Part IV
Contact

Contact

The purpose of this section is to review work in sociolinguistics which has been devoted to the study of language varieties in contact. It deals with both languages in contact and dialects in contact, the difference between the two being typically defined as involving contact between non-mutually intelligible as opposed to mutually intelligible varieties, although it is of course acknowledged that mutual intelligibility is not an absolute criterion. Although there are quite naturally differences between the two types of contact, it is also the case that some of the same linguistic processes appear to be involved in both cases – and it is precisely linguistic processes and outcomes which are of interest to workers in linguistic variation and change. It is important to point this out since language contact is a subject which has been studied by many non-variationist linguists who have a number of different goals and foci. These include sociologists of language; social psychologists of language; bilingual acquisition specialists; and applied linguists. Dialect contact, on the other hand, is an area of study in which variationists have always been very much at the forefront, doubtless as a consequence of their following in the dialectological tradition, which was always aware of the importance of the geographical diffusion of linguistic innovations and the development of transition zones and linguistically intermediate forms.

David Britain in his chapter "Space and Spatial Diffusion" argues that it is ironic, given that dialect geography was in this way undoubtedly one of the most important antecedents of our form of sociolinguistics, that geographical space is one social category that has received very little attention in variationist linguistics. Britain says that, like many other categories dealt with in this *Handbook*, but to a much greater degree, space has remained unproblematized and untheorized in sociolinguistics – a simple given which variationists have taken for granted. Britain turns to the field of human geography, and shows that geographically informed variationist linguistics can benefit from the insights and methodologies of this science.

In her chapter on the "Linguistic Outcomes of Language Contact", Gillian Sankoff looks at the way in which languages spoken by bilinguals influence each other. Although she describes the growing rapprochement between Second Language Acquisition studies and variationist sociolinguistics, she takes the speech community, a notion extensively discussed earlier in this handbook, as

her focus, as is typical in sociolinguistic rather than psycholinguistic research. The main objective of variationist work in language contact is to achieve an understanding of the linguistic consequences of this contact. The same is equally true of work in dialect contact.

In "Koineization and Accommodation", Paul Kerswill examines the linguistic consequences of koineization, whereby new varieties of a language come into existence as a result of contact between speakers of varieties which are mutually intelligible. As Kerswill points out, one of the major questions we want to ask about varieties such as New Zealand English which are the relatively recent result of dialect contact, dialect mixture, and new-dialect formation is why they are like they are.

Peter Trudgill

24 Space and Spatial Diffusion

DAVID BRITAIN

> *Space was treated as the dead, the fixed, the undialectical, the immobile. Time, on the contrary, was richness, fecundity, life, dialectic.*
>
> Foucault (1980: 70)

Given the historical origins of variationism in traditional dialectology, and given the advances the discipline has made over the past decades in unpacking the initially rather crude attempts at understanding the social embedding of variation and change (see, for example, Rickford 1986, L. Milroy 1980, Milroy 1992, for social class, Eckert and McConnell-Ginet 1992 for gender, Eckert 1997 for age, Bell 1984 for style, and so on), it is paradoxical that one of the social categories that has received least attention of all is *space*. Almost without exception, space has been treated as a blank stage on which sociolinguistic processes are enacted. It has been unexamined, untheorized, and its role in shaping and being shaped by variation and change untested. One function of this chapter, therefore, is to strongly assert that space makes a difference, and to begin, in a very hesitant way, to map out what a geographically informed variation analysis might need to address.

It might be reasonable to think that human geography would provide some of the answers. I will draw on some influential work of human geographers in this chapter, but they, too, have engaged in a great deal of soul searching about the goals of their discipline and its very existence as a separate field of enquiry. As we will see, there are remarkable parallels between the recent history of human geographic thought, and the ongoing interest in language variation across space. Although space has been undertheorized in variation studies, a number of researchers, from the traditional dialectologists through to those interested in the dialectology of mobility and contact, have, of course, been actively engaged in research on geographical variation and language use. Their work will be contextualized here to highlight the parallels with human geographic theory, and some of the criticisms of earlier approaches which

have fed through to human geography, but remain largely unquestioned in variationist practice.

The second half of the chapter will present an overview of the current state of play in the spatial realization of linguistic performance. Two topics will be considered most prominently: the spatial diffusion of linguistic innovations, and the (related) spatial configuration of linguistic boundaries (i.e. isoglosses and transitions).

1 Where is Space?: Putting the Geo- into Variationist Sociolinguistics

> Space is not an empty dimension along which social groupings become structured, but has to be considered in terms of its involvement in the construction of systems of interaction. (Giddens 1984: 368)

Three types of space can be distinguished which are relevant to the discussion here:

1 Euclidean space – the objective, geometric, socially divorced space of mathematics and physics.
2 Social space – the space shaped by social organization and human agency, by the human manipulation of the landscape, by the contextualization of face-to-face interaction, by the creation of a built environment, and by the relationship of these to the way the state spatially organizes and controls at a political level.
3 Perceived space – how civil society perceives its immediate and not so immediate environments – important given the way people's environmental perceptions and attitudes construct and are constructed by everyday practice.

Together these three combine to create *spatiality*, a key human geographic dimension. None of these three can exist independently of one another. Geometric space is appropriated and thus made social through human settlement, but social space can never be entirely free of the physical friction of distance. And our perceptions and value systems associated with our surroundings, although deeply affected by both social and Euclidean space, can in themselves affect the way space is later appropriated and colonized. Importantly, spatiality is not fixed and concrete but, as Pred puts it, always in a state of "becoming" (1985: 338).

A sociolinguistic example, here, illustrates the interdependency and evolution of the three forms of space. The low-lying Fens of eastern England separate the counties of East Anglia – Norfolk and Suffolk – from the Midlands and the north – Lincolnshire, Northamptonshire and Leicestershire. The area has a

rather unique geomorphological and demographic history. Before the early seventeenth century, the Fens were mostly poorly navigable undrained marshland, and most of the population lived on a few islands of higher ground and in small communities on the northern coastline. The southern two-thirds of the Fenland was particularly subject to tidal flooding in summer, more continuous flooding in winter and was, therefore, too unstable in most places for permanent settlement. Darby, for example, notes that "even those portions that escaped winter flooding were subject to an annual heaving motion, the mud absorbing water and swelling" (1931: 18). The overall livelihood of many small Fenland communities was directly related to the success of efforts to hold the water back.

Until the seventeenth century, the Fens were seen as a miserable place, where its inhabitants eked out a meagre living in the most difficult of circumstances. White (1865: 264) claims, for example, that "on these [Fenland] banks, the inhabitants for their better security erect their miserable dwellings, at a great distance sometimes from each other and very remote from their parish churches to which they rarely resort . . . so that they seem to be cut off from the community and are deprived of almost every advantage of social life". The geographical boundary that the area created between east and west, and the perceptions of the Fens and Fenlanders, engendered a strongly negative reaction to the area. Darby (1931: 61) claims that there arose "a mythical fear of a land inhabited by demons and dragons, ogres and werewolves", and he quotes Felix who claimed the Fens were "especially obscure, which ofttimes many men had attempted to inhabit, but no man could endure it on account of manifold horrors and fears and the loneliness of the wide wilderness – so that no man could endure it, but everyone on this account had fled from it".

Reclamation from the mid-seventeenth century onward proved to be a major turning point in the history of the Fens. A previously barely passable marshland evolved into fertile arable land. The impact of the reclamation on the Fenland's demographic structure was considerable. Subsequent to drainage, the Fens saw quite rapid demographic growth, particularly in those central Fenland areas which had previously been less accessible (see Britain 1997a: 19–20 for more detail about demographic growth and settler origins).

Despite this, the Fens remains an important boundary to east–west communication. Politically, the area is still very much a peripheral one. It sits at the northwestern edge of East Anglia, and at the eastern and southern edges of the Midlands and north. Road and rail links crossing the area remain relatively poor, and, functionally, the absence of a large urban centre in the Fens means its inhabitants look beyond the area for the provision of major products, services, and leisure facilities (see further below). Perceptions of the area today are still rather negative, fueled by high profile media coverage of crime and ethnic tension. The physical impenetrability of the Fens to outsiders before reclamation, the concentration of socio-political spheres of influence to the East and West, and the almost demonic external perception of the area and its inhabitants led to the Fens becoming seen as a major boundary between two

important and economically powerful regions, East Anglia and the Midlands. The historically evolving spatiality of physical, social, and perceptual space in the Fens have created not just a geographical boundary, but a linguistic one too – the site of one of the largest clusters of dialect transitions in the country (see Britain 1991, 1997a, 1997b, 1998, 2000), including:

- the realization of (u) in "cup", "butter", etc. [ʊ] to the west-northwest, [ʌ] to the east-southeast;
- the realization of (a) in "castle", "last", etc. [a] to the west-northwest, [aː] to the east-southeast;
- the presence or absence of /h/: absent to the west, present to the east;
- the realization of /au/: [ɛː] to the west, [ɛu] to the east;
- the realization of vowels in unstressed syllables: e.g. past tense "-ed" forms and "-ing" forms are realized with [ɪ] to the west, but [ə] to the east;
- the preservation (to the east) or not (to the west) of a "nose" [nʊuz]/ "knows" [nʌuz] distinction;
- third person present tense –s absence (to the east) or presence (to the west);
- the realization of (ai): [ɑi] to the west, [əi] to the east (and "Canadian Raising" in between).

Doreen Massey (1984, 1985; see also Curry (1996) and Johnston (1991) for similar overviews) has charted three distinct periods in the theoretical development of spatiality in social scientific thought. These three stages are mirrored in quite direct ways in the investigation of spatial variation in language use. Before the 1960s, she claims, human geography was about "regions," the focus of study being on place, difference, and distinctiveness. Rather than focusing on spatial processes or structures, individual areas were analyzed for individual unique characteristics. "Too often," she states (Massey 1984: 2), however, "it degenerated into an essentially descriptive and untheorized collection of facts." This period coincides most obviously with that of traditional dialectology. It, too, focused on regions, on focal areas and their boundaries, on the local dialectal variability, and differentiation from place to place which fueled its opposition to the neogrammarian hypothesis of regular exceptionless sound change. Making few demands on social theory of any kind, it treated space, at least in its initial forms, as little more than a container, a background setting against which dialectological findings could be mapped. The introduction of the *Linguistic Atlas of England* (Orton et al. 1978) is extremely revealing in this respect:

> Wright had observed that in the current state of knowledge only an approximate classification of M[iddle] E[nglish] dialects could be made because it was impossible . . . to fix the exact boundaries where one dialect ends and another begins . . . Wright was taking an even longer historical view than Kurath in suggesting that regional dialect boundaries in the past could be reconstructed on the basis of modern evidence . . . they decided to set as their objective the oldest kind of traditional vernacular . . . which would demonstrate the continuity and historical development of the language. (Orton et al. 1978: i)

So although traditional dialectology is often (always?) portrayed as one of the earliest forms of geographical linguistics, in fact there is virtually no *geographical* contribution to the work at all. The role of space is reduced to that of data presentation on a map. In fact, the historicist agenda of traditional dialectology is one which has pervaded variation studies throughout its brief life – consider the primacy for many variationists of the apparent-time model. Soja (1989) is probably the most prominent human geographer to question this obsession with time over space:

> An essentially historical epistemology continues to pervade the critical consciousness of modern social theory. It still comprehends the world primarily through the dynamics arising from the emplacement of social being and becoming in the interpretive contexts of time. . . . This historicism . . . has tended to occlude a comparable critical sensibility to the spatiality of social life, a practical theoretical consciousness that sees the life-world of being creatively located not only in the making of history, but also in the construction of human geographies, the social production of space and the restless formation and reformation of geographical landscapes. (Soja 1989: 10–11)

In the 1960s the whole situation changed, in human geography, dialectology, and the social sciences in general. The quantitative revolution broke out. The consequences of this revolution had different effects on sociology and sociolinguistic dialectology on the one hand, and human geography and geographical dialectology on the other. Within the former, spatiality was largely ignored. Social relations and social structures were quantified and correlated with other social structures, or in the case of sociolinguistic dialectology, with linguistic variables (Labov 1966). The scientific empiricism of the time meant that the regular, the general, and the neutral took precedence over the specific, the individual, and the unique.

The introduction to Sociolinguistic Patterns (Labov 1972) makes it quite clear that Labov considered his work as a reaction to Chomskyan linguistics first and foremost, rather than an attempt to radically shift dialectological practice. His initial work in Martha's Vineyard (Labov 1963), a largely rural community, contrasted with later work carried out in New York (Labov 1966), then one of the largest urban centers in the world. It is interesting, therefore, that most of the major studies carried out within the same framework for many years after looked at *urban* communities: Wolfram (1969) in Detroit; Sankoff and Cedergren (1971) in Montreal; Trudgill (1974a) in Norwich, etc, and very few focused on rural locations. This point appears rarely to have been questioned. On the surface, it appears an obvious reaction to the largely rural focus of traditional dialectology. Researching in the city was most probably seen as the way to gain access to the most fluid and heterogeneous communities, and therefore to tackle the issue of the social embedding of change "where it's all happening." In some senses, though, it could be seen as throwing the rural baby out with the traditional dialectological bathwater. The outmoded methods of traditional dialectology possibly stigmatized research in rural communities

and so they became avoided as a focus of analysis. This urbanism still pervades much of the discipline, however: the rural is still portrayed as the insular, the isolated, the static, as an idyll of peace and tranquility rather than as composed of heterogeneous communities, of contact, of change and progress, and of conflict (See, for example, Cloke and Little 1997, Macnaghten and Urry 1998, Cloke 1999, Shucksmith 2000.) But language varies and changes in rural as well as urban communities.

Sociologists had society to quantify, sociolinguistic dialectologists had linguistic variables to quantify, but what about human geographers? All they had was space, a dimension. So they set about the task of establishing a quantified human geography, drawing up spatial laws, spatial relationships, and spatial processes all of which could be explained by spatial factors, without reference to social content. It was at this time that such concepts as "the friction of distance" and, hence, gravity models, were drawn upon to explain empirically discovered spatial regularities. Euclidean space came into its own.

Just as social theory despatialized itself as a result of the quantitative revolution, and human geography became concerned solely with space, Labov (1982), in his review of the first 20 years of variationism, firmly separated "spatial" contributions to language change from the "social," and treated the study of linguistic heterogeneity in space, society, and time as a "natural alliance" (1982: 20) but of separate disciplines. Dialect geographers study language in space and, he says, sociolinguists study heterogeneity in society. Labov (1982: 42) went on to state that "the study of heterogeneity in space has not advanced at the same tempo as research in single communities." Interestingly, the division implies that heterogeneity in both time and society are somehow not in space, that spatiality has not shaped the communities (or their evolution) under investigation. But this view was typical of the time. Massey (1984) notes that "in terms of the relation between the social and the spatial, this was the period of perhaps the greatest conceptual separation. . . . For their part, the other [non-geographic – DB] disciplines forgot about space altogether" (1984: 3) and that "the other disciplines continued to function, by and large, as though the world operated, and society existed, on the head of a pin, in a spaceless, geographically undifferentiated world" (1984: 4).

The human geographic focus on spatial causes and motivations stimulated much of the early sociolinguistic work in dialect geography, perhaps most notably in the analysis of the spatial diffusion of innovations and, in particular, the adoption and adaptation of gravity models (e.g. Trudgill 1974b, 1983, Callary 1975, Larmouth 1981, Hernández Campoy 1999, 2000a, 2000b), but was also evident, earlier, in the neolinguistic tradition (see, e.g., Bartoli 1945, Bonfante 1947, Weinhold 1985). Early sociolinguistic work on the geographical diffusion of innovations was triggered by the highly influential models of diffusion proposed by the Swedish human geographer Torsten Hägerstrand (e.g. 1952). His work began a whole sub-discipline of human geography – time geography – which investigated the creation of spaces through the bundling of people's "time-space biographies" (see also Pred 1981, Carlstein 1981, etc). It was his

modeling of spatial diffusion, however (rather a small part of the project of time-geography), which had the most impact on dialectology (and geography), however, since it provided a methodological framework that could be readily adopted to visually display geographical distributions of the frequencies of linguistic innovations, "the spatial diffusion of ratios" (Trudgill 1983: 61). Examples from the dialectological literature will follow in the next section. But its purely spatial, asocial approach was criticized by a number of human geographers.

In a detailed critique, Gregory (1985) underlined the fact that the model Hägerstrand proposed failed to "cut through the connective tissue of the world in such a way that its fundamental integrities are retained. Obvious examples include the detachment of 'potential adopters' from their social moorings and the displacement of subjects from social struggles" (Gregory 1985: 328) and presented the world as "squashed into a flat surface, pockmarked only by the space-time incidence of events" (1985: 328). Furthermore, as highlighted by Yapa (1977: 359) and Gregory (1985: 319), the model treats the non-adoption of an innovation as "a passive state where the 'friction of distance applies a brake to innovation . . . rather [than] an active state arising out of the structural arrangements of society." In addition, Gregory suggested that the model provided no attempt to account either for the relationship between social structure and human agency, or for the *consequences* of innovation diffusion, which, in the time-geographic model are merely "a sequence of distributional changes" (Gregory 1985: 304). If feature A diffuses from place X to place Y, will feature A (1) be unchanged at Y from its state at place X and (2) carry the same social connotations, the same values, in the two places? We will return to this point later.

Gravity models, too, depend on a Euclidean, geometric view of space where physical distance and total population count as the sole determinants of the influence one community is likely to have on another. First, however, although gravity models predict influence of place X on place Y (and perhaps more importantly *rank* the influences of place X on a number of places, W, Y, Z), based on the distance between place X and the other locations, we know little about the spatiality of that distance. Physical, social, and perceptual factors (mountains, marshes, motorways, lack of roads or public transport, employment blackspots, shopping malls, xenophobia, or external negative perceptions of place) can all minimize or maximize that distance in the eyes (and mouths) of speakers, and, thereby, the actual effect place X will have on others. Second, innovations travel in different ways. The desire to purchase a new brand of washing powder or chocolate bar could be provoked by a range of different media – TV adverts, promotional material through the mail, as well as recommendations from neighbors and school friends. It is widely acknowledged now that most linguistic innovations (especially non-lexical ones) are transmitted through face-to-face interaction (Trudgill 1986), and not through exposure on TV. Therefore the spatiality of face-to-face communication, and the nature of what Hägerstrand called "coupling constraints" will additionally interact

with that distance. Third, and related to the previous points somewhat, is the problem that the gravity model assumes everyone in place X has an equal and likely chance of coming into contact with any resident of the other location. But some groups are more mobile than others, and are more likely therefore to meet non-locals than more territorially circumscribed groups. As the Milroys have shown (L. Milroy 1980, J. Milroy and L. Milroy 1985, J. Milroy 1992), it is the central classes of society who have weaker social networks, and who tend to be more mobile (in the hunt for job stability and socioeconomic advancement) whilst at the extremes are those who cannot move or do not need to. I have shown in previous work (Britain 1991, see also, in preparation; cf. Urry 1985) that the degree to which class experiences are both heterogeneous and spatially concentrated can have a particular effect on language variation and change. Some communities, therefore, may be in a better position to influence than others. Specific examples of gravity model analyses will be considered in the next section.

In admitting some of the problems, Trudgill, one of the pioneers of the application of gravity models to dialectology, adapted the gravity model to include a calculation of prior-existing linguistic similarity, given that "it appears to be psychologically and linguistically easiest to adopt linguistic features from those dialects or accents that most closely resemble one's own, largely . . . because the adjustments that have to be made are smaller" (1983: 74–5; see also below, and Britain 1999).

More generally, Massey criticizes the quantificational approach to space as being insensitive to the local and the unique: "The 'old regional geography' may have had its disadvantages but at least it did retain within its meaning of 'the spatial' a notion of 'place', attention to the 'natural' world, and an appreciation of richness and specificity. One of the worst results of the schools of quantification and spatial analysis was their reduction of all this to the simple (but quantifiable) notion of distance" (Massey 1984: 5).

The difference, then, in terms of spatiality between this "sociolinguistic dialect geography" (Trudgill 1974b) and the largely urban speech community sociolinguistics of the late 1960s and 1970s cannot be clearer, the former asocially quantifying space, and the latter aspatially quantifying society. Dialect geographers were busy quantifying geometric space, devoid of its social content, whilst urban sociolinguists studied their speech communities with little regard for their integration into a larger socio-*spatial* framework.

Since the mid-1970s, a radical shift has taken place away from the spatial fetish in human geography Massey (1984, 1985). The initial move was to deny the spatial altogether, with a view, diametrically opposed to that of its philosophical predecessors, that the spatial was purely social, a construct of practice and social structure. The role of human geographers in this initial stage descended into "a position at the end of the transmission belt of the social sciences, dutifully mapping the outcomes of processes which it was the role of others to study" (Massey 1985: 12). It is important to note at this point, therefore, that the tremendous and valuable progress that has been made of late in mapping

techniques in dialectology (see further below) still largely represents the *portrayal*, the *display* – sophisticated and eyecatching, admittedly – of data, rather than an *explanation* of the patterns found. The response to this rejection of the spatial in the 1970s was that "'geography' was underestimated . . . Space *is* a social construct – yes. But social relations are also constructed over space, and that makes a difference" (Massey 1985: 12).

"The difference that space makes" (Massey 1984, Sayer 1985, Cochrane 1987, Johnston 1991) became a dominant theme of mainstream human geography in the 1980s. Rather than space being seen as having no effect whatsoever on social process or it having, in itself, causal powers, geographers argued for the need to consider spatiality as a contingent effect which contributes to the contextual conditions which can affect how or if causal powers act (see Duncan, for example, 1989: 133). Johnston (1991) expands on this view, suggesting that cultural geography (dialectology, therefore, included?) provides strong evidence for this position:

> Places differ culturally, in terms of . . . the "collective memory". For a variety of reasons, some associated with the local physical environment, people's responses to the problems of surviving collectively vary from place to place, at a whole range of scales. How they respond becomes part of the local culture, the store of knowledge on which they draw. . . . That store . . . becomes the inheritance of those who succeed, being transmitted intergenerationally to others who will modify it as they in turn tackle problems old and new. Thus cultures develop in places and are passed on in places . . . people learn what they are and what they should do at particular times and in particular places. (Johnston 1991: 50–1)

Here I will tentatively introduce a few linguistic issues or contexts which highlight how dialectology could be sensitized to these issues: the spatiality of sociolinguistic processes; the role of the perpetual "becoming" of place; the analysis of the unique; and the question of *whose* geographies we should be interested in (see Britain, in preparation, for a more fully worked out application of one socio-spatially oriented model of the structure of civil society to sociolinguistic concerns).

2 The Spatiality of Sociolinguistics: Functional Zones and Dialect Boundary Formation

The social networks that people tie in their everyday lives are partly constrained by space and spatiality and contribute to creating and maintaining spatiality in their neighborhoods, villages or towns. Network strength – a measure of the time, emotional intensity, intimacy, function, and reciprocity of relationships – as is now well-established (Milroy 1980, Milroy and Milroy 1985, Milroy 1992), restricts or encourages the adoption of innovations from

outside. "Linguistic change is slow to the extent that the relevant populations are well established and bound by strong ties, whereas it is rapid to the extent that weak ties exist in populations" (Milroy and Milroy 1985: 375). In Britain (1997a), I drew on the work of Giddens whose structuration model of society relies heavily on concerns for time-investment and interpersonal trust and intimacy in explaining social reproduction and change. His theory puts particular emphasis on the role of routinization – "the habitual taken-for-granted character of the vast bulk of activities of day-to-day social life, the prevalence of familiar styles and forms of conduct" (Giddens 1984: 376) – in the perpetuation of social structure. One function of routinization, according to Giddens, is the "material grounding of the recursive nature of social life" (1984: xxiii). Our routinized daily activities are reproduced by their very performance. In this sense, routines, like strong social networks, often lead to system preservation. Second, claims Giddens, it is through routines that norm-enforcement is achieved: "the routinised character of . . . daily life does not just 'happen'. It is made to happen by the reflexive monitoring of action which individuals sustain in circumstances of co-presence" (1984: 64). So routines lead to system preservation and enforcement. If we investigate the geographies of routines and of social networks, we can see how spatiality (space in its physical, social, and perceptual guises) helps construct functional zones, and, in a very real sense, communities of practice (Holmes and Meyerhoff 1999, Meyerhoff, this volume).

A linguistic example will come again from the Fens (Britain 1991). Figures 24.1a, 24.1b and 24.1c show an area of the eastern Fens. In the east is the urban centre of King's Lynn, and 14 miles (22 km) to the southwest lies Wisbech, a smaller town. Between the two lies a cluster of dialect boundaries, including those of: the realization of /au/: [ɛː] in Wisbech, [ɛu] in King's Lynn; the preservation (in King's Lynn) or not (in Wisbech) of a "nose" [nʊuz] /"knows" [nʌuz] distinction (except in the word "go" where the realization of [gʊu] is used variably in Wisbech); and third person present tense –s absence (in King's Lynn) or presence (in Wisbech). This boundary has emerged partly due to the distance between the settlements (a distance that once felt much greater due to the Fenland marshes) and a relatively sparse population in the intervening rural areas, partly as a result of relatively poor infrastructural connections between the two towns (they sit in different counties, separated by a number of substantial rivers and drainage channels which have only been bridged in a few places), partly as a result of local rivalries and negative stereotyping of each other's residents, and partly as a result of the routinized geographies of everyday interactions and behaviors which residents in the intervening areas have mapped out for themselves, *given these spatiality constraints*. Villages to the west of the dialect boundary orient themselves to Wisbech for the provision of employment, services, entertainment, and so on, and villages to the east to King's Lynn. Note how in figure 24.1c these geographies are recreated by public transport provision. This boundary cannot be understood simply as motivated by physical spatial factors, nor by solely social ones – a whole host

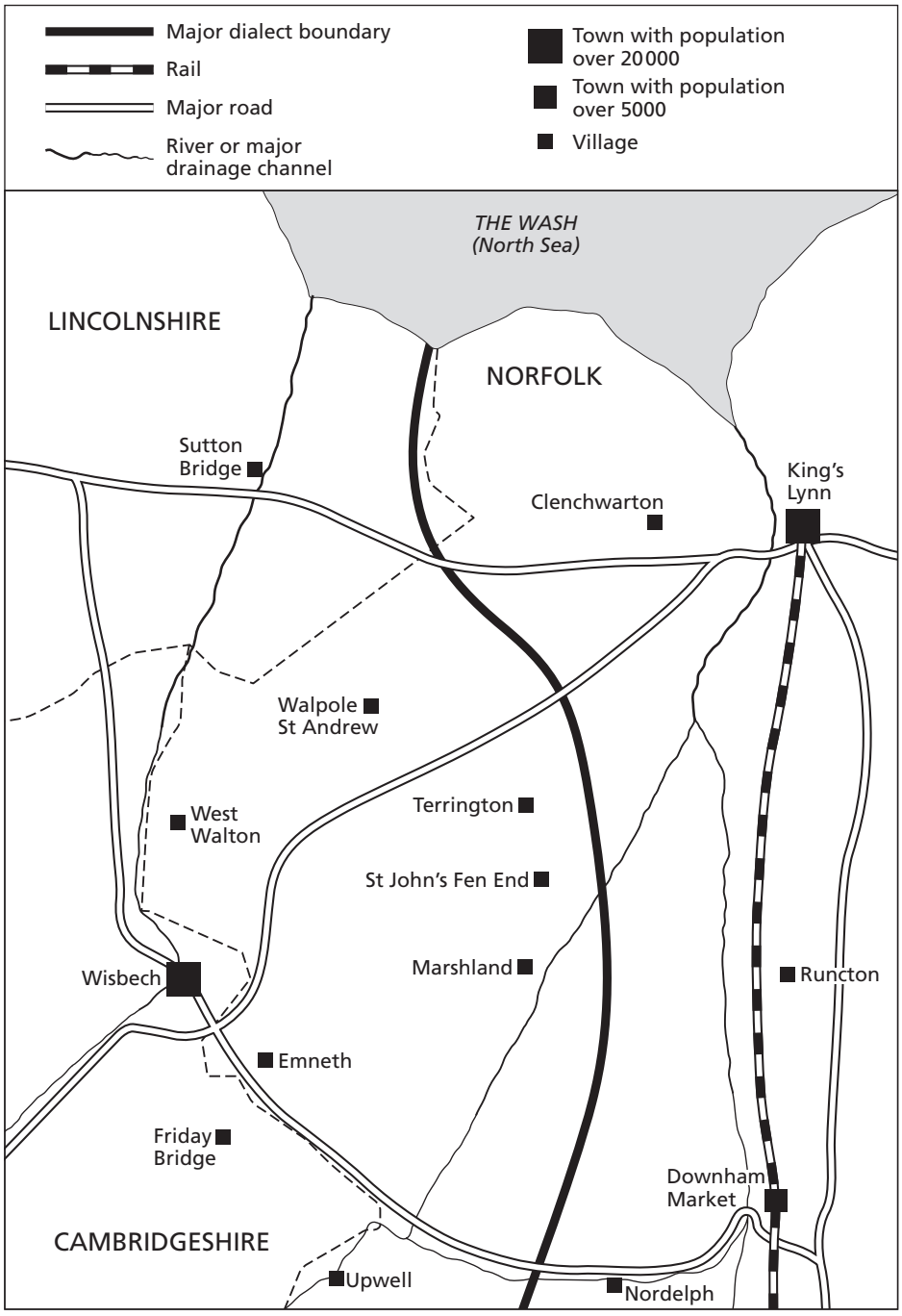

Figure 24.1a The King's Lynn–Wisbech functional zone in the Fens: the dialect boundary and the major roads, rail and waterways

Source: Britain (1991: 134)

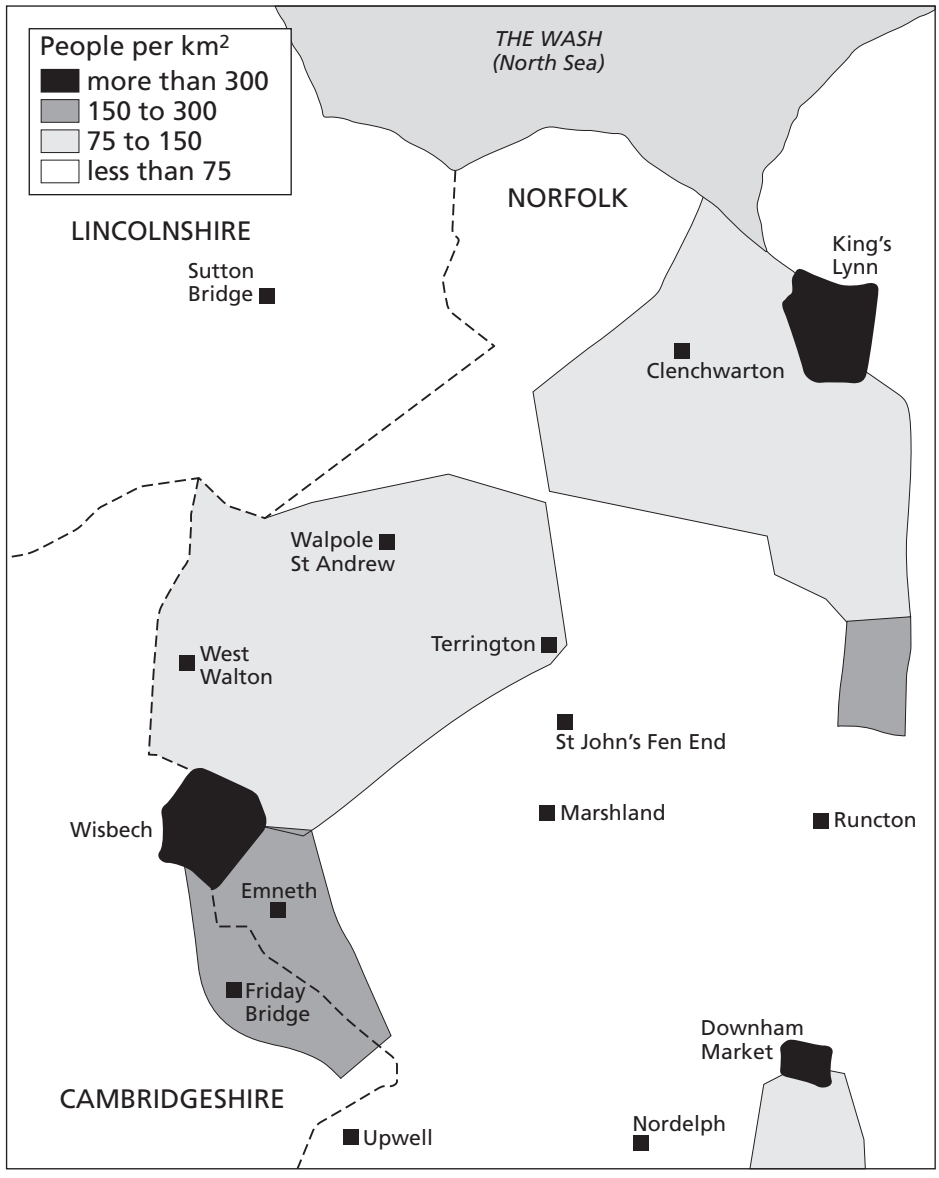

Figure 24.1b The King's Lynn–Wisbech functional zone in the Fens: population density

Source: Britain (1991: 134)

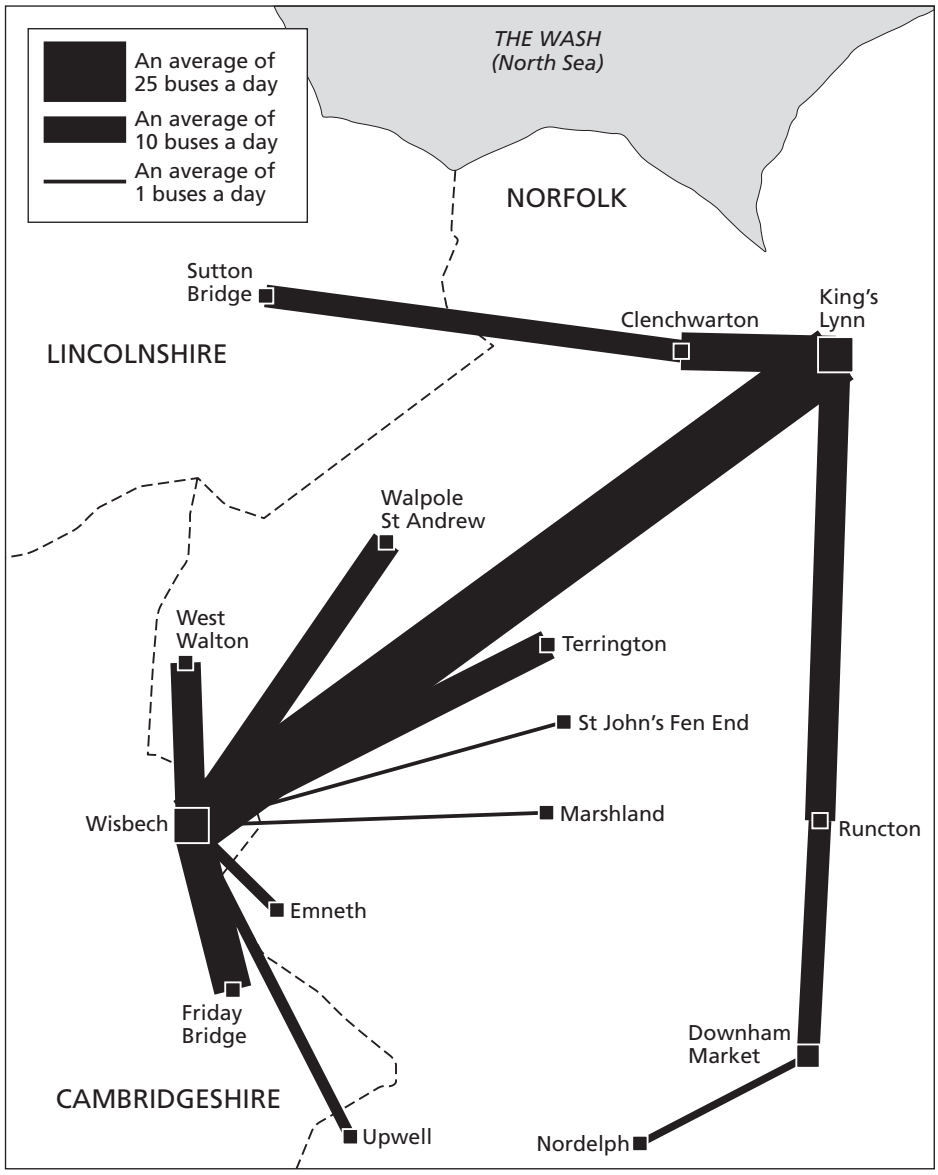

Figure 24.1c The King's Lynn–Wisbech functional zone in the Fens: the density of bus routes

Source: Britain (1991: 134)

of factors combine (and are recreated by their routinization by locals) to account for the (rather narrow) transition zone for these variables.

3 The Perpetual Becoming of Place: Contact and Migration as Catalysts of Change

The applicability to dialectology of the idea that "place is an ongoing process" (Pred 1985: 361) cannot be clearer than in the work of those interested in dialect contact (Trudgill 1986, Trudgill and Britain forthcoming, Siegel 1987, Milroy forthcoming), new dialect formation (Trudgill et al. forthcoming, Britain 1991, Kerswill and Williams 2000, Simpson and Britain in preparation), and second dialect acquisition (Payne 1980, Trudgill 1986, Chambers 1992, Amastae and Satcher 1993, Al-Dashti 1998, Watts 2000). The very basis for this research are the linguistic consequences of changes in space and place as a result of migration, labor indentation, colonization, suburbanization, gentrification, New Town formation, land reclamation, and so on. All these processes cause breaks both in social networks and socialized routines, always for the migrants, and often for those in settlements receiving newcomers too. Giddens has claimed that routines psychologically instill in humans what he calls "ontological security" – "a sense of trust in the continuity of the object world and in the fabric of social activity" (1984: 60), or, in Gregory's words, "a mode of self-reassurance brought about by the agent's involvement in the conduct of everyday life" (1989: 197). When routines are broken, as they are in the situations which lead to dialect contact, people seek to reroutinize their lives to some degree, as a natural development of their need for ontological security (Johnson 1990: 127). The linguistic consequences of reroutinization are twofold. First it leads to the gradual development of stonger social network ties. Second, it leads to the (re)establishment and subsequent social enforcement of a more focused koineized linguistic system (Le Page and Tabouret-Keller 1985, Britain 1997a, forthcoming, Kerswill, this volume). In virtually every human settlement this process is ongoing as the place evolves, as routines are formed and broken and reformed, as routines create, break down, and recreate new spatialities.

4 The Analysis of the Unique and the Local: The Onward March of "Estuary English"?

Over the past 500 years at least, London and the southeast of England have been an influential focus of linguistic innovation, and many new forms appear to have had their origins there. In the latter decades of the twentieth century, however, interest in the apparent leveling of traditional dialects in Britain has

grown, particularly in the media, who have created a beast known as "Estuary English" ("Estuary" here relating to the Estuary of the Thames, the principal river flowing through London and southern England) which is, apparently, eating up dialects as it marches across the dialect landscape of southern England and beyond. And, it is fair to say, a number of researchers have found evidence of apparently southeastern English features – particularly consonants – appearing in northern England and Scotland (see, for example, Foulkes and Docherty 2000, Llamas 1998, and many of the papers in Foulkes and Docherty 1999). These researchers and others have been careful to try and dampen the media's enthusiasm for the appetite of the beast, but point out, quite rightly, that, as in other places (e.g. the northeast of England (Watt and Milroy 1999, Watt, forthcoming)) leveling tendencies are afoot in the southeast which are reducing some of the marked minority forms of local dialects in the London–southeast functional zone, and that the leveling is a result of contact between various London, RP, and local southeastern varieties. Features spreading include labiodental [ʋ] variants of prevocalic /r/, the fronting of /θ/ and /ð/ to /f/ and /v/, the glottalization of /t/, and the vocalization of /l/. So what role is there for the local dialects in the face of this influence? As we saw earlier, the mainstream models of diffusion in the 1960s paid little attention to the *consequences* of diffusion, assuming that the process involved "a sequence of distributional changes" (Gregory 1985: 304) rather than a process which had locally specific outcomes, and which may be resisted by local identity practices.

A number of dialectological studies have found such locally specific outcomes and practices. In the Fens, for example, I found that whilst the changes listed above, plus others such as the fronting of /uː/ and /ʊ/, were advancing rapidly in the speech of the young, other reported changes were not. In the eastern Fens, where a /uː/–/ʌʊ/ distinction between *moan* and *mown* is retained, /ʌʊ/ fronting was mostly only affecting the *mown* lexical set: hence "rows of roses" /rɐuzərʊuzəz/. Similarly for /ai/, the backing, rounding, and monophthongizing process ongoing elsewhere (Tollfree 1999: 168) is only affecting the diphthong before voiced consonants in the central Fens: "night time" being realized as [nəiʔtɑːm] (Britain 1997a, 1997b). In each case the local structures *interact* with the incoming ones and produce new but local not universal outcomes. The classic Martha's Vineyard study by Labov (1963) provides a superb example of how local solutions are found in the face of external threats: in this case, the use of raised onsets of /ai/ and /au/ as a reaction to the influx of summer visitors. Trudgill's work in Norwich demonstrates other possible reactions to threats from outside: hyperdialectisms (1986: 66–78). In Norwich, which traditionally preserved the Middle English distinction between **aː** and **ai**, (daze = /deːz/; days = /dæiz/), some youngsters, during the latter period of the attrition of this phonological split in the city, were found to be using /eː/ in *both* lexical sets. Similarly Vivian, in the still quite consistently rhotic town of Accrington in Lancashire, found young people using hyperdialectal /r/ in words such as "sauce" and "lager" (Vivian 2000).

It should be remembered that the diffusion of innovations leads to contact between dialects. In contact situations, linguistic accommodation is the norm, and since accommodation among adults is less than perfect, and is driven by a whole host of social psychological factors, it may not be complete or accurate, often deliberately so (Trudgill 1986, Giles and Coupland 1991). Where an innovation comes into contact with a traditional local form, therefore, a number of potential outcomes emerge: adoption of the innovation; the emergence of interdialect forms between the local form and the innovation; the rejection of the innovation, including the use of hyperdialectisms. In each case, there will be local outcomes determined by local circumstances, including the structure of the local varieties under attack, and the socio-spatial structures of the community vis-à-vis that of the innovation. The supposed rampant advance of Estuary English is a case in point – some of its features seem to be eradicating traditional forms (leveling), others are "renegotiated" during the koineization process at a local level (interdialectalization) (see Trudgill and Britain, forthcoming; Kerswill chapter 26 of this volume; Britain, forthcoming), others are rejected, reacted against, or at least slowed down, by local social, spatial, linguistic, attitudinal, and other factors.

5 Whose Geographies? Mapping Children and Gender

Maps are superb visual devices. An instant picture of the spread of an innovation is possible, and comparisons can be drawn with earlier periods (particularly using the apparent-time model). But whose maps should we be drawing? When we discuss the interactions between spatiality and linguistic structure, as in the diffusion of innovations, for example, whose geographies should we write to help us understand the patterns we find? Perhaps, given recent advances (Eckert 2000), we should be looking at the geographies of *adolescents* as keenly as we do the geographies of other age groups. Very often our explanations of the spread of change rely on the ease of mobility, social structures, networks, gender and ethnic relations, and so forth of the (often middle-class) adult population, rather than the differently constrained spatialities of the young among whom innovations are generated, socialized, and diffused. Commenting on the tendency of variationism to choose *adult* variables and then study their use in children, Eckert comments that: "one might want to begin a . . . study of variation with a focus on children's linguistic resources, social identities and strategies, asking how these patterns are transformed into adult strategies" (2000: 11); "the focus on adult social practice in the study of variation may well obscure age-specific use and interpretation among children" (2000: 10). The spatiality constraints discussed above (mountains and marshes . . .) need to be comprehended as much as possible from the viewpoints of adolescents.

The existence of a motorway from A to B may help relatively little in the diffusion of a change if the diffusers cannot drive. Hence, what for adults may be highly accelerating or restricting constraints, are necessarily differently experienced by adolescents and the young. (And the adult constraints need to be understood alongside contexts of the poorer accommodative ability discussed above.) This issue was faced by Trudgill (1986: 53–7) when trying to explain how the form most rapidly spreading from London to Norwich was found most precisely in the group that had least contact with Londoners – children. His explanation relied both on attitudinal factors, and on an understanding of the geographies of members of local peer groups. In the Fens, potential contact with linguistic innovation often took place in the clubs, skating rinks and other leisure facilities offered by the New Town of Peterborough, a city with many migrants from London (and elsewhere). This contact was restricted not just by the distance, and by poor transport facilities, but also by reactions by parents and local authorities, and the adolescents of Peterborough themselves: "They don't wanna talk to us anyway – they call us 'carrot crunchers'," one youngster from the Fenland town of March reported.

Research on dialect leveling and dialect supralocalization (Milroy et al. 1994, Watt and Milroy 1999, Milroy 1999, Watt, forthcoming) has also hinted, though rather indirectly, that there may be a role for an analysis of the geographies of gender in the diffusion of supra-local forms. Their research, largely looking at the abandonment of traditional local forms of Newcastle English in favor of more regionally widespread (but nevertheless non-standard) forms, such as the shift from glottalized [t?] to glottalled [?], has found without exception that it is women who lead the change to the supra-local forms. An understanding of women's and men's (and boys' and girls') geographies could help account for such findings, which, Milroy claims (1999), is not just restricted to the northeast of England.

The aim of this section has not been to criticize or undermine much of the tremendous work which has been carried out in traditional dialectology, dialectological cartography, or variationist sociolinguistics. As much as anything, it has shown that, perhaps without really being aware of it, the work produced was symptomatic of its time, and of the changing philosophical underpinnings of human geography itself. What is clear, I hope, is a recognition that space is important, that space matters in variationist research. But space is not (just) about maps and the archiving of data analyses, not about space as a causal effect, not about "settling for a position at the end of the transmission belt of sociolinguistics, dutifully mapping the outcomes of processes which it is the role of sociolinguists to study" to alter Massey's phrasing somewhat. It is about the role of physical, social, and perceptual space in "time-deep clusters of network biographies," places. The examples given above of what a geographically informed variationism might look like and may need to address come from the existing literature, rather than provide a map of the way forward. Much more interdisciplinary research is needed at the local level of face-to-face interaction (see, for examples, the social geographies of the Jocks and Burnouts in

Eckert 2000: ch 2), and of language use in what Giddens called "locales", as well as at the regional level of innovation diffusion.

6 The Spatial Reflection of Linguistic Performance

Having discussed the evolution of geolinguistic practice, this concluding section charts some of the findings of research on the geographical distribution of linguistic forms. It begins with a mention of cartography, followed by an exemplified discussion of the two most studied geolinguistic phenomena – patterns of spatial diffusion, and linguistic boundaries.

6.1 Dialect cartography

As mentioned above, the display of dialectological data on maps has both a long painstakingly detailed historical past and a recent, more technologically driven present. Chambers and Trudgill indeed talk of a renaissance in dialect geography in the late twentieth century (1998: 19), following a lull after the demise of traditional dialectology during which time "dialect geography all but disappeared as an international discipline" (1998: 20; see discussion above). They put this down first to technology (see also Kretzschmar and Schneider 1996): the ability to readily create and display, on computer, large numbers of maps containing complex data sets for many linguistic variables, and make them readily available both in publication and on interactive websites, such as that maintained by Bill Kretzschmar at the University of Georgia, and the *Atlas of North American English* (Labov et al. 2001). Dialect atlases were huge, often cartographically dull, and expensive; the newer work is more interactive, freely available at the end of an ethernet connection and visually more appealing. The second reason for the revival is, ironically, the reason for the obsolescence of traditional dialectology in the first place: the advent of variationist method in the 1960s. The new cartographic dialectology has begun to sensitize itself to questions of inter-speaker variability, to change across the generations, to the social embedding of variation, and so forth – the very factors which saw dialect geography wither in the mid-twentieth century.

We now have a variationist dialect geography. It is also noteworthy that in many cases the data that are being described using the new techniques are the very same data collected half a century previously: large-scale national survey corpora (see, for example, Kretzschmar and Schneider 1996, Upton and Widdowson 1996), rather than freshly collected data sets, which supports the claim by Trudgill (1983: 31–51) that traditional dialectological data are useful if handled with care. The whole range of levels of variation have been mapped: lexical, most predominantly, but also phonological, morphological, and gram-

matical. The example below is interesting in that, unlike the mostly lexically and phonologically oriented cartographic work in the field, it deals with the grammatical constraints on syntactic variation and change. It is based on Heap's (1999) analysis of pro-drop variation in the Romance varieties of central France, southern Switzerland and northern Italy. Figures 24.2a, 24.2b and 24.2c show, respectively, the areas with 100 percent, 80–99 percent or 0–20 percent

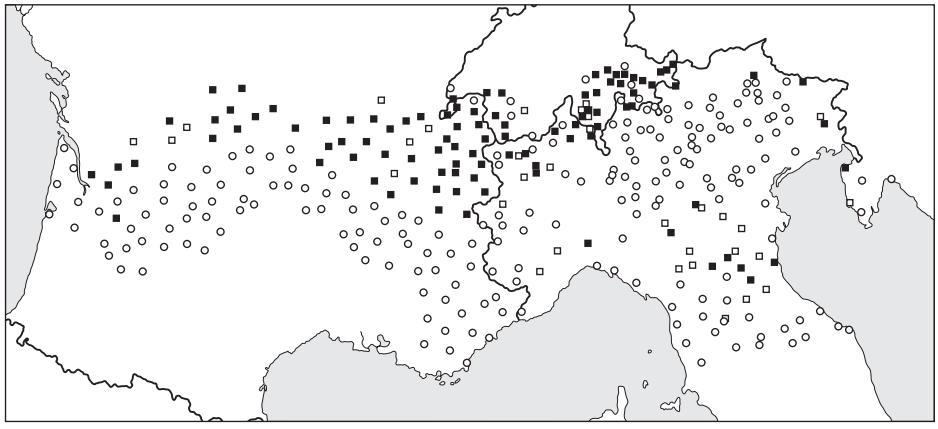

Figure 24.2a Pronoun presence in first person contexts in central France, southern Switzerland, and northern Italy (filled squares = categorical presence; empty squares = 80–100% presence; circles = 0–20% presence)

Source: Heap (1999: 93)

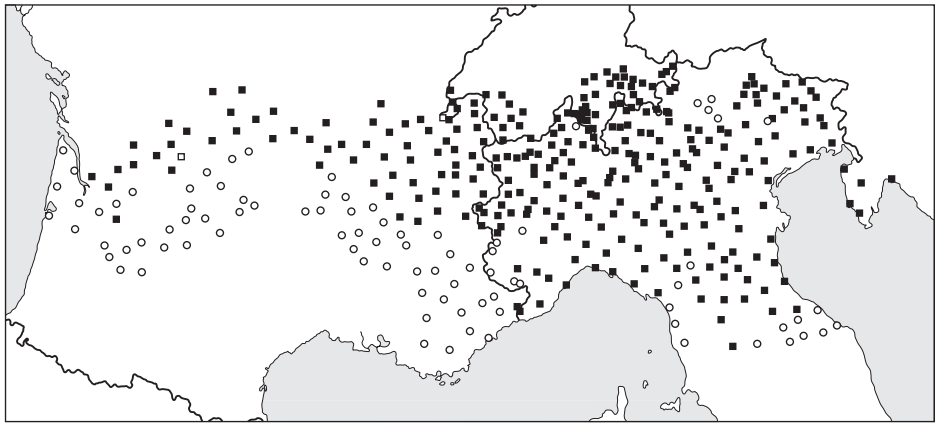

Figure 24.2b Pronoun presence in second person contexts in central France, southern Switzerland, and northern Italy (filled squares = categorical presence; empty squares = 80–100% presence; circles = 0–20% presence)

Source: Heap (1999: 95)

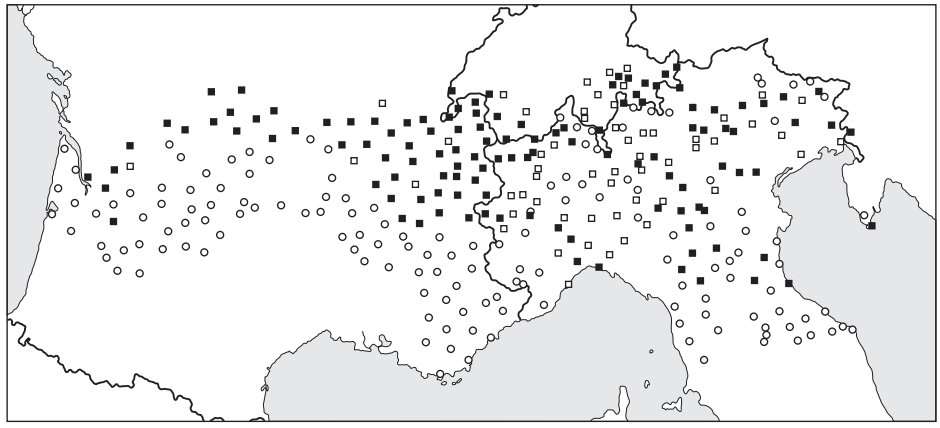

Figure 24.2c Pronoun presence in third person contexts in central France, southern Switzerland, and northern Italy (filled squares = categorical presence; empty squares = 80–100% presence; circles = 0–20% presence)
Source: Heap (1999: 97)

pro-retention in 1st, 2nd, and 3rd persons respectively, as found in Gilliéron and Edmont's (1902–10) *Atlas Linguistique de la France*, and Jaberg and Jud's (1928–40) *Sprach- und Sachatlas Italiens und der Südschweiz*. Figure 24.2a shows a relatively small area of consistent pro-retention across central France, the far northwest of Italy and southeast Swizerland, whereas figure 24.2b shows that all of southern Switzerland, most of northern Italy and a good part of central France retain the pronoun in second person contexts. Interestingly, here, there are very few speakers between 20 percent and 100 percent pro-retention. Figure 24.2c, for 3rd person contexts shows a pattern mid-way between figures 24.2a and 24.2b – a greater distribution of locations with a high frequency of pro-retention than in 1st person, but less categorically than for 2nd person.

6.2 Spatial diffusion

The diffusion of innovations across space is sometimes divided into two types*: relocation diffusion*, where the innovations are carried by individuals or groups migrating to new locations (see Trudgill 1986, Chambers 1992, Britain, forthcoming, Kerswill, this volume) and *expansion diffusion* where the innovations are passed on through day-to-day contact between those who have acquired the innovation and those who have not (see Gerritsen 1987 for a discussion of the contrast). There appears to me at least to be no serious reason why this division is made. As discussed above, expansion diffusion involves contact and accommodation in the same way as the more extreme examples of the "collision," following relocation, of radically distinct dialects, outlined, for

example, in Trudgill (1986) and Siegel (1987), and it is often the case in less extreme situations that it is difficult to tease apart expansion effects from relocation effects (see, for example, Kingston, forthcoming; Bailey et al. 1993). But a division is made in the literature. Expansion diffusion will be exemplified below, and relocation diffusion by Paul Kerswill later in this volume.

The earliest suggested model of the spatial diffusion of innovation, and the simplest since it relies solely on the friction of distance, is the "wave model" (sometimes referred to as "contagion diffusion" – Bailey et al. 1993), whereby innovations, over time, radiate out from a central focal area, reaching physically nearby locations before those at ever greater distances. Relatively few examples of such diffusion have been found in the literature, however, perhaps reflecting its status as an iconic representation of diffusion – with diagrams ressembling the ripples created by raindrops falling in a puddle of water – rather than one representing some empirically discovered pattern. Bailey et al. (1993: 379–80), however, do suggest that contagion diffusion is at work in the spread of lax nuclei of /i/ in "field" across Oklahoma. Trudgill's (1986: 51–3) discussion of the diffusion of changes from London to East Anglia suggests also that the slow, unsalient, and phonetically gradual diffusion of fronter realizations of /ʌ/ (so "cup" [kɐp–kap] is spreading in a wave-like way.

A more common finding is a hierarchical effect, with innovations descending down an urban hierarchy of large city to city, to large town, to town, village and country. Bailey et al. (1993: 368–72) convincingly demonstrate this hierarchy in action in their investigations of the diffusion of the unrounding of /ɔ/ to [ɑ] (in words such as "hawk") in Oklahoma. Before 1945, the unrounding was found predominantly only in the urban centres of Tulsa, Oklahoma City, and Enid (see figure 24.3a below). Among respondents born after 1945 (figure 24.3b) the change has spread rapidly, and has been resisted "only in four sparsely populated areas . . . each of the conservative areas is far removed from metropolitan centres, and all but one lie some distance from major interstate highways. The infrequency of innovative forms in these areas points to the major path of diffusion for this feature" (Bailey et al. 1993: 370).

Hierarchical effects have also been found: by Trudgill investigating the diffusion both of /æ/ lowering (Trudgill 1983: 66–72) and [sj] to [ʂ] (Chambers and Trudgill 1998: 178) in Brunlanes peninsular in southern Norway; and the diffusion of /h/-dropping in East Anglia (Trudgill 1983: 76–8); in Callary's (1975) study of the raising and diphthongization of /æ/ in northern Illinois; by Gerritsen and Jansen (1980) investigating the spread of open monophthongised variants of /ɛi/ in the Netherlands; by Hernández Campoy (2000a, 2000b) studying the standardization of Spanish in the region of Murcia, in addition to my own findings that /l/ vocalization had arrived in the Fens following an urban hierarchical path (see Radford et al. 1999: 82). The usual explanation for this finding is that whilst distance plays some role, interaction between urban centers in modern societies is likely to be greater, and therefore a more frequent and effective conduit for accommodation and transmission of innovations, than between urban and rural. Transportation networks tend to

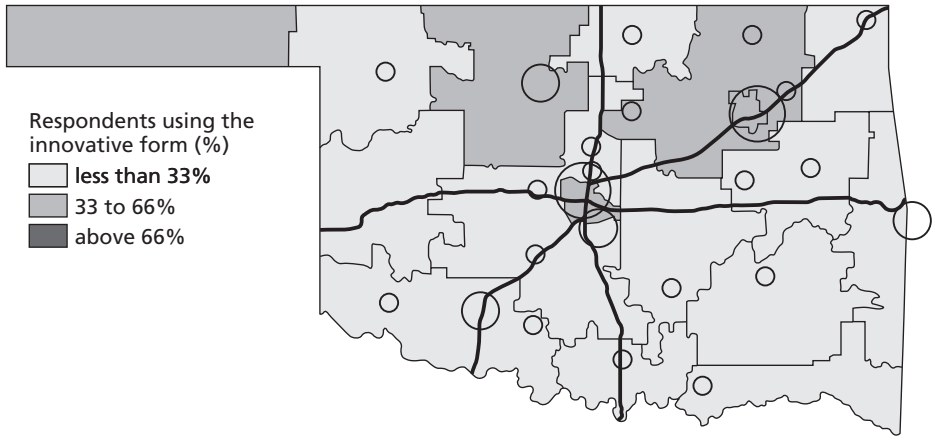

Figure 24.3a The geographical distribution of /ɑ/ in *hawk* among respondents born in or before 1945

Source: Bailey et al. (1993: 369)

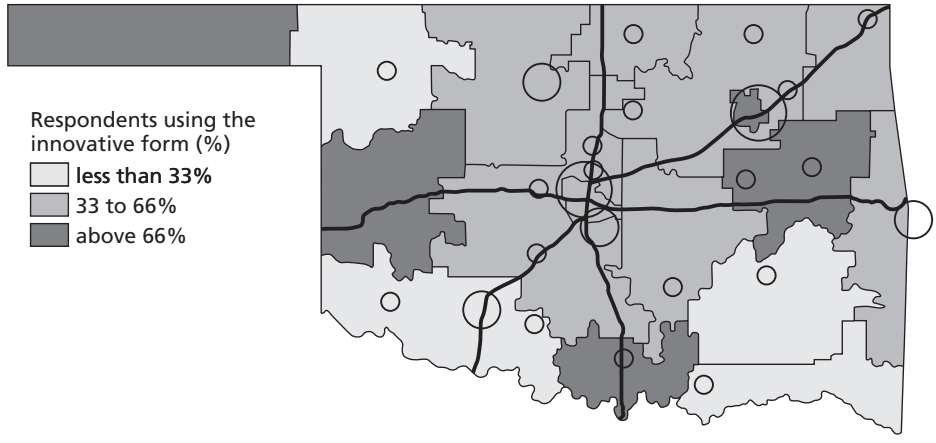

Figure 24.3b The geographical distribution of /ɑ/ in *hawk* among respondents born in or after 1946

Source: Bailey et al. (1993: 369)

link urban with urban, the socioeconomic and consumer infrastructure tends to be based in and oriented towards urban centers, with the ensuing consequences for employment and commuting patterns, and these obviously feed the hierarchical nature of diffusion.

In some of the earliest work in sociolinguistic dialect geography, Trudgill (1974b) adopted from the human geography of the time *gravity models* which suggested both that a combination of distance and population interacted in the

likely influence two places would have on each other, and that they could be used to predict the routes of change an innovation may take. (The standard calculation of the interaction of places A and B involves multiplying the populations of the two places, and then dividing that total by the square of the distance between the two places.) Many of the urban hierarchy studies listed above (Trudgill's both in Norway and England, Callary, and Hernández Campoy) adopted this technique in their own research. Hernández Campoy's discussions (1999, 2000a, 2000b) of the urban hierarchical flow of standardization in southeastern Spain provide a very detailed outline both of the theory and methodology of gravity models. He shows how, in the region of Murcia, the local deletion of intervocalic /d/ (especially in past participles "–ado", e.g. "terminado" "finished") is being eroded by standardization. Using an adaptation of the gravity model formula, he calculates an "interaction potential index" (IPI) and shows how the use of the standard form of (d) in past participles has diffused hierarchically through the region, first to places with high IPIs, trickling down to smaller urban centers with lower scores (see figure 24.4 and table 24.1 below).

The model predicts that the larger urban centers of Murcia City and Cartagena, with higher IPIs should receive the innovation most vigorously, and smaller centres such as Yecla and Caravaca less so. The predictions are borne out by the variation analysis of (d).

Horvath and Horvath (1997) show, in research on the vocalization of /l/ in Australian English, that perhaps a combination of contagion and hierarchy can help explain some changes. Quite unexpectedly, they found that vocalization was at its greatest not in the first order cities of Sydney and Melbourne, but in "the most slowly growing parts of the older core" (1997: 120) of the country, the South Australian centers of Adelaide and Mount Gambier. They propose a "cultural hearth model" whereby the feature gains a foothold in both town and country in one particular region before diffusing to other regions. In later work (Horvath and Horvath 2000), and adding investigations of New Zealand cities into the equation, they make important inroads into the

Table 24.1 The interaction potential indices and use of standard [d] realizations of intervocalic (d) in five urban centers of the Region of Murcia, Spain

Urban center	Interaction Potential Index	% use of standard [-d-]
Murcia City	28.35	41
Cartagena	5.67	32
Lorca	1.39	14
Caravaca	0.76	5
Yecla	0.23	4

Source: Hernández Campoy (2000a, 2000b)

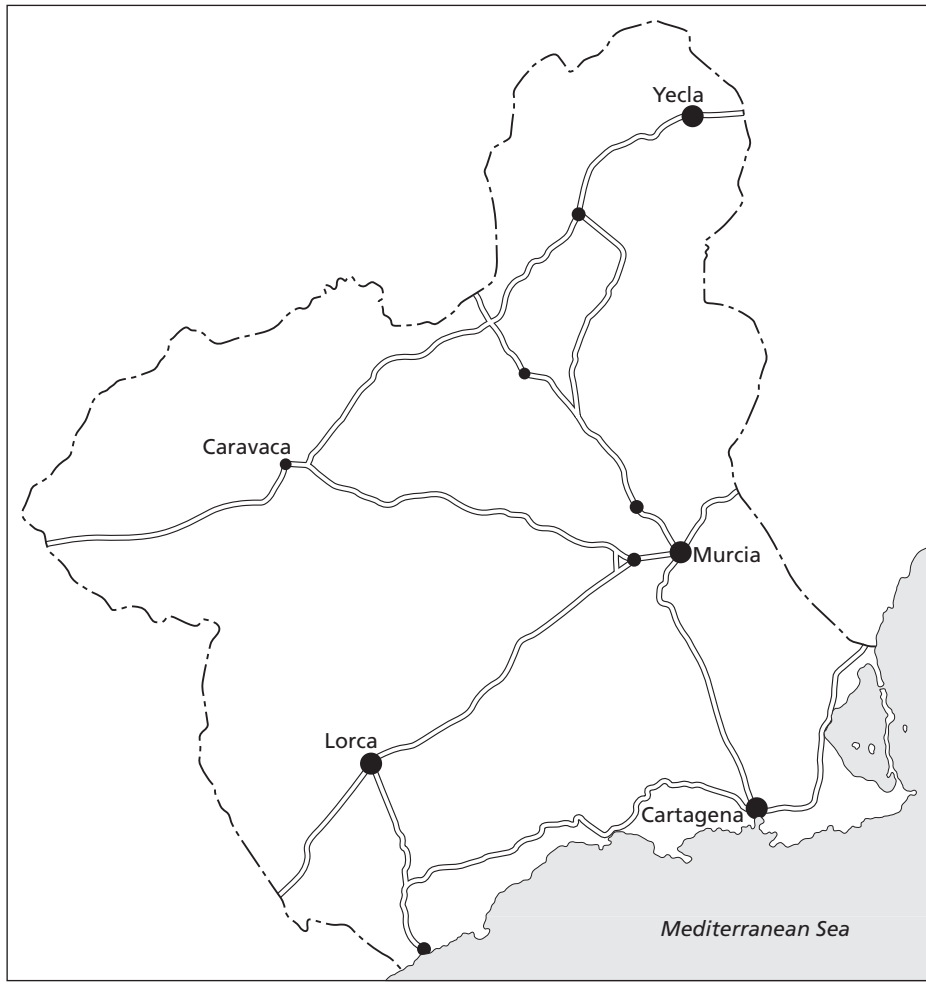

Figure 24.4 The region of Murcia in southeastern Spain, showing the main urban centers

cartography of diffusion, by using Varbrul analyses to visually display statistically significant *interactions* between place and social and linguistic constraints.

Sometimes, and possibly for reasons of identity-marking and the rejection of incoming forms and the values they represent, innovations diffuse against the urban hierarchy. Bailey et al. (1993: 371–3), who found a case in point with the diffusion of the quasi-modal "fixing to" in Oklahoma from rural to urban, label these cases *contrahierarchical* diffusion (1993: 374). Another, rarely cited example comes from Trudgill's (1986) East Anglian research. He found that a number of smoothing processes found in rural north Norfolk were

Figure 24.5 The contrahierarchical diffusion of smoothing in East Anglia
Source: Trudgill (1986: 50)

diffusing southwards to urban centres in the county of Suffolk. These processes include:

Tower	/tɑuə/ → /tɑː/
Fire	/fɑiə/ → /fɑː/
Do it	/dʉːəʔ/ → /dɜːʔ/
Player	/plæiə/ → /plæː/
Pure	/pʉːə/ → /pɜː/, etc.

The southward progress of this smoothing can be seen in figure 24.5.

7 Boundaries

Paradoxically, linguistic boundaries can be signs either of contact and change – the "beachheads" (Chambers and Trudgill 1998: 112) of diffusing innovations – or of relative isolation and conservatism – the mountain barrier, the break in

Figure 24.6a Two major isoglosses of England, marking the southern limit both of [ʊ] in *some* (solid line) and [a] in *chaff* [dotted line]

Source: Chambers and Trudgill (1998: 107)

interaction networks. The concentration on regions and focal areas in traditional dialectology (and, as we saw earlier in human geography generally) led to the need to describe and explain the boundaries between regions. These *isoglosses* were usually portrayed as abrupt, discrete, and invariable. Form *x* was used consistently on one side and form *y* on the other. Chambers and Trudgill's (1980) discussion and reanalysis of two of the most widely cited isoglosses in the English dialect literature – the ʊ/ʌ (in the STRUT lexical set) and a/ɑː (in the BATH set) divisions between the northern and southern dialects of England – provided a damning critique of this key concept of traditional dialectology. These isoglosses, shown in figure 24.6a, came from publications based on

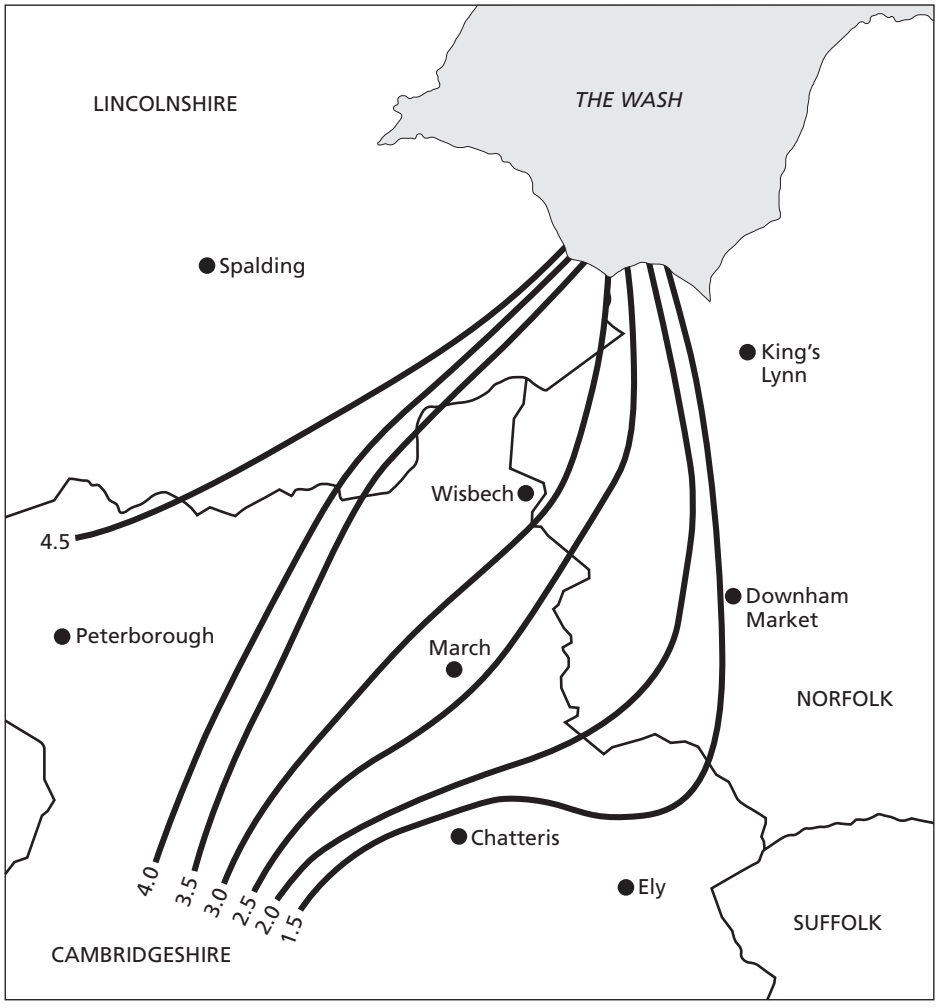

Figure 24.6b The ʊ/ʌ transition zone in the Fens: speakers aged 15–30 (index score 5 = [ʊ], 4 = [ʊ̟], 3 = [ɤ], 2 = [ʌ̟], 1 = [ʌ])

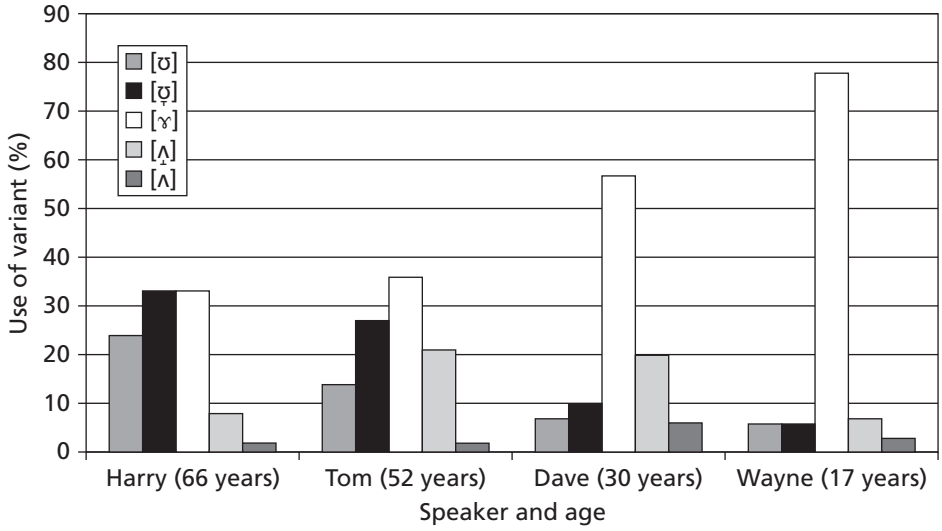

Figure 24.6c The use of /ʌ/ by four central Fenland speakers from Wisbech

the Survey of English Dialects (e.g. Wakelin 1972). Chambers and Trudgill reanalyzed the very same data (this time from the SED's Basic Materials (Orton and Tilling 1969–71)) and found that these isoglosses were in fact *transition zones*, broad areas of linguistic variability dividing regions of categoricity. My own variationist analyses of part of this transition zone (Britain 1991, 1997b, 2000), based on informal conversational data, showed an area of variability in which a wide range of interdialectal forms [ʊ̟–ɤ–ʌ̟] were found between the northern and western [ʊ] and southern and eastern [ʌ] extremes. Whilst the overall index scores for the region showed a more or less gentle progression from northwest to southeast (figure 24.6b), an analysis of the lects of individual speakers, as Chambers and Trudgill had conducted on the SED data, was very revealing: within the transition zone, there was considerable evidence of a gradual focusing on an interdialectal [ɤ] form, indicative perhaps of a stabilization or fossilization of the transition. Figure 24.6c shows the range of variants used by four male speakers from the central Fenland town of Wisbech.

Chambers and Trudgill (1998: 113–18) also found variability in the SED data in the transition from /a/ to /ɑː/ in the same location. My analyses of conversational data (Britain 2000), however, unearthed a rather different pattern, one quite unlike the ʊ/ʌ variability, and one which perhaps begs us to forgive the isogloss somewhat. Figures 24.7a and 24.7b show the regional distribution of short [a] and long [aː] forms in the *bath* lexical set in the Fens for older and younger speakers respectively. Both maps show that those speakers who

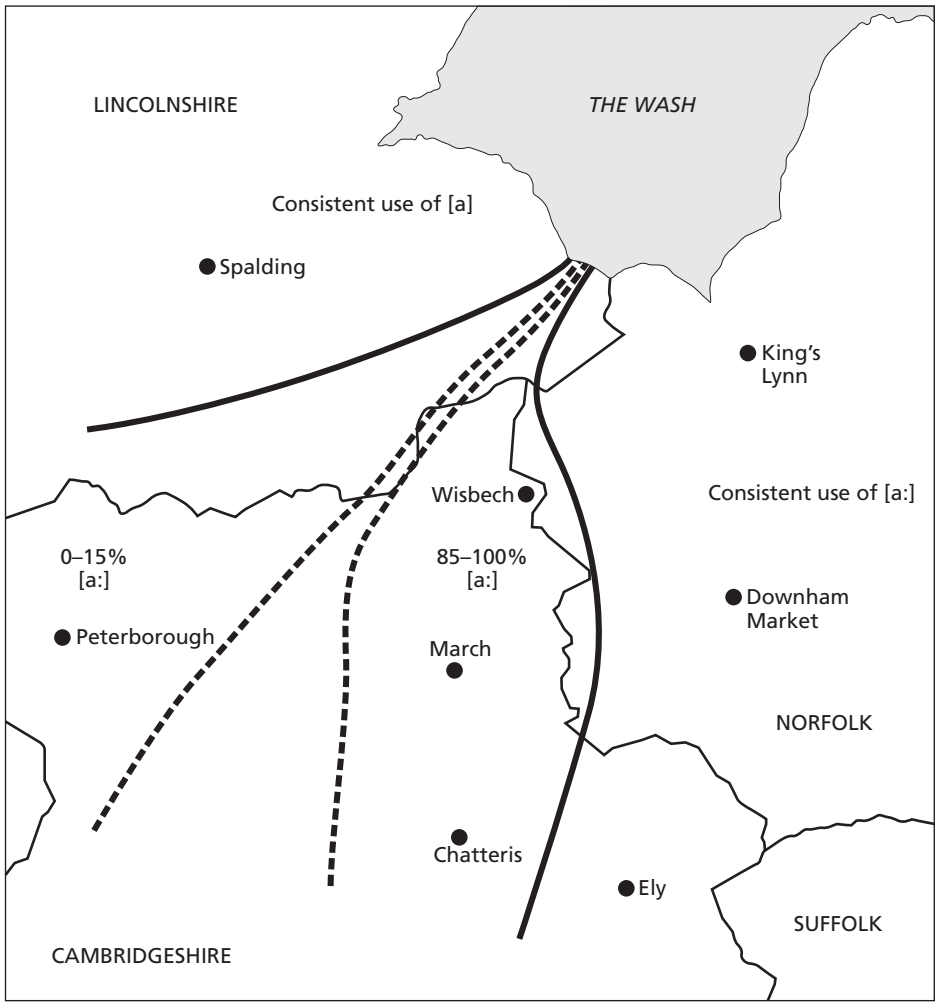

Figure 24.7a The a/a: transition zone in the Fens: speakers aged 45–65

are variable have nevertheless a very dominant tendency indeed to prefer one or other of the variants. The area between the zones of near-categoricity on either side is very sparsely populated, and marks a socioeconomic functional zone boundary between the west and the central Fens. Two older speakers living in that area, however, demonstrated robust variability. Among the young, the area between near-categorical zones on either side was narrower, and the near-categorical speakers on each side were more categorical than the older generations – an emerging *isoglossization* of a former transition, perhaps?

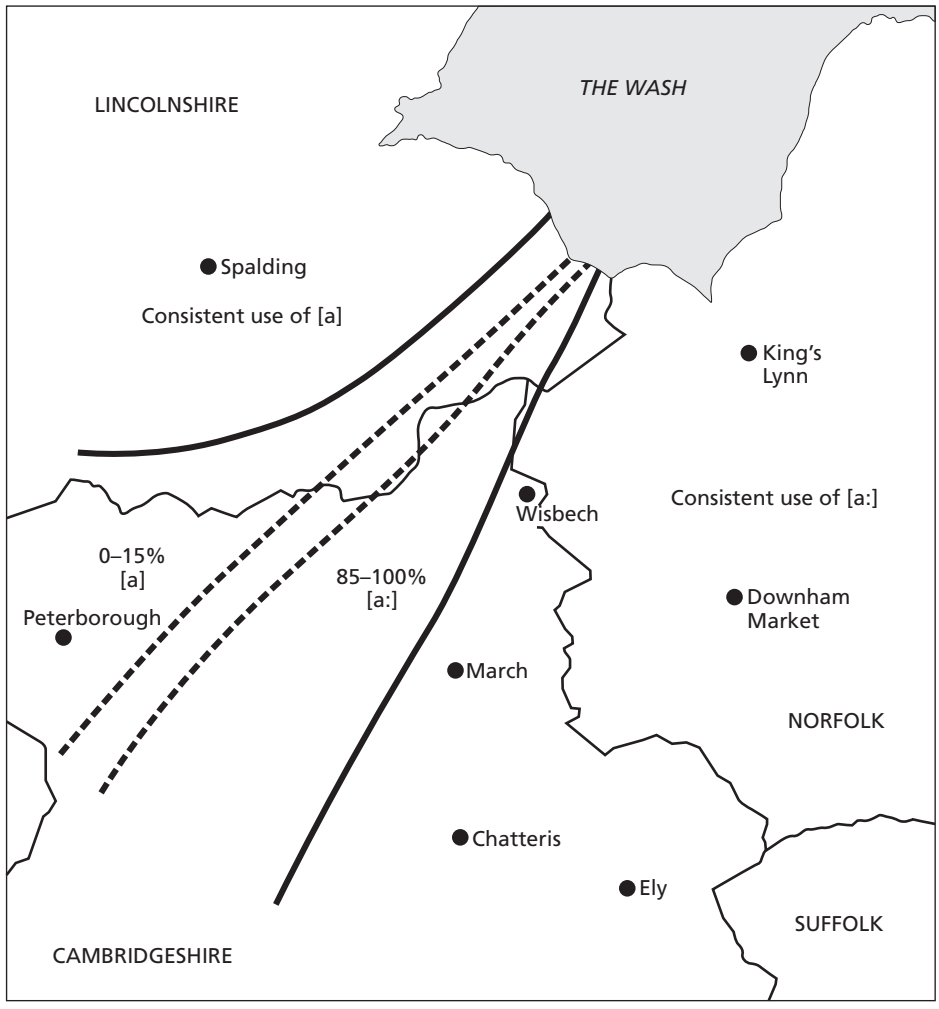

Figure 24.7b The a/a: transition zone in the Fens: speakers aged 15–30

8 Space as an Independent Variable

The chapter has attempted to put geolinguistic practice into context and to highlight some of its principal findings. Possibly not surprisingly, the sub-discipline has evolved along similar paths to human geography itself, but the direct interaction between the two has been extremely limited (Trudgill 1974b, Britain 1991, Hernández Campoy 1999). It was suggested here that rather than abandoning space altogether as a variable, or fetishising it, endowing it with

causal powers in its own right, sociolinguistics should take account of the role space in its physical, social, and attitudinal guises *contingently* plays in the construction, maintenance, and change of speech communities of practice. We must find a place for space if we are to fully understand the geographical differentiation of language.

Advances in mapping technology have revolutionized access to and dissemination of dialectological survey work, and have contributed, along with the vigor of the variationist enterprise, to a resurgence of interest in dialect geography. The spatial distribution of variability that maps portray enable us to examine with more sophistication the diffusion of linguistic innovations and the transitional zones this diffusion creates. But maps display, they do not explain. Closer attention to the spatiality of interaction, however, may lead us nearer to that explanatory goal.

REFERENCES

Al-Dashti, A. (1998). Language choice in the State of Kuwait: a sociolinguistic investigation. Ph.D. dissertation, Essex University, Colchester.

Amastae, J. and D. Satcher (1993). Linguistic assimilation in two variables. *Language Variation and Change* 5: 77–90.

Bailey, G., T. Wikle, J. Tillery and L. Sand (1993). Some patterns of linguistic diffusion. *Language Variation and Change* 5: 359–90.

Bartoli, M. (1945). *Saggi di linguistica spaziale*. Turin: Bona.

Bell, A. (1984). Language style as audience design. *Language in Society* 13: 145–204.

Bonfante, G. (1947). The neolinguistic position. *Language* 23: 344–75.

Britain, D. (1991). Dialect and space: a geolinguistic study of speech variables in the Fens. Ph.D. dissertation, Essex University, Colchester.

Britain, D. (1997a). Dialect contact and phonological reallocation: "Canadian Raising" in the English Fens. *Language in Society* 26: 15–46.

Britain, D. (1997b). Dialect contact, focusing and phonological rule complexity: the koineisation of Fenland English. In C. Boberg, M. Meyerhoff and S. Strassel (eds.), *A Selection of Papers from NWAVE 25. Special issue of University of Pennsylvania Working Papers in Linguistics* 4: 141–70.

Britain, D. (1998). Accounting for the growing diversity of North American English dialects: a reply. Response paper presented at the Nijmegen Lecture Series "William Labov: Linguistic Change: Some Solved & Unsolved Problems," Max Planck Institute, Nijmegen, Netherlands, December 14–16.

Britain, D. (1999). Local and supra-local dialect contact: the "estuaryisation" of the Fens? Paper presented at the Research Seminar Series, Department of Linguistic Science, University of Reading.

Britain, D. (2000). Welcome to East Anglia! two major dialect "boundaries" in the Fens. In J. Fisiak and P. Trudgill (eds.), *East Anglian English*. Woodbridge: Boydell and Brewer. 217–42.

Britain, D. (forthcoming). Geolinguistics and linguistic diffusion. In U. Ammon, N. Dittmar, K. Mattheier and P. Trudgill (eds.), *Sociolinguistics: International Handbook of the Science of Language and Society*, 2nd edn. Berlin: Mouton De Gruyter.

Britain, D. (in preparation). Space: the final frontier? the application of human geographic theory to language variation and change. Manuscript.

Callary, R. (1975). Phonological change and the development of an urban dialect in Illinois. *Language in Society* 4: 155–70.

Carlstein, T. (1981). *Time Resources, Society and Ecology: On the Capacity for Human Interaction in Time and Space*. London: Arnold.

Chambers, J. (1992). Dialect acquisition. *Language* 68: 673–705.

Chambers, J. and P. Trudgill (1980). *Dialectology*. Cambridge: Cambridge University Press.

Chambers, J. and P. Trudgill (1998). *Dialectology*, 2nd edn. Cambridge: Cambridge University Press.

Cloke, P. (1999). The country. In P. Cloke, P. Crang and M. Goodwin (eds.), *Introducing Human Geographies*. London: Arnold. 256–67.

Cloke, P. and J. Little (1997). *Contested Countryside Cultures*. London: Routledge.

Cochrane, A. (1987). What a difference the place makes: the new structuralism of locality. *Antipode* 19: 354–63.

Curry, M. (1996). On space and spatial practice in contemporary geography. In C. Earle, K. Mathewson and M. Kenzer (eds.), *Concepts in Human Geography*. Lanham: Rowman & Littlefield. 3–32.

Darby, H. (1931). The role of the Fenland in English history. Ph.D. dissertation, St Catherine's College, Cambridge University, Cambridge.

Duncan, S. (1989). Uneven development and the difference that space makes. *Geoforum* 20: 131–9.

Eckert, P. (1997). Age as a sociolinguistic variable. In F. Coulmas (ed.), *The Handbook of Sociolinguistics*. Oxford: Blackwell. 151–67.

Eckert, P. (2000). *Linguistic Variation as Social Practice*. Oxford: Blackwell.

Eckert, P. and S. McConnell-Ginet (1992). Think practically and look locally: language and gender as community-based practice. *Annual Review of Anthropology* 21: 461–90.

Foucault, M. (1980). Questions on geography. In C. Gordon (ed.), *Power/Knowledge: Selected Interviews and other Writings, 1972–77*. New York: Pantheon. 63–77.

Foulkes, P. and G. Docherty (1999). *Urban Voices*. London: Arnold.

Foulkes, P. and G. Docherty (2000). Another chapter in the story of /r/: "labiodental" variants in British English. *Journal of Sociolinguistics* 4: 30–59.

Gerritsen, M. (1987). Sociolinguistic developments as a diffusion process. In U. Ammon, N. Dittmar and K. Mattheier (eds.), *Sociolinguistics: An International Handbook of the Science of Language and Society*. Berlin: De Gruyter. 1574–91.

Gerritsen, M. and F. Jansen (1980). The interplay of dialectology and historical linguistics: some refinements of Trudgill's formula. In P. Maher (ed.), *Proceedings of the Third International Congress of Historical Linguistics*. Amsterdam: Benjamins. 11–38.

Giddens, A. (1984). *The Constitution of Society: Outline of the Theory of Structuration*. Cambridge: Polity Press.

Giles, H. and N. Coupland (1991). *Language: Contexts and Consequences*.

Milton Keynes: Open University Press.
Gilliéron, J. and E. Edmont (1902–1910). *Atlas linguistique de la France*. Paris: Champion.
Gregory, D. (1985). Suspended animation: the stasis of diffusion theory. In D. Gregory and J. Urry (eds.), *Social Relations and Spatial Structures*. 296–336.
Gregory, D. (1989). Presences and absences: time-space relations and structuration theory. In D. Held and J. Thompson (eds.), *The Social Theory of Modern Societies: Anthony Giddens and his Critics*. Cambridge: Cambridge University Press. 185–214.
Hägerstrand, T. (1952). *The Propagation of Innovation Waves*. Lund: Gleerup.
Heap, D. (1999). *La variation grammaticale en geolinguistique*. Munich: Lincom Europa.
Hernández Campoy, J. (1999). *Geolingüística: modelos de interpretación geográfica para lingüistas*. Murcia: Universidad de Murcia.
Hernández Campoy, J. (2000a). Requisitos teórico-metodológicos para el estudio geolingüístico del dialecto murciano. In J. M. Jiménez Cano (ed.), *Estudios sociolingüísticos del dialecto Murciano*. Murcia: Universidad de Murcia.
Hernández Campoy, J. (2000b). Geolinguistic patterns of diffusion in a Spanish region: the case of the dialect of Murcia. MS.
Holmes, J. and M. Meyerhoff (1999). The community of practice: theories and methodologies in language and gender research. *Language in Society* 28: 173–83.
Horvath, B. and R. Horvath (1997). The geolinguistics of a sound change in progress: /l/ vocalisation in Australia. In C. Boberg, M. Meyerhoff and S. Strassel (eds.), *A Selection of Papers from NWAVE 25. Special Issue of University of Pennsylvania Working Papers in Linguistics* 4: 109–124.
Horvath, B. and R. Horvath (2000). A multilocality study of a sound change in progress: the case of /l/ vocalisation in New Zealand and Australian English. MS.
Jaberg, K. and J. Jud (1928–40). *Sprach- und Sachatlas Italiens und der Südschweiz*. Zofingen: Ringier.
Johnson, D. (1990). Security versus autonomy motivation in Anthony Giddens' concept of agency. *Journal for the Theory of Social Behaviour* 20: 111–30.
Johnston, R. (1991). *A Question of Place: Exploring the Practice of Human Geography*. Oxford: Blackwell.
Kerswill, P. and A. Williams (2000). Creating a new town koine: children and language change in Milton Keynes. *Language in Society* 29: 65–115.
Kingston, M. (forthcoming). Geolinguistic diffusion and rural dialect attrition: Is London taking over? Ph.D. dissertation, Essex University, Colchester.
Kretzschmar, W. and E. Schneider, (1996). *Introduction to Quantitative Analysis of Linguistic Survey Data: An Atlas by the Numbers*. London: Sage.
Labov, W. (1963). The social motivation of a sound change. *Word* 19: 273–309.
Labov, W. (1966). *The Social Stratification of English in New York City*. Washington, DC: Center for Applied Linguistics.
Labov, W. (1972). *Sociolinguistic Patterns*. Oxford: Blackwell.
Labov, W. (1982). Building on empirical foundations. In W. Lehmann and Y. Malkiel (eds.), *Perspectives in Historical Linguistics*. Amsterdam: John Benjamins. 79–92.

Labov, W., S. Ash and C. Boberg (2001). *Atlas of North American English*. Berlin: Mouton de Gruyter.

Larmouth, D. (1981). Gravity models, wave theory and low-structure regions. In H. Warkentyne (ed.), *Methods IV: Papers from the 4th International Conference on Methods in Dialectology*. Victoria: University of Victoria. 199–219.

Le Page, R. and A. Tabouret-Keller (1985). *Acts of Identity: Creole-based Approaches to Language and Ethnicity*. Cambridge: Cambridge University Press.

Llamas, C. (1998). Language variation and innovation in Middlesbrough. *Leeds Working Papers in Linguistics and Phonetics* 6: 98–115.

Macnaghten, P. and J. Urry (1998). *Contested Natures*. London: Sage.

Massey, D. (1984). Introduction: Geography matters. In D. Massey and J. Allen (eds.), *Geography Matters!* Cambridge: Cambridge University Press. 1–11.

Massey, D. (1985). New directions in space. In D. Gregory and J. Urry (eds.), *Social Relations and Spatial Structures*. London: Macmillan. 9–19.

Milroy, J. (1992). *Linguistic Variation and Change*. Oxford: Blackwell.

Milroy, J. and L. Milroy (1985). Linguistic change, social network and speaker innovation. *Journal of Linguistics* 21: 339–84.

Milroy, J., L. Milroy and S. Hartley (1994). Local and supra-local change in British English: the case of glottalisation. *English World-Wide* 15: 1–33.

Milroy, L. (1980). *Language and Social Networks*. Oxford: Blackwell.

Milroy, L. (1999). Women as innovators and norm-creators: The sociolinguistics of dialect leveling in a northern English city. In S. Wertheim, A. C. Bailey and M. Corston-Oliver (eds.), *Engendering Communication: Proceedings of the 5th Berkeley Women and Language Conference*. 361–76.

Milroy, L. (ed.) (forthcoming). Contact approaches to language variation and change. Special issue of *Journal of Sociolinguistics* 6(1).

Orton, H. and P. Tilling (eds.) (1969–71). *Survey of English Dialects: The Basic Material*, vol. 3: *The East Midland Counties and East Anglia*. Leeds: Arnold.

Orton, H., S. Sanderson and J. Widdowson (eds.), (1978). *The Linguistic Atlas of England*. London: Croom Helm.

Payne, A. (1980). Factors controlling the acquisition of the Philadelphia dialect by out-of-state children. In W. Labov (ed.), *Locating Language in Time and Space*. New York: Academic Press. 143–78.

Pred, A. (1981). Social reproduction and the time-geography of everyday life. *Geografiska Annaler* 63B: 5–22.

Pred, A. (1985). The social becomes the spatial, the spatial becomes the social: enclosures, social change and the becoming of places in the Swedish province of Skåne. In D. Gregory and J. Urry (eds.), *Social Relations and Spatial Structures*. London: Macmillan. 337–65.

Radford, A., M. Atkinson, D. Britain, H. Clahsen and A. Spencer (1999). *Linguistics: An introduction*. Cambridge: Cambridge University Press.

Rickford, J. (1986). The need for new approaches to social class analysis in linguistics. *Language and Communication* 6, 3: 215–21.

Sankoff, G. and H. Cedergren (1971). Some results of a sociolinguistic study of Montreal French. In R. Darnell (ed.), *Linguistic Diversity in Canadian Society*. Edmonton: Linguistic Research Inc. 61–87.

Sayer, A. (1985). The difference that space makes. In D. Gregory and J. Urry (eds.), *Social Relations and Spatial Structures*. London: Macmillan. 49–66.

Shucksmith, M. (2000). *Exclusive Countryside? Social Inclusion and Regeneration in Rural Britain*. York: Joseph Rowntree Foundation.

Siegel, J. (1987). *Language Contact in a Plantation Environment: A sociolinguistic history of Fiji*. Cambridge: Cambridge University Press.

Simpson, S. and D. Britain (in preparation). Dialect levelling in Telford new town. MS.

Soja, E. (1989). *Postmodern Geographies: The Reassertion of Space in Critical Social Theory*. London: Verso.

Tollfree, L. (1999). South East London English: discrete versus continuous modelling of consonantal reduction. In P. Foulkes and G. Docherty (eds.), *Urban Voices*. London: Arnold. 163–84.

Trudgill, P. (1974a). *The Social Differentiation of English in Norwich*. Cambridge: Cambridge University Press.

Trudgill, P. (1974b). Linguistic change and diffusion: description and explanation in sociolinguistic dialect geography. *Language in Society* 3: 215–46.

Trudgill, P. (1983). *On Dialect: Social and Geographical Perspectives*. Oxford: Blackwell.

Trudgill, P. (1986). *Dialects in Contact*. Oxford: Blackwell.

Trudgill, P. and D. Britain (forthcoming). *Dialects in Contact*, 2nd edn. Oxford: Blackwell.

Trudgill, P., E. Gordon, G. Lewis and M. Maclagan (2000). Determinism in new-dialect formation and the genesis of New Zealand English. *Journal of Linguistics* 36: 299–318.

Upton, C. and J. Widdowson (1996). *An Atlas of English Dialects*. Oxford: Oxford University Press.

Urry, J. (1985). Social relations, space and time. In D. Gregory and J. Urry (eds.), *Social Relations and Spatial Structures*. 20–48.

Vivian, L. (2000). /r/ in Accrington: an analysis of rhoticity and hyperdialectal /r/ in East Lancashire. Undergraduate dissertation, Essex University, Colchester.

Wakelin, M. (1972). *English Dialects: An Introduction*. Edinburgh: Athlone Press.

Watt, D. (forthcoming). "I don't speak Geordie, I speak Northern": contact-induced levelling in two Tyneside vowels. *Journal of Sociolinguistics*.

Watt, D. and L. Milroy (1999). Patterns of variation and change in three Newcastle vowels: is this dialect levelling? In P. Foulkes and G. Docherty (eds.), *Urban Voices*. London: Arnold. 25–46.

Watts, E. (2000). The acquisition of Cheshire English by American immigrants. MA dissertation, Essex University, Colchester.

Weinhold, N. (1985). *Sprachgeographische Distribution und chronologische Schichtung: Untersuchungen zu M. Bartoli und neueren geographischen Theorien*. Hamburg: Helmut Buske Verlag.

White, W. (1865). *Eastern England*. London: Chapman and Hall.

Wolfram, W. (1969). *A Sociolinguistic Description of Detroit Negro Speech*. Washington, DC: Center for Applied Linguistics.

Yapa, L. (1977). The green revolution: a diffusion model. *Annals of the Association of American Geographers* 67: 350–9.