businesses were encouraged to provide jobs for skilled workers away from the capital. Few of the sample families, then, had any ties with the settled population of the area. This lack of social continuity has led to the disappearance, within one generation, of several salient features noted in the Stewkley data and present in the speech of our elderly respondents (who would have been in their thirties and forties at the time of the *SED* research): post-vocalic *r* in words like *arm* and *start*; the mid back onset for the *price* diphthong, giving [ɔɪ]; and a raised front onset [ɛʊ̟] for the *mouth* diphthong. None of these features occurred in the re-

TABLE 9. *Continuity and change in Milton Keynes speech.*

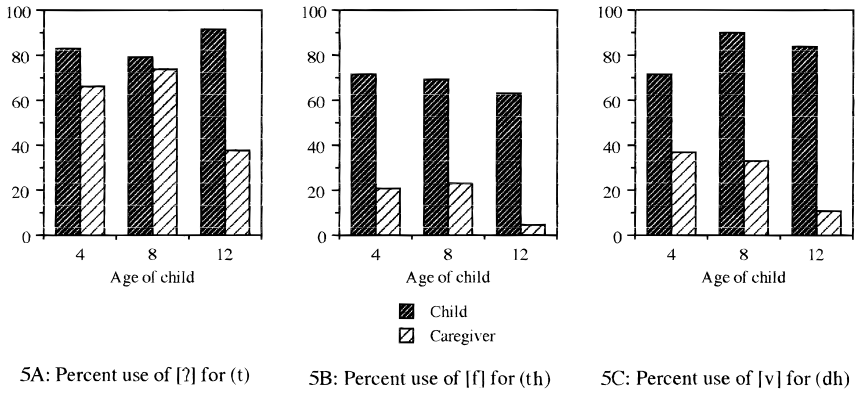
Word class (Wells 1982)	*SED* Stewkley 1950s	MK Elderly 1991	Mothers born in Bucks & Herts	MK Children 1991
θ *three*	θ	θ	θ > f	f > θ
ð *mother*	ð	ð	ð > v	v > ð
t *butter*	ʔ	ʔ > t	ʔ > t	ʔ > t
aʊ *mouth*	ɛʊ̈	ɛɪ	æʊ	aʊ > a:ə ɛ:
aɪ *price*	ɔɪ	ɔɪ ɑɪ	ɑɪ	ɑɪ a͟ɪ
əʊ *goat*	ʌʊ ʊə (two lexical sets)	ə̟ʊ̟ ə̟ʊ	ʁʏ ʁʊ̟	ʁʏ > ʁɪ ʁʊ̟

Note: > means "more frequent than." Symbols placed adjacent to each other refer to variants that occur in roughly equal proportions.

cordings of the children, who seemed to be settling on compromise variants that are phonetically intermediate between London English and RP ("fudges," to use the term of Chambers & Trudgill 1980; see Principles 1 and 2). Moreover, features new to the area – especially the use of labiodentals for /θ/ and /ð/, and the fronting of /əʊ/ and /u:/, which are involved in more general diffusion in the region (Trudgill 1988, Kerswill & Williams 1997, Torgersen 1997) – occurred in the speech of children and of some parents, but were not present in the older speakers. If we include those mothers in our sample who were born in the Milton Keynes area (the northern Home Counties of Buckinghamshire and Hertfordshire), we have a cross-sectional picture of four locally born generations. Table 9 shows the changes between the generations. Note, in particular, the brief appearance of [æʊ] in the mothers' generation (cf. Fig. 2C).

The speed of change is evident when we examine the parent and child data. In the cases of the glottal replacement of word-medial /t/, and of the fronting of /θ/ and /ð/ to [f] and [v], differences between the parent and child generations are striking; see Figure 5. Although the caregivers used fewer of the non-standard forms than the children, possible evidence that a change is taking place in the status of these previously stigmatized forms can be seen if we consider the caregivers' data in isolation. Fig. 5 shows that the youngest caregivers (those of the 4-year-olds – see Table 10) use glottal stops, [f], and [v] approximately twice as often as the oldest caregivers (those of the 12-year-olds). Fig. 5 also shows a striking lack of relationship between the caregivers' and their children's scores; the older children are MORE non-standard (for reasons to be discussed under Principle 8), while the older caregivers are LESS non-standard.

As we saw under Principle 4, the ability of children to restructure their phonologies is crucial to the understanding of koineization. Possibly our most striking example of the rapidity with which individuals can do this is the case of



5A: Percent use of [ʔ] for (t) 5B: Percent use of [f] for (th) 5C: Percent use of [v] for (dh)

FIGURE 5: Use of non-standard consonantal variants in the speech of children and caregivers (interview data).

TABLE 10. *Mean age of caregivers.*

Age of child	Mean age of caregivers
4	29.1
8	33.4
12	36.4

James. The second of three boys whose parents had migrated from Perth in Scotland, he was 4 years old at the time of the first recordings. The family returned to Scotland every holiday, and the grandmother frequently came to stay in Milton Keynes. When first recorded, James spoke Perthshire Scots; but by the time we came to record him for the second time, 18 months later, his speech was similar to that of his southern English counterparts. Scots variants had been replaced by southern variants as shown in Table 11, which gives the majority variants in his recorded speech. By age 6, the Scots variants had apparently disappeared completely from the speech he used with his peers.

There is a similar shift in the consonant system, as shown in Table 12, which summarizes a quantitative analysis of James's consonants. At age 4, James resembled his mother in her categorical use of the standard forms [θ], [ð], and [h], and her near-categorical use of glottal [ʕ] in word-medial positions. By age 6, he had adopted the two merged southern English forms [f] and [v] in full measure; he had begun to drop /h/, and had begun to use some intervocalic [t], a consequence possibly of learning to read (Chambers 1992). For (th) and (dh), it is as if he had

TABLE 11. *Changes in James's vowel realizations over 18 months (Williams & Kerswill 1997:52).*

James age 4: March 1991	James age 6: Dec 1992
goat [oː] 100%	[æʏ æɪ]
plate [eː] 100%	[ɐ̟ɪ]
house [ʉ] 36%, [ɵʊ] 18%, [aʊ] 45%	[aʊ]
card [ɐ̟·ə], e.g. [kʲɐ̟·əd]	[ɑ̟ː]
it [ɐ]	[ɪ]

TABLE 12. *Consonant change over 18 months: James + mother: interview data (Williams & Kerswill 1997:53).*

James	% [θ]	% [f]	% [ð]	% [v]	% [h]	% ∅	% [t]	% [ʔ]
age 4	61.5	38.4	(50)	(50)	100	0	0	100
age 6	0	100	0	100	63.4	36.6	4.7	95.2
Mrs M	100	0	100	0	100	0	0	90.0

"unlearnt" the standard dental fricatives, and had begun to produce the non-standard labiodentals, which happen to correspond to immature forms (Kerswill 1994b).

Finally, we can examine the mechanism of koineization by comparing the results for one variable in Milton Keynes, and the same variable in a well-established town of similar size where we do not expect this process to be taking place. We will see that doing so sheds light on some of the issues raised above.

We have noted already that many of the features found in the Milton Keynes koine are also spreading in the southeast generally. On the face of it, this suggests that Milton Keynes is simply part of regional dialect leveling. We now look at evidence showing that, even if the outcome is similar, the mechanism is different, because of the discontinuity across the generations in Milton Keynes. We address this question by looking again at the data for (au). There is strong impressionistic evidence that the non-local (arguably RP) variant [aʊ] is spreading rapidly into the regional speech of the country, at the expense of local variants – a tendency noted in another New Town, Telford in the English Midlands (cf. Simpson 1996). To test this, we compared the Milton Keynes distribution with that of Reading, a town of about the same size as Milton Keynes, and roughly the same distance from London. Tables 13–14 show the distribution of the four variants already discussed above. Importantly for our argument, we have had to add two further

TABLE 13. *Percentage use of variants of (au), Milton Keynes, interview style (working class; 1996 recordings).*

	[ɛː]	[aːᵊ]	[æʊ]	[aʊ]	[ɛʊ̯]	[ɛɪ]
Girls age 14 (n = 8)	0	5.9	4.7	88.8	0	0
Boys age 14 (n = 8)	0	12.3	3.8	83.1	0	0
Elderly (n = 2f, 2m)	9.8	0	1.2	0	63.2	25.6

TABLE 14. *Percentage use of variants of (au), Reading, interview style (working class; 1997 recordings).*

	[ɛː]	[aːᵊ]	[æʊ]	[aʊ]	[ɛʊ̯]	[ɛɪ]
Girls age 14 (n = 8)	0	8.0	0	90.4	0	2.3
Boys age 14 (n = 8)	0	5.7	0	87.1	3.8	3.2
Elderly (n = 2f, 2m)	3.3	0	4.1	0.7	53.5	38.1

variants associated with older regional speech, such as that described by the *SED*. The data are taken from recordings of 14-year-olds and of people over 75 years of age, conducted in 1996–97.[10]

The tables show that the situation for (au) in Reading is similar in many respects, though not all, to that in Milton Keynes – a fact which strongly suggests the presence of regional dialect leveling. In both towns, variants [ɛʊ̯] and [ɛɪ] are used practically as a norm by older people, but are very rare among younger people. We would not expect the same development to be happening in two demographically such different towns, because of Principle 6: Milton Keynes is an "abnormal" speech community in that the young migrant families, in general, have no connection with the old people there. This is not so for Reading; the members of the working-class sample from which the sixteen teenage speakers are drawn have strong family connections in the town, with parents and grandparents for the most part born there (Kerswill & Williams 1999). The distribution of variants is very similar, but crucially, they are not identical. Table 14 shows that the old variants are still sporadically to be heard among Reading teenagers – reflecting, we argue, continuity in the town. By contrast, in our Milton Keynes data from both 1991–93 and 1996, the old variants are totally absent.

The data for (au) confirm what we have already claimed about continuity and change in a New Town. In Reading, we see a fairly rapid change from the old variants to the new – but presumably by a "normal" mechanism, involving the adoption of new variants by speakers who have networks with weak ties. In Mil-

		PARENT 1		
		London	South-east	Other
PARENT 2	London	Group 1 52.4% (10 children)	Group 2 29.1% (8 children)	Group 3 20.0% (3 children)
	South-east		Group 4 10.8% (10 children)	Group 5 27.1%* (8 children)
	Other			Group 6 10.0% (10 children)

* This score is increased by one high-scoring outlier.

FIGURE 6: Percentage diphthongal realizations of (ɔ:).

ton Keynes, the mechanism is quite different, even if the outcome is the same. The older generation's speech has no effect on that of the in-migrant generation, who bring in variants associated with different regional origins. The children have to make sense of this wide range of imported variants, and they settle on [aʊ] (cf. Mæhlum 1992b). In a new town, there is a catastrophic, creole-like discontinuity of dialect transmission (cf. Thomason & Kaufman 1988:49–50); these incomers' children have little or no exposure to the native variety of the region. This was actually evidenced by the fact that, in a listening test, very few teenage informants could recognize the older accent; see Kerswill & Williams 2000. (Continuity and change in Reading and Milton Keynes are further discussed by Williams & Kerswill 1999.)

Finally under Principle 6, we examine the orientation of the child speakers toward language varieties that originate elsewhere. We will consider the variable (ɔ:), the vowel in closed-syllable words of the *thought* set. As shown in Table 6, the vowel varies between a diphthong and a monophthong: [o̝ʊ] ~ [o̝:]. The diphthong is a well-established London variant, also found in other parts of the southeast. In Milton Keynes there is considerable variation, with the monophthong being the more common variant. Figure 6 shows the percentage use of the diphthong for 49 Milton Keynes children. They have been divided into six different "regional orientations," based on their parents' origins. Three origins have been considered, in a way that reflects distance from London: London itself, the southeast, and elsewhere. The percentage use of the diphthong co-varies with the "dis-

tance" from London of the child's network; if we disregard Group 5, which contains one subject with a much higher score than the others in the group, then we find a perfect gradation from Group 1 (maximal London orientation) to Group 6 (non-southeastern orientation). This analysis does not, of course, take into account the individuals' integration into the network (cf. Principle 5); but it does suggest that this qualitative factor (regional affiliation of network) influences language use. It also shows that focusing is not complete in this generation. We turn now to this very issue: the time-scale of focusing.

Principle 7: From initial diffusion, focusing takes place over one or two generations.

The notions of language focusing and diffusion (Le Page 1980) have a useful ambiguity. The most straightforward view is that focusing refers to linguistic homogeneity in a community, while diffuseness refers to linguistic heterogeneity. Focusing of this kind is found in social groups which, as Downes puts it, "have a strong sense of their own identity, a consensus in values and beliefs, and also in relation to the norms or rules which govern their practices" (1984:216). These are the kinds of groups that the Milroys studied in Belfast (L. Milroy 1980). However, their account of focusing is not so much concerned with absolute homogeneity as with the linguistic NORM, and this leads us to the second meaning of the term. In varying degrees, the Milroys found a FOCUSING OF NORMS, or clarity in expected patterns of behavior. The result of this is a clearer correlation of the level of use of vernacular forms with social factors, including the degree of an individual's embeddedness in a social network.

Focusing in any community is relative; in many cases (such as where there are clear ethnic, religious, or caste divisions), diffusion will persist. Diffusion is also characteristic of socially mobile middle-class groups, as well as among geographically mobile groups generally. A New Town starts from a position of extreme diffusion and will become more focused with time; exactly how long depends on the social, developmental, and linguistic factors listed above.

We have already mentioned the apparent rapidity with which focusing is taking place in the second generation (first child generation) in Milton Keynes, and we now examine whether this is in fact so. We return to the variable (ou) – which, as we saw, refers to the fronting of /əʊ/. Figure 7 shows the association of the children's scores (ranked from high to low) with those of their caregivers (the data are the same as those displayed in Fig. 4). Two points should be noted.

First, with two notable exceptions (bottom right on the graph), the overall range of the children is smaller than that of the caregivers, suggesting a degree of focusing. Unlike the children, the mothers' different regional origins are reflected in the scores; this is seen particularly in the six mothers who score below 1.0, and who are from the north of England, Norfolk, Scotland, or overseas. Second, even disregarding these six women, we find that, in 33 of the remaining 42 cases, the child's fronting is greater than that of the caregiver; this suggests that Milton

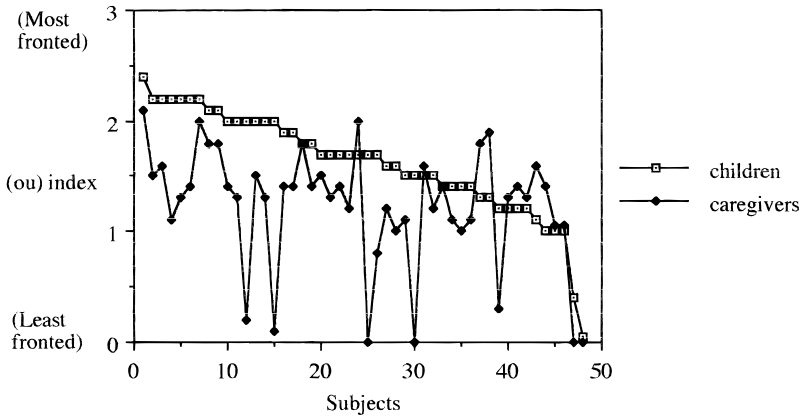


FIGURE 7: Association of children's (ou) scores with those of their caregivers.

Keynes children, as a group, are taking part in this general southeastern change. Some of the youngest mothers, themselves brought up in Milton Keynes, also have high scores, which suggests that this feature has been characteristic of the town for some time. Finally, the discussion under Principle 5 suggests that greater fronting is associated with greater integration into peer-groups; this result gives a "window" on the mechanism behind the spread of this feature.

The two very low-scoring exceptions are significant. These are the two children who, as we saw under Principle 6, are 4-year-olds of Scottish parentage. At this age, they had not yet accommodated to the majority pattern. This suggests, as we shall see under Principle 8, that the focusing of a new dialect is the responsibility of older, not younger, children.

Finally, we return to the question of which generation is able to achieve the focusing necessary for a koine. The data for Milton Keynes suggest that the second generation is already quite close to being focused, though we have noted examples where this has not quite been achieved – cf. (au), discussed under Principle 2, and (ɔ:), discussed under Principle 6. The restriction here is that, when children are for some reason more parent- or family-oriented, they are inevitably oriented toward language varieties that originate elsewhere (as is the case in Spitsbergen; cf. Mæhlum's work); this is not true of the Reading working-class speakers, for instance. This will lead to a greater degree of diffusion than in established towns.

Principle 8: Because of sociolinguistic maturation, the structure of the new speech community is first discernible in the speech of native-born adolescents, not young children.

We have referred several times to the special position of older children in the formation of a new speech community. In this section, we present data from

TABLE 15. *Percentage use of [θ] for (th).*

	Interview	Elicitation	Reading
4-year-olds	28.2	19.8	—
8-year-olds	30.3	7.7	24.4
12-year-olds	36.7	47.5	65.4
Caregivers	83.0	—	—

NOTE: dash means data not available.

Milton Keynes which confirm this in full measure, as well as allowing us to see the process behind the focusing involved.

First, we consider three variables whose sociolinguistic patterning in the south and east of England is well known: *th*-fronting, *h*-dropping, and *t*-glottaling. We would expect to see the older children gaining in maturity with respect to these, presaging the future adult norms of Milton Keynes.

The first, (th), shows older children style-shifting more than the younger ones. Table 15 shows the use of [θ], the standard variant, by caregivers and children (the interview data are those displayed in Fig. 5B, though the standard variant is shown here). The 4- and 8-year-old children use a low percentage of the standard form, and seem not to style-shift systematically. Their low scores may reflect the fact that the use of [f] for /θ/ is also a feature of immature speech (see Kerswill 1994b:75–76). The oldest children, however, use considerably more of the standard variant in all styles, which must be categorized as more formal than talk with their peers. They also style-shift consistently. The style-shifting by this age group is very much in line with Romaine's findings for children in Edinburgh (1984:101), and it shows the increasing sociolinguistic maturity of children as they grow older. The high use of the standard form by the adults reflects, we think, two facts: Some parents were not from areas where /f/ and /θ/ merge, and the feature is in any case still in the process of diffusion in the southeast (see Trudgill 1986:53–57, J. Milroy 1996).

Second, we consider (h), which shows a markedly high use of the standard variant [h]. Table 16 shows the use of [h] in lexical words (i.e. not function words like *he*, *his* etc.). The reason for the very high use of the standard probably lies in the salience of the variable; people are aware of "h-dropping." All the children style-shift, with the oldest children using the standard most in the more formal elicitation style – again, as with (th), probably reflecting sociolinguistic maturity.

Last, we will discuss *t*-glottaling: the use of a glottal stop [ʔ] for /t/ in intervocalic position. This feature is spreading throughout Great Britain (Trudgill 1990:78, J. Milroy et al. 1994), with London and Edinburgh–Glasgow as dual "epicenters." Like *h*-dropping, it is a feature that is also salient for many speakers; but it is increasingly tolerated in careful speech, and outside the word-

TABLE 16. *Percentage use of [h] for (h).*

	Interview	Elicitation
4-year-olds	73.8	86.0
8-year-olds	81.1	94.1
12-year-olds	82.1	99.4
Caregivers	91.9	—

TABLE 17. *Percent use of [t] for (t).*

	Elicitation (single words+connected speech)	
	Girls	Boys
4-year-olds	39.2	16.3
8-year-olds	38.5	20.5
12-year-olds	89.5	58.4

ANOVA: Age: F = 17.44; df: 2; $p < .0001$
Sex: F = 18.24; df: 1; $p < .0001$

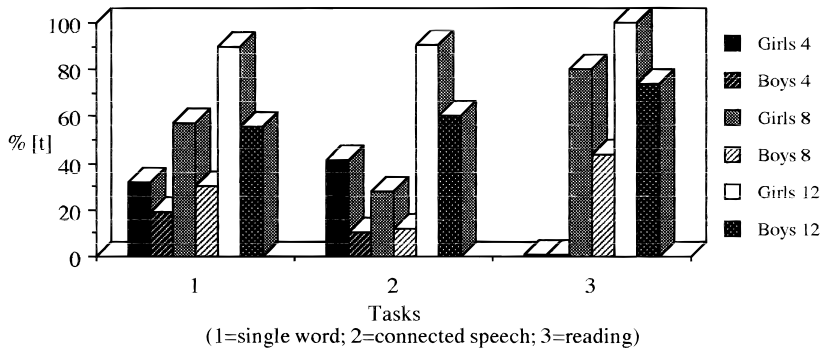


FIGURE 8: Scores for (t) by task, sex, and age.

internal intervocalic position considered here, it may pass unnoticed (cf. Wells 1982:299). Table 17 shows the use of the standard [t] for this variable in the elicitation tasks. Figure 8 gives more detail; the elicitation task is split into its components, and reading data are included for the 8- and 12-year-olds. Strik-

TABLE 18. *Percentage use of [t] for (t), interview data.*

	%[t]
4-year-olds	17.2
8-year-olds	20.4
12-year-olds	8.6
Caregivers	40.9

ingly, there are large style and sex differences in ALL age groups, in the expected direction. However, it is in the oldest age group that we find a high overall use of [t] in the elicitation styles, approaching 90% for the girls. We have no directly comparable adult data, but the interview data for adults and children (Table 18) give us a pointer. Here the older children use much LESS [t] than they do in the elicitation styles (Table 17), and also less than the younger children in the interviews (Table 18). They also differ markedly from the adult group. We can interpret this finding by suggesting that the 12-year-olds treated the interview in a rather less formal manner than the adults, even though the adult interviews were designed to elicit informal speech (see note 6). There are two reasons for proposing this. First, as young adolescents, the 12-year-olds are approaching the age when their increasing peer-group orientation is symbolized, among other things, by allegiance to non-standard speech (Romaine 1984:107, Chambers 1995:169, Kerswill 1996a). Second, AW, having spent a good deal of time in the schools and nursery prior to recording the interviews, had become familiar to the children. The data show, furthermore, that the older children are able to select more standard variants in formal school-based tasks, while increasing the range of style-shifting by preferring the non-standard variants in the interview. This development in the children's sociolinguistic competence is clearly visible in Figure 9.

We can make the following tentative generalization: Children slowly gain sociolinguistic maturity in a manner that involves a gradual increase in the number of styles that are perceived and treated in an adult way. In the elicitation tasks, attention is focused on pronunciation, and notions of "correctness" come into play. By age 12, children respond to this in an adult fashion, using relatively few glottal stops. By that age, however, children do not yet adopt the more formal register used by adults in interviews. Interacting with these developmental factors are general sociolinguistic changes in Great Britain, whereby *t*-glottaling is increasingly tolerated in more careful registers, and formality is being eroded in previously formal situations (something of which we saw evidence in the fact that glottaling is used less by older than by younger caregivers: see Table 10, above). This is particularly evident in the spoken media, to which children are increasingly oriented.

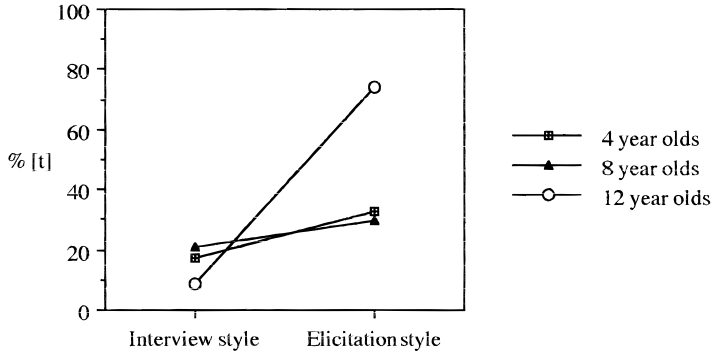


FIGURE 9: Percent use of [t] for (t) by age and style.

The results presented for (th), (h), and (t) are predictable, given the location and demographic mix of Milton Keynes, and given what is known about children's social and linguistic maturation. As such, the results show that the new speech community is developing along "normal" lines. However, these changes do not show the DIRECTION of the development. By analyzing the sociolinguistic patterning of two variables that we believe to be innovative in the south of England – (ou) and (u:) – we can draw conclusions about this development, and about the process by which it is spread in the new town. We have already discussed (ou), which refers to the fronting of /əʊ/ in *goat*. The variable (u:) refers to the fronting of /u:/ in *goose*, for which there is independent evidence of widespread fronting, in the southeast of England, in the speech of middle-class people in their twenties when compared to their over-40 counterparts (Torgersen 1997). Figure 10 shows the use of fronted variants for each vowel for female subjects, by age group.[11] For both vowels, the figure shows an increase in the amount of fronting used by the older girls. Two observations can be made. First, as for (ou), the overall fronting for (u:) is greater for girls than for boys: 46.7% vs. 36.3% in elicitation style, a finding significant at $p < .02$ (MANOVA), supported by Torgersen's significant result (1997:61). This suggests that, if these are indeed changes in progress, young females are leading them. Second, it is the older girls who use the most fronted variants, while the youngest girls match the mothers fairly closely. If we interpret the girls' data in isolation, using an apparent-time model, we might infer that backing is taking place, since younger children have the most back or central variants. This seems highly unlikely, given that parental orientation and influence are much greater among 4-year-olds than among the older children. This influence is reflected in the similarity of the adults' and 4-year-olds' scores on these two variables. An alternative explanation can be sought in the relative orientation toward parents and peers by children of different ages. Thus it is likely that, as the children grow older, they gradually increase their use of fronted vari-

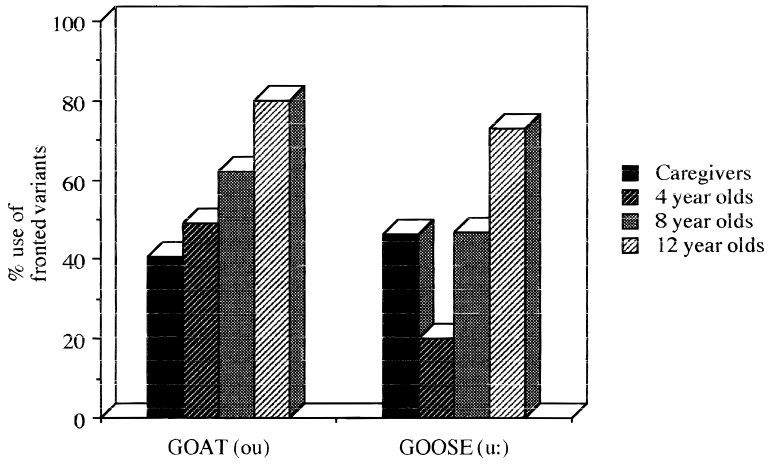


FIGURE 10: Percent use of fronted vowels in *goat* and *goose*, by age, female subjects.

ants, perhaps with a slightly older child reference group as a model. The likelihood of this explanation is increased by the fact that it is the children who are more integrated into peer-groups who have more fronting, as we saw under Principle 5. We now address the issue of the respective roles of the three age groups in the new speech community by taking an overall view of the data.

It is possible to gain a global picture of the speech community by entering the results for all ten variables quantified (see above) into a PRINCIPAL COMPONENTS analysis (Horvath & Sankoff 1987). This, broadly speaking, takes the scores for all subjects and computes "components" or dimensions which serve to differentiate the subjects optimally. The position of each subject relative to the others is then displayed as a point on a scattergram; this allows the researcher to identify groups of subjects, and then to interpret the groupings observed – in our case, in social terms. Figure 11 shows the result for the present data, which we have coded according to age group. A number of patterns can be observed. First, although the 4- and 8-year-olds cover roughly the same part of the display, it is only among the younger group that we find a statistical "outlier," in this case the subject with the very highest score on Component 2. This is Rory, one of the two boys who, at age 4, spoke with a marked Scottish accent.[12] His position on the graph reflects the fact that, by this age, he has not yet moved linguistically toward his peer group. We should also mention Neil, whose position at the bottom left of the plot (-0.55, -0.5) places him at the periphery of his group. This boy has parents from London, and has marked London features in his speech, particularly a monophthongal realization [ɛ:] of

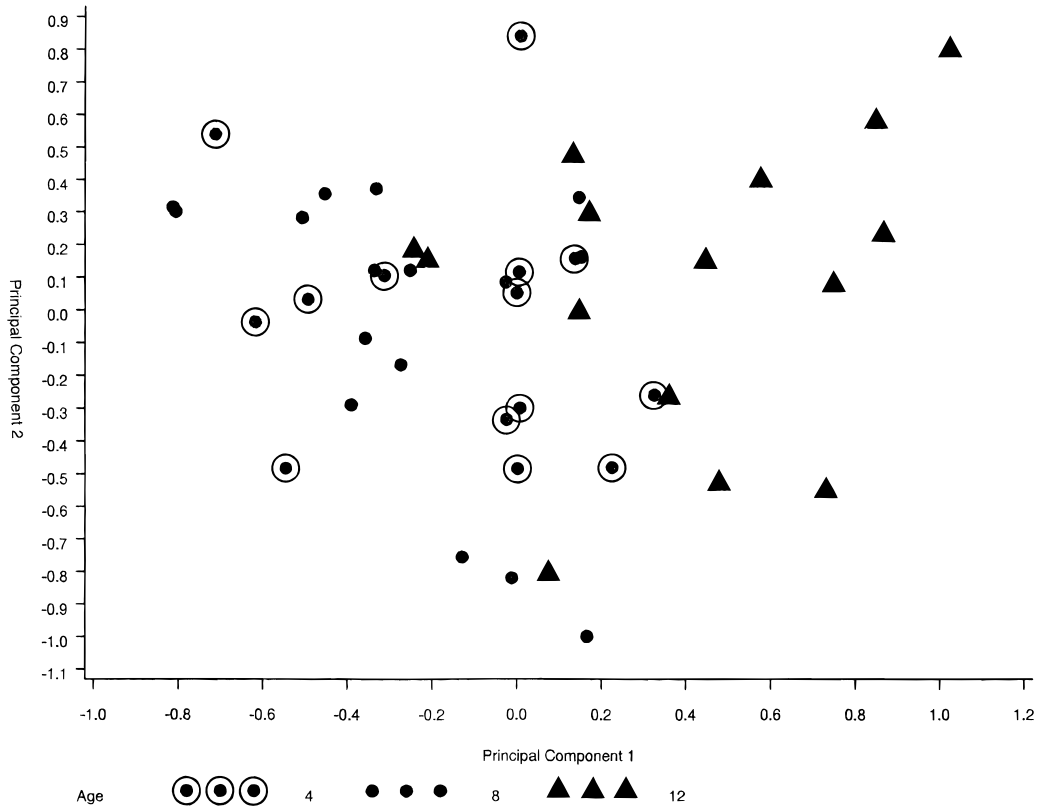


FIGURE 11: Principal components analysis of ten variables (Stage 1 recordings, elicitation tasks).

the vowel /aʊ/. His peripheral position suggests that Milton Keynes children's speech is NOT a transplanted London variety.

There is a second, much more striking pattern that bears directly on the preceding discussion: While the 4- and 8-year-olds largely overlap, the 12-year-olds appear to have "moved off" upward and to the right. There are two possible interpretations of this "movement." First, we can consider it as representing differences between the children that will persist. In this case, we are applying an apparent-time interpretation, and we conclude that language change is present. The other possibility is to regard the three age groups as representing "snapshots" of Milton Keynes children at different ages; thus, the 8-year-olds' pattern reflects that shown by the 12-year-olds at a time four years previously. This is in line with the conclusion drawn in the discussion of (ou) and (u:). The latter, developmental interpretation seems more likely, for three reasons relating to individuals' sociolinguistic maturation:

(a) The style-shifting patterns noted for (th), (h), and (t) indicate adult-like behavior only among the oldest children, suggesting age-grading in the children's behavior (Eckert 1997:151).

(b) The data for (au) in Fig. 3 show the same girls resembling the adult speech of the young, Milton Keynes-educated women.

(c) The fronting of /əʊ/ and of /u:/ appear to be well established, but nevertheless recent innovations, found only in the speech of younger people; thus their adoption by the oldest girls is explicable as an expression of their incipient adolescent desire to assert their autonomy from their parents' generation.

Clearly, the age-based pattern observed in Fig. 11 is not unique to Milton Keynes. What is special is the fact that, in contrast with Reading and elsewhere in the southeast, the New Town shows no well-established local variety to act as a model on which these children can converge. Instead, the model is to some extent their own creation – or, more accurately, one created by the very first children growing up in the New Town.

DISCUSSION: OBSERVING THE KOINEIZATION PROCESS

We have been at pains to stress the dynamic nature of koineization. We were able to do this because we were in a position to observe a contemporary example, rather than having to infer the dynamics of the process from a completed case. The disadvantage of this is that we do not know the ultimate outcome of the process in Milton Keynes. However, this is mitigated by the fact that a good deal is known about the outcomes of koineization, as our review makes clear. We are able, therefore, to compare the process, as we observe it, with outcomes described elsewhere.

Early in this essay, we posed a number of questions, the answers to which can help the investigator explain the path that koineization took in a particular case. Although we certainly cannot answer them all for Milton Keynes, we have nev-

ertheless been able to make a number of substantive claims about koineization, which previously could be stated only suggestively. Mainly, these concern the TIME SCALE of koineization. During the first twenty years of a new town, what is the relative contribution of the incoming adults (the first generation) and the first native-born children growing up there (the second generation)? What are the social and linguistic factors that lead to focusing in the second or the third generation? For Milton Keynes, we have seen evidence that focusing, albeit not complete, is already taking place in the second generation. The reasons we cited were (a) the relative similarity of the majority of the input dialects, particularly in relation to their lack of complexity, (b) the high proportion of children in the early years, and (c) the ease with which the children were able to form social networks in which new norms could be forged.

This high proportion of children is, in fact, quite usual in cases of migration, yet it is often overlooked in studies of dialect contact; it reflects the fact that migrants are normally of child-bearing age. Therefore we must seek to qualify Trudgill's claim that, in cases where a great deal of simplification occurs in the koine, the preceding contact involved adults, and that it is their "failure" to maintain phonological and other kinds of complexity that leads directly to the simplified koine. Although adult language and dialect contact was undoubtedly the predominant type in most cases of indentured labor (as in Fiji and South Africa) and of slavery, it is not true of most migration within the West in the last 100 years. The Milton Keynes study shows graphically that, in a case of contemporary economic migration in the West, second-generation children have a crucial role to play in focusing.

A critical case for Trudgill's hypothesis – that it is adult dialect contact that leads to both simplification and relatively late focusing – lies in Western examples, such as Høyanger, where the focusing did not occur until the third generation. To explain these examples, we must look not only to the adults' speech accommodation (as Trudgill seems to imply) but also, in the light of the Milton Keynes children's linguistic behavior, to the young children's strategies. Taking first the failure of focusing to apply in the second generation, we must seek explanations both in social factors – such as the lack of opportunity for the formation of child peer groups in which the focusing can take place – and in linguistic factors, e.g. great linguistic differences. As for simplification, it is necessary to take account of the contribution of children, simply because they are demonstrably the main agents of focusing in Milton Keynes and elsewhere. Children presumably take the diverse adult models as a part of their input; but given the opportunity, they will quite rapidly begin to form new, more focused varieties – which may contain further changes, including simplificatory processes, not foreshadowed in their parents' speech. Trudgill is probably right in stressing the importance of adult dialect contact in simplification, though the new information we have obtained about settlement patterns in Høyanger means that the matter is less clear-cut. However, we do not yet have the complete picture; further research

in other new communities must now explore the extent to which children of different age groups also contribute to this process.

Trudgill's discussion of the contribution of older and younger individuals to koineization can be refined in further ways. The Milton Keynes data show very clearly that the features of the "new dialect" there are prefigured by the older children, those verging on adolescence, and not by the more home-oriented younger children. This is partly corroborated by the speech of the youngest mothers in our sample, who attended secondary schools in Milton Keynes some ten years before our oldest children; in their speech, they use distributions of the variants of both (au) and (t) that closely resemble those of the older girls.

Whether, in the end, Milton Keynes speech will differ substantially from that of other, well-established towns in the area is in fact doubtful. We have seen the growing similarity between Milton Keynes and Reading, and we have ascribed this to regional dialect leveling. What is so distinctive about Milton Keynes is the very different process by which this result is being achieved: We have seen an almost creole-like discontinuity across three generations within Milton Keynes speech, something which is by definition absent from the other towns.

NOTES

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[1] Here and elsewhere in this article, we use the term "dialect" to refer to any variety of language, usually but not always associated with a region.

[2] An important though partial exception to the rule that the process leading up to a known outcome cannot be observed is the "Origins of New Zealand English" project, which uses a unique set of archive recordings (Trudgill & Britain 1997, Trudgill et al. 1998). The project confirms many of Trudgill's predictions about koineization, though the absence of recordings of children inevitably places a limit on the detail with which some parts of the process can be observed.

[3] We use the term "second dialect" by analogy with "second language."

[4] Voluntary economic migration, such as that taking place in 20th-century western Europe, contrasts sharply with most situations where pidgins, creoles, and koines such as Fiji or South African Bhojpuri have arisen (see Siegel 1987, Mesthrie 1993). In such cases, it was mainly adults of working age who were transported, with little regard for family relationships – a factor that may have resulted in extensive language and dialect contact among adults, leading to simplification.

[5] Low-lying land reclaimed from the sea, especially in the Netherlands.

[6] The level of informality achieved in the interviews is indicated by the following factors. The conversations were based on an exchange of information, on topics which included the raising of children and experiences of living and working in a New Town. On most occasions, other members of the household, including children, were present; and refreshments were served (cf. Labov 1972:85–94 for a similar approach to the identification of informal speech).

[7] In general, because of the high mobility of the sample families, place of birth is not a strong predictor of place of secondary school.

[8] This is a substantially expanded version of the discussion in Kerswill 1996a:195–6.

[9] The diphthong offsets [ɪ] and [ʏ] were counted as "fronted," the offset [ʊ] as "non-fronted."

[10] These recordings were conducted as part of the project "The role of adolescents in dialect levelling," 1995–98; ESRC ref. R000236180, award holders A. Williams, P. Kerswill, and J. Cheshire.

[11] Variants in the region of [y] and [y̲] were deemed to be "fronted," variants [ʉ] and [u̟] "non-fronted."

[12] James, who spoke Perthshire Scots (see Principle 6), was not included in the Principal Components analysis, because the majority of his vowel realizations could not easily be coded in the scheme adopted.

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