LANGUAGE CHANGE ACROSS SPEECH ISLANDS: 
THE EMERGENCE OF A MIDWESTERN DIALECT OF PENNSYLVANIA GERMAN

DISSERTATION

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By

Steven Hartman Keiser, B.A., M.A.

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2001

Dissertation committee:
Professor Brian D. Joseph, adviser
Professor Donald Winford, adviser
Professor Richard D. Janda
Professor Terence Odlin

Approved by

[Signature]
Adviser
Linguistics Graduate Program

[Signature]
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Linguistics Graduate Program
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ABSTRACT

This dissertation studies the emergence, maintenance, and cultural significance of a Midwestern variety of Deitsch, also known as Pennsylvania German, in geographically isolated Amish communities in the American Midwest. In spite of the apparent lack of contact between them, these speech islands take part in recent linguistic changes which differentiate them from speakers in Pennsylvania. These common developments in relative isolation can be interpreted as a violation of "natural linguistic laws" (Chambers 1995). The aim of this research is to provide an account for the unusual homogeneity of Midwestern Deitsch. In so doing, I consider a question of crucial and ongoing importance in the study of language change: how do external factors (that is, contact with speakers of other dialects and other languages) interact with internal factors (that is, the structure of the language itself) to effect linguistic change?

First, utilizing audiotaped data collected in interviews and conversations with over 140 speakers, the dissertation details the patterns of lexical, phonological, and morphological variation that characterize Midwestern Deitsch and identifies a particular sound change in progress, the monophthongization of /aI/ to /εI/, that serves as a point of comparison between Midwestern communities. Second, it explores the settlement histories of Deitsch speech islands in the Midwest as well as the current patterns of interaction
between them and with the Pennsylvania settlements. Finally I synthesize the historical, social, and linguistic facts and show that Midwestern Amish speech islands are better conceived of as a loosely connected "archipelago" whose interconnecting family and church networks have promoted the emergence of a regional dialect as a marker of a distinct regional social identity. This dissertation is a contribution both to the theory of language change as well as to the dialectological landscape of America viewed cross linguistically.
in memory of my grandma,

Alta Brenneman Keiser
ACKNOWLEDGMENTS

The day I walked into a Brussels preschool as a decidedly monolingual three-year-old American I discovered that language is both barrier and bridge to other people. You might say I’ve spent the better part of the three decades since then swinging on linguistic fences and crossing cultural bridges during sojourns on four continents. Little did I imagine the wonder that awaited me in my own backyard—actually my grandma’s backyard in a small town in my home state of Iowa. Driving with her down dusty Kalona roads to the Amish farmsteads of her friends, former pupils, and second cousins was my introduction to new friends, new teachers, and distant cousins. Here the cultural and linguistic divide blurred: we shared a common language (English) even as I struggled to acquire their first language (Deitsch); we were united by a common ethnic and Anabaptist faith heritage and yet the daily practices of “Old Order” and “liberal Mennonite” religious convictions formed the greatest gulf between us. I found a place where I was both at home and a stranger. This has been a blessing to me, and I am deeply grateful.

For starting me on this journey and encouraging me every step of the way, I owe many thanks to my advisers Brian Joseph and Don Winford, both of them brilliant scholars and patient mentors.
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VITA

January 23, 1965........Born, Iowa City, Iowa


1996 .......................M.A. Linguistics. The Ohio State University.

PUBLICATIONS


FIELDS OF STUDY

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CHAPTER 1

INTRODUCTION

Pennsylvania German is a language that has outgrown its name. Now in its third century on North American soil, this German variety has seen its speakers multiply and move to such an extent that the majority currently live, not in Pennsylvania, but in Ohio, Indiana, Illinois, Iowa, and other Midwestern states. This shift in the demographic center of gravity of Pennsylvania German has been accompanied by linguistic divergence. A new Midwestern dialect of Pennsylvania German has emerged and with it a new sense of regional identity for its speakers, who, with few exceptions, are members of Amish communities.

This dissertation provides an account for the emergence in the Midwest of this new regional dialect of Pennsylvania German (also known as Pennsylvania Dutch, and hereafter referred to as Deitsch, the native term for the language\(^1\)). It briefly describes the linguistic features which distinguish Midwestern Deitsch from Deitsch in Pennsylvania as well as linguistic features which show continuity of the Midwest with

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\(^1\) Deitsch (pronounced [dairʃ] in Pennsylvania and [dɛtʃ] in the Midwest) is the word used by native speakers when speaking the language. When speaking English, native speakers employ a variety of terms to refer to their language including Dutch, Pennsylvania Dutch, German, and Pennsylvania German.
Pennsylvania, and notes the respective roles of internal change, dialect contact, and language contact in the development of these features. The core of the dissertation is an analysis of a sound change that has spread across Amish communities throughout the Midwest. The key to accounting for the spread of this sound change is found in the interaction between the constraints of phonetic structure, the settlement histories of the Amish in the Midwest, and the resulting long-term, long-distance interaction between speakers across widely separated rural speech islands. This study enriches current models of the spread of linguistic change by highlighting the importance of these “weak” links between apparently isolated speech communities. Finally, the dissertation establishes the social and psychological reality of Midwestern Deitsch and demonstrates that the development and maintenance among the Amish of a regional Midwestern identity reflected in a distinctive language is embedded in the social history of the region as a whole.

1.1 Defining Amish communities as speech islands

Throughout this study I employ the term *speech island* as a convenient metaphor for Amish communities since one of the remarkable characteristics of the Amish is their vibrant maintenance of Deitsch in numerous geographically noncontiguous settlements separated from each other by an ocean of English speakers.

The term *speech island* or *Sprachinsel* has been utilized primarily by researchers of German language varieties. Its use in some general works is somewhat idiosyncratic, e.g., Hock (1991:434-5), who uses the term to refer to regions which do not adopt a
linguistic change, but without reference to geographic or cultural isolation. Mattheier provides what will pass for here as a standard definition of a speech island: “a speech community resulting from the delay or prevention of linguistic and cultural assimilation which—as a speech minority cut off from its main territory—is surrounded and/or ‘roofed’ by a linguistically and ethnically different majority society, and which distinguishes itself or is separated from the contact society via a sociopsychological attitude motivated by contrastive self-identity” (1994: 334, my translation). \(^2\)

The key criteria in this definition are, first, the continuing presence of an ancestral “mainland” speech community and, second, the resistance to assimilatory processes. By this definition, few minority language communities count as “speech islands,” because they lack one or both of these traits. But Amish communities in North America clearly qualify. Their members speak a minority language, Deitsch (a.k.a. Pennsylvania German), that has historic links to the “main” German varieties in Europe, and the Amish have resisted shifting to English for over two hundred years, due in part to a group identity which emphatically contrasts with that of American society as a whole. Though as recently as 1950 there were less than forty Amish settlements in North America, today there are over two hundred. Each of these settlements, by Mattheier’s definition, constitutes a separate speech island due to its geographic and social isolation from other

\(^2\) This definition has, it should be noted, a temporal element. A delay in linguistic assimilation necessarily happens over a period of time. Presumably a minority language community cannot simply appear one day and be labeled as delaying assimilation the next. No attempt has been made to define how long resistance to assimilation must continue to count as “delay,” although a minimum length of three generations seems reasonable since it is well-documented that many minorities become fully assimilated linguistically in that time (Mattheier 1994:334). Furthermore, the attitudes and practices that allow for the maintenance of cultural isolation do not necessarily come only from within the speech island (Mattheier 1994:334). For example, the attitudes of the Euro-American majority society toward African American Vernacular English (AAVE) contribute to the social and areal ghettoization of AAVE dialect islands.
communities of German speakers be they in Europe or in an Amish community several counties or states distant.3

The speech island metaphor is helpful in describing the unique physical and social context of Amish settlements vis-à-vis each other and the surrounding North American society, but it is not intended to suggest outcomes in language use and language change which are qualitatively or quantitatively different from other intense language contact scenarios. Speech islands can be included under the general heading of language maintenance and language contact studies (e.g., Thomason and Kaufman 1988) with the addition of dialect contact as another interface for linguistic change. As in pidgin and creole studies, we are delimiting speech island studies more on sociocultural criteria than on purely linguistic criteria (Mufwene 2000).

Still, the speech island metaphor is both useful and powerful. It connotes profound isolation and intense unavoidable interaction with the surrounding “sea.” It implies the existence, at some point in time, of an ancestral “mainland” variety and/or other island varieties whose influences must be investigated. It is the exploration of extreme isolation, intense contact, and the murky area in between that gives a distinctive place to speech islands in the study of language maintenance and the spread of language change.

3 Amish settlements are by definition geographically distinct from each other. The distance between settlements is occasionally small (e.g. Knox County, Ohio is only twenty five miles away from the older Holmes County settlement), but usually it is large—a hundred miles or more. Large or small, the distance is almost always sufficient to make transportation by horse and buggy between settlements unfeasible. Researchers have generally interpreted a speech island as being constituted locally as opposed to comprising clusters of communities spread out over a large geographic region (Schirmunski 1930 and Rosenberg 1998), though see Rosenberg’s (1998:6) reference to a “superregional” variety in Rio Grand de Sul German varieties in Brazil. Rosenberg characterizes this superregional variety as a non-homogeneous dialect continuum with considerable retention of local features.
Any account of Deitsch as it is spoken in Midwestern speech islands must deal with its striking and surprising homogeneity. The lexical and phonetic features that distinguish Midwestern Deitsch from Deitsch in Pennsylvania can be found in Amish communities scattered from Ohio to Kansas. Not only are Amish settlements speech islands, that is, geographically non-contiguous, they are also religious/cultural islands whose norms of social practice include restrictions on the use of modern transportation and telecommunication technologies—thus dramatically increasing their mutual isolation. It is not obvious how these communities could follow very similar paths of linguistic change and continuity in the face of such isolation from one another. What is more, at least one of the distinguishing features of Midwestern Deitsch, the monophthongization of /ar/ to [ɛ:] (e.g., [dairʃ] > [dɛːʃ] ‘German’), is a recent innovation, having appeared over a century after the founding of Amish settlements in the region. This development poses the question central to this study: how does linguistic change spread between distant speech communities—in this case between minority language speech islands in the Midwest?

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4 Most Amish do not own cars, televisions, or computers. Telephones, if owned, are usually located outside of the home (e.g., in a barn or shed) and used strictly for business or emergency situations. Transportation is by horse and buggy or bicycle. Long distance travel is typically done via chartered van or bus. These and other social practices vary somewhat from one Amish community to the next, and even between church districts within the same community.

5 Of equal interest is how some features (phonological and other) could resist change and remain stable across speech islands, though this will not be addressed directly here.
1.2 Overview of the dissertation

The investigation of this question will begin by placing the emergence of Midwestern Deitsch in the context of previous studies of Deitsch dialect geography. Then I consider accounts for linguistic change in speech islands which variously highlight internal factors, dialect contact, and language contact. This leads to a multi-pronged research methodology that I apply in the collection of social and linguistic data in the communities in this study. Finally I synthesize the historical, social, and linguistic facts and show that Midwestern Amish speech islands are better conceived of as a loosely connected archipelago, so to speak, whose interconnecting family and church networks have promoted the emergence of a regional dialect as a marker of a distinct regional social identity.

1.2.1 Previous studies of Deitsch dialect differentiation

Previous studies of dialect differentiation in Deitsch have, in large part, ignored the Midwest and have not made the type of cross-community comparisons crucial to addressing the question at hand. Only recently has a specific set of features for a Midwestern variety of Deitsch been proposed (Louden 1997, see Table 6, section 2.3.2). These features include: the diphthong /aɪ/ realized as a monophthong [ɛ:], the preservation of tapped /r/ in syllable-initial and intervocalic positions, the preservation of clear /l/ in syllable-final position, the use of figgere as a future auxiliary verb, and a small number of lexical differences.
1.2.2 Factors involved in linguistic change in speech islands

Linguistic change in Deitsch falls under the larger rubric of linguistic change in speech islands and this study takes its multifaceted approach from previous research on speech islands. Beginning with Schirmunski’s (1930) seminal work on German Sprachinseln in Russia, the study of speech islands has had three consistent foci: linking the speech island to a particular dialect in the ancestral land (internal continuity/change), explaining the results of contact between speakers of different ancestral land dialects in a new community (dialect contact), and differentiating between language external and language internal sources of linguistic change (language contact). These three factors—internal continuity and change, dialect contact, and language contact—have formed profitable lines of inquiry in the study of Deitsch as well.

1.2.2.1 Internal factors

Under certain conditions (e.g., isolation, strong ethnolinguistic vitality) languages are surprisingly stable and change relatively slowly. Reed (1972), for example, demonstrates the continuity that holds between the phonology of the Palatinate dialect (Pfälzisch), spoken by the greatest number of German settlers in colonial Pennsylvania, and that of Deitsch even after two centuries of independent development. The retention of tapped [r] in prevocalic and intervocalic position in Midwestern Deitsch is another example of the stability of Deitsch phonology.

It is equally true, however, that a language—as it proceeds from the mouths of its speakers and is perceived in the ears and minds of its listeners—changes over time, and
the direction of change is notoriously difficult to predict. This study then considers proposed constraints on changes which stem from internal motivations, that is, linguistic structure. Notions such as language “drift” and grammaticalization are considered insofar as they apply to the occurrence or spread of the same linguistic change, i.e., the monophthongization of /at/, across speech islands, but both of these concepts can be shown to be epiphenomenal to core factors such as probability, analogy, and sociohistorical patterns of interaction. Proposed universal tendencies for change in vocalic systems which make reference to physiological and cognitive universals contribute to an explanation of the changes in Midwestern Deitsch. Cross-linguistic studies of vowel shifts (Labov 1994), of vowel coalescence (Parkinson 1996), and of sound changes involving the diphthong /at/ support the view that the sound change [aɪ] > [e] is both common and in some sense phonetically natural. Following the proposed Big Bang Theory of sound change (Janda and Joseph 2001a and 2001b), I hold the influence of such “purely phonetic” factors to be limited to the earliest stages of a sound change, with the ensuing spread controlled by social factors.

1.2.2.2 Dialect contact

The study of dialect contact forms the core of this study. The linguistic features characteristic of each Deitsch speech island are determined, in part, by the input dialects spoken by its settlers. Later linguistic changes that affect multiple communities (e.g.,

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6 I employ the following general definition of dialect: “a dialect is a language variety spoken by a particular group of people.” Different dialects thus are defined simultaneously in terms of differences in linguistic structure as well as by the differences in the social identities of the speakers. The typical language X comprises a “diary,” that is, a collection of dialects all of which identify themselves as a variety of language X. In most cases this claim presupposes some degree of mutual intelligibility.
Midwestern Amish) may be assumed to have spread from one island to the next. Neither
the standard wave model for the diffusion of linguistic change across space and time nor
the gravity model (Chambers and Trudgill 1980) offer satisfactory explanations for such
phenomena in Midwestern Deitsch. We then consider actual speaker contact between
Deitsch speech islands. If a high degree of mutual intelligibility exists between speakers
across different speech islands, what might motivate speakers to change their own dialect
in order to copy outright, to converge with, or to diverge from their interlocutor’s? Most
important: what is the minimal degree of contact between speakers needed to catalyze the
spread of linguistic change. Studies of social networks (e.g., Milroy and Milroy 1985,
Lane 1998) have focused on points of maximum contact between speakers forming a
single network. Here we are more interested in analyzing the “weak” links between
networks. Though difficult to quantify, these links can be described qualitatively and
they demonstrate that linguistic diffusion and dialect convergence are possible even in the
apparent absence of significant face-to-face contact.

1.2.2.3 Language contact

In a setting where speakers of different languages are in contact with each other, the
outcome of linguistic change is constrained, not primarily by the structures of the
languages, but by the social patterns of interaction of the speakers (cf. Thomason and
Kaufman 1988). Deitsch in the Midwest and Deitsch in Pennsylvania share most of the
features that can be linked to changes due to contact with English (see section 2.1), but
differ in some respects. The Midwest, for example, has borrowed more English lexical
items, while in Pennsylvania, but not the Midwest, the phonetic realization of /r/ and /l/
has changed to match that of English. The question then is: can these differences in the outcomes of language contact in the Midwest be accounted for by differences in the social setting, that is, differences in the contexts of the contact?

By now it should be clear that this investigation intends to make use of the widest possible collection of evidence to account for linguistic change in Deitsch and overall. In general, the more evidence one can muster to motivate a particular change, the better. Thus an approach that allows for multicausality offers more robust explanatory power and is truer to life.

1.2.3 The communities studied

To conduct a complete survey of Deitsch in the Midwest would require the collection of data from all Deitsch communities in the region. For practical reasons, this is not possible. I have chosen, therefore, to collect data from two of the major Amish communities in the Midwest: Holmes County, Ohio and Kalona, Iowa. For comparative purposes, I also collected data from two regions in the Pennsylvania “homeland” of Deitsch: Lancaster County and Montgomery/Bucks Counties. The selection of these communities was motivated primarily by questions of access. Friendship and kinship ties afforded me convenient means of introduction to individual speakers in each community.

Happily, both of the Midwestern communities also meet other important criteria for the study of linguistic change in speech islands. They are among the earliest Amish settlements in the Midwest (the Holmes County settlement began in 1809; Kalona in
1846), and so afford the greatest possible time depth for language change. They also provide a convenient means of studying the geographical expansion of Deitsch speech islands across the Midwest as they represent the easternmost and westernmost edges of the early Midwestern Amish settlements. Since the social networks, both intimate and public, of most Deitsch speakers are shaped in large part by their churches, it is important that the communities have a similar mix of church affiliations. Both Kalona and Holmes County are historic Amish communities in which Amish of varying orders (degrees of conservatism) still form the majority of the Deitsch-speaking population and in which there are also significant numbers of persons affiliated with churches which at one time were Amish. The selection of Amish communities is of interest, too, because the Amish constitute by far the largest group of speakers for whom Deitsch is a living and first language.\footnote{I define a living language as one which children are acquiring as a first or co-first language. The Amish currently number approximately 180,000. Old Order Mennonites who also speak Deitsch as a first language number somewhat over 10,000. The number of speakers in groups for whom Deitsch is a dying language is difficult to estimate.}
Figure 1. Map of communities studied and Amish settlements in North America (map adapted from Nolt 1992:251)

I detail the histories of the Holmes County and Kalona communities and the current patterns of interaction of their speakers—as distinct from each other and from Pennsylvania—in order to understand the linguistic developments that have taken place in the Midwest. The settlement patterns of the Amish in Holmes County and Kalona held true for most other 19th century Amish settlements. Extended family groups from the frontier settlement of Somerset, Pennsylvania were joined by European Amish in the new outposts. But at various times difficult conditions, church troubles, and the promise of
more and cheaper land all contributed to extensive migration back and forth between the
dozens or so Amish communities in the Midwest throughout the 19th century. As a result,
even today it is a rare Midwestern Amish family who does not have kinship links to two
or more Midwestern Amish communities. Current patterns of travel between Amish
communities confirm that, although migrations between established communities may
have slowed somewhat by the end of the 20th century, there is still a level of contact
between Deitsch speech islands that warrants investigation as a means for the spread of
linguistic change.

1.2.4 The linguistic data
The linguistic feature investigated in these communities is the realization of the
diphthong /at/ as a monophthong. This feature was selected both because it shows
evidence of being a change in progress and because it is salient to native speakers as a
marker of regional dialectal difference. Additional features which contribute to the
perception of a distinct Midwestern Deitsch dialect but that are not analyzed in detail are:
the realization of /t/ as a tapped rather than an (American-English-like) approximant, the
realization of syllable-final /l/ as an alveolar lateral rather than an (American-English
like) velarized lateral [1], and native lexical items which show distinct regional dialect
variants.

Studying the patterns of continuity versus change in each of these features contributes to
an understanding of the emergence of Midwestern Deitsch. The lexicon of Midwestern
Amish shows both continuity and change with respect to Deitsch spoken in Pennsylvania.
When compared with variation in the lexicons of different regions within Pennsylvania (in both plain and nonplain communities\textsuperscript{8}), the lexicon of Midwestern Deitsch is remarkably homogeneous and patterns very closely with the Amish of Lancaster County, Pennsylvania. However, in a small set of salient words, the Midwest does differ from Lancaster County. The Midwest diverges more dramatically from Lancaster County and from Pennsylvania as a whole in the spread of a sound change /aɪ/ > /ɛ/ (the monophthongization of /aɪ/). This recent change, prominent in speakers younger than 75, has taken root throughout the Midwest, but not in Pennsylvania. The Midwestern speakers also retain an alveolar tapped [r] in positions where Pennsylvania speakers have innovated by adopting an approximant [ɾ] like that of American English.

Not all linguistic change in the Midwestern Deitsch contributes to the emergence of a regional dialect. For example, the collapse of the dative case with the accusative, patterns in remarkably similar ways between the two Midwestern communities. However, this change also occurs in other Deitsch speech islands in Pennsylvania in much the same way and at the same time. These common changes suggest that both common broad social factors (compulsory education in English may be one) and internal factors are at work here (see, e.g., Keel 1994 and Keel and Mattheier 2002 forthcoming). Finally, two innovations in Holmes County, Ohio—a near phonemic merger of /aɪ/ with /ɛ:/ and the use of non-feminine morphological marking on the determiners for human female referents—provide points of potential divergence within Midwestern Deitsch.

\textsuperscript{8} The term “plain” is used to refer to Amish and Mennonite communities. See footnote 11 in section 2.2 for more on this distinction.
1.2.5 Summary

These disparate patterns of change and continuity make clear the need for a complex account for the emergence of Midwestern Deitsch. A key part of the explanation, a part that helps to account for its overwhelming homogeneity, is the mobility of Amish during especially the first century of settlement in the Midwest and current patterns of interaction between speech islands that reflect early migrations. This contact between distant Amish communities has ensured the uniform spread of changes internal to the language (such as monophthongization of /ai/ and, perhaps, dative case collapse). What is more, it has led to the solidifying of a Midwestern identity among the Amish who live west of Pennsylvania. In a sense, these Midwestern Amish communities are not so isolated and island-like as they appear. Persistent, pervasive language contact plays a prominent role in language change in all Deitsch communities, and helps to account for shared changes across the Midwest and Pennsylvania. At the same time resistance in the Midwest to adopting the American-type realization of /r/ and /l/ is another example of the region’s cohesiveness.

The rest of this dissertation is organized as follows. In the next chapter, I review previous studies of Deitsch dialect differentiation to provide the historical and social context for the emergence of Midwestern Deitsch. In chapter three I examine previous research on internal change, dialect contact, and language contact and consider whether proposed linguistic and social constraints on language change can account for the homogeneity of Deitsch in Midwestern speech islands. Then in chapter four I lay out the
research design and interlocking methodologies of quantitative sociolinguistics, traditional dialectology, and anthropological participant-observation that I employed in my fieldwork and data collection. Chapters five and six outline the history of Deitsch in Europe and 19th century Pennsylvania as well as the historical background of the Amish in the Midwest with special reference to the Kalona, Iowa and Holmes County, Ohio communities. In chapter seven I describe the current patterns of interaction within and between these communities. The linguistic data on the monophthongization of /au/ are presented in the eighth chapter. In the ninth chapter, I discuss the other linguistic features that contribute to the production and perception of a distinct Midwestern dialect of Deitsch as well as speakers' mental maps of Deitsch dialects. In the tenth and final chapter I synthesize the sociohistorical facts with the patterns of language usage in order to provide a comprehensive account for the emergence of dialect divergence in the Midwest as well as the maintenance of overall homogeneity in Deitsch. I conclude with suggestions for future study of Deitsch dialect differentiation.
CHAPTER 2

PREVIOUS RESEARCH ON DEITSCH DIALECT DIFFERENTIATION

This chapter summarizes evidence for Deitsch dialect differentiation from previous studies of language contact, social variation, and regional variation in Deitsch-speaking communities. Research on Deitsch has focused on the linguistic outcomes of long-term intense contact with speakers of English. This contact has produced some salient dialect differences as certain communities borrow more English words and/or adopt English pronunciation in these borrowings. Another focus of recent research has been the putative differences between the speech of plain and non-plain speakers. Finally, though regional variation within Pennsylvania has received adequate treatment, the Midwest has been largely ignored. Studies of Deitsch outside Pennsylvania have focused on particular linguistic features in single communities and have not made the type of cross-community comparisons crucial to an examination of the spread of linguistic change between speech islands. Only recently has a specific set of features for a Midwestern variety of Deitsch been proposed (by Louden, see section 2.3.2).
2.1 Language contact as source of dialect differentiation in Deitsch

In spite of more than two centuries of contact between Deitsch speakers and English speakers, the Deitsch language has thrived and maintained its essential character as a dialect of German. Still, it is clear that contact with English has introduced a number of innovations into Deitsch wherever and by whomever it is spoken. It may be that the intense nature of contact with English which all Deitsch-speaking communities experience overwhelms and to a certain extent minimizes the impact of regional dialectal differences. At the same time, one of the salient means for differentiating regional dialects is the degree to which speakers allegedly incorporate English lexicon and structure into their Deitsch.

Table 1 summarizes innovative Deitsch features which result, at least in part, from contact with English.
<table>
<thead>
<tr>
<th>Level</th>
<th>Feature (with references)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Lack of morphological integration of borrowed nouns, adjectives. (Reed 1948, Fuller 1997)</td>
</tr>
<tr>
<td>Morphology and Syntax</td>
<td>- Dative/accusative case merger. (Buffington 1937; Anderson and Martin 1976; Huffines 1989 and 1991; Keel 1994; Keiser 1999a)</td>
</tr>
<tr>
<td></td>
<td>- Overall semantic congruence in TMA systems. (Louden 1997)</td>
</tr>
<tr>
<td></td>
<td>- Distribution of progressive aspect. (Burridge 1992, Huffines 1997)</td>
</tr>
<tr>
<td></td>
<td>- Distribution of reflexive markers on verbs (Fuller 1997).</td>
</tr>
<tr>
<td></td>
<td>- Word order in past participle constructions. (Huffines 1997)</td>
</tr>
</tbody>
</table>

Table 1. Deitsch features with evidence of (English) contact-induced change.
Not all of the features listed in Table 1 are uncontroversial, and certainly some (e.g., the changes in case-marking) are best understood as being motivated by language internal changes alongside the external influence of English. Table 2 lists some innovations and retentions in Deitsch for which contact with English plays a lesser or nonexistent role.

<table>
<thead>
<tr>
<th>Level</th>
<th>Feature (with references)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lexicon</td>
<td>• Morphological integration of borrowed verbs. (Reed 1948, Fuller 1997)</td>
</tr>
<tr>
<td>Phonetics and Phonology</td>
<td>• Segmental inventory in general. (Raith 1992)</td>
</tr>
<tr>
<td></td>
<td>• Prosody. (Raith 1992)</td>
</tr>
<tr>
<td>Morphology and Syntax</td>
<td>• Nominative/accusative case merger (Buffington 1937)</td>
</tr>
<tr>
<td></td>
<td>• Development of future tense with zahl and geh. (Burridge 1992)</td>
</tr>
<tr>
<td></td>
<td>• Distribution of periphrastic duh. (Buffington and Barba 1954, Burridge 1992, Costello 1992)</td>
</tr>
<tr>
<td></td>
<td>• Development of modals. (Burridge 1992)</td>
</tr>
<tr>
<td></td>
<td>• Retention of verbal morphology. (Fuller 1997)</td>
</tr>
<tr>
<td></td>
<td>• Development of non-feminine dative of possession in Ohio. (Van Ness 1995)</td>
</tr>
</tbody>
</table>

Table 2. Deitsch features with little or no evidence of (English) contact-induced change.
Of the studies noted in Table 1 and Table 2, only Louden 1997, Fuller 1997, Van Ness 1995, and Keiser 1999a, 1999b, 2001c include speakers from the Midwest. None compare contact-induced change in different geographical communities in any detail. In spite of the great number of changes that Deitsch has undergone due, at least in part, to intense long term contact with English, only two of these features are utilized by speakers in differentiating the Deitsch of particular communities: the amount of lexical borrowing and the degree of phonological nativization of English borrowings.

Recent studies estimate that as much as 14% of Deitsch vocabulary is made up of words borrowed from English, including a growing number of common words which already exist in Deitsch such as ‘farm’ (Deitsch bauerei), ‘some’ (Deitsch deel), and several function words such as ‘really’ (Deitsch arig) and ‘because’ (Huffines 1997:55; Enninger and Raith 1988:285). The increase in lexical borrowing is salient to native speakers and is most often used to contrast generational differences within a single community. A speaker might say about a particular native Deitsch lexical item “My grandparents might use that, but I wouldn’t. I just use the English.”

Speakers also have clear perceptions about the degree to which communities other than their own borrow words from English. In Holmes County, for example, the ultra-conservative Swartzentruber Amish are said to retain more German words in their Deitsch than do Old Order Amish, because the Swartzentrubers have considerably less

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9 Huffines proposes differences between plain (i.e. Mennonite and Amish) and nonplain speakers in one community. These claims will be discussed in the following section (2.2).
10 This is not an exact quote from a particular speaker, but rather reflects the gist of what several speakers told me on different occasions.
interaction with non-Amish. As for regional differences, Midwesterners acknowledge that Pennsylvanians borrow less vocabulary from English. An Iowa Amish boy, commenting on the conservative, archaic-sounding nature of the speech of visiting Pennsylvania preachers said, "They speech Bible Dutch." Pennsylvanians return the favor by describing Midwesterners as profligate borrowers of English words. One Pennsylvania Mennonite said, "In Ohio it's a joke. All that's left is the syntax; the words are English...It'd be embarrassing for me to have so little Dutch in my Dutch."

Within the Midwest, speakers differ in the extent to which they incorporate borrowed English lexical items into Deitsch phonology. This process is commonly referred to as "Dutchifying" your English, and can be used to refer to Deitsch-accented English usage in general (not just in borrowings). For example, the English borrowing buggy [bɔgi] may be incorporated into Deitsch phonology by substituting a native phoneme for English [ʌ] and laxing the unstressed word-final high vowel, e.g., [bɔgr]. Though there has been a marked decrease in this phenomenon especially in the younger generations (Louden 1997:82-4, and my fieldwork), speakers still regularly comment on the Dutchified speech of others. The general perception in the Midwest is that the Holmes County area is phonologically conservative in this respect; Holmes County speakers phonologically incorporate borrowings more than other Midwestern communities, such as Madison County, Ohio, Elkhart and Lagrange Counties, Indiana, and Kalona, Iowa (Keiser 1999b, 2001a, 2001c). This is evidence that Midwestern Deitsch is not completely homogeneous.
2.2 Social variation: reviewing the evidence for plain v. non-plain Deitsch.

In the past two decades several researchers have suggested that the Deitsch of plain\(^{11}\) speakers is diverging from that of non-plain speakers—often in the direction of convergence with English (e.g., Huffines 1986, 1989, 1992; Louden 1993; Van Ness 1994).\(^{12}\) Given that the populations of non-plain speakers are concentrated in Pennsylvania, these analyses apply only to Pennsylvania varieties of Deitsch. Furthermore, close examination reveals many of these claims to be less robust and less interesting than they appear at first glance.

Among the features offered as examples of diverging plain Deitsch norms are: insertion of modified noun objects between the preposition *am* and the infinitive in progressive constructions, phonetic realization of *am* as [an] or [on] in progressive constructions, use of *als* to express habitual action in present as well as past, increased use of auxiliary *duh* to express meaning other than repeated action, collapse of dative case with accusative, placement of the past participle in non-final position, and more frequent borrowing of English loan words.

\(^{11}\) The term “plain” refers to Amish and Old Order Mennonites: religious groups that overtly mark a clear separation between themselves and society as a whole, often by means of distinctive, plain clothing and simple lifestyle. Occasionally Mennonites in general are also included, since historically they belong to the plain tradition, even if most do not currently overtly mark themselves as such. The term “plain” is chosen over other terms (e.g., “sectarian”—a synonym used by Huffines and others) since it is used self-referentially by plain people (*plain leit*) when distinguishing themselves from others. Other groups which might be considered plain include the German Brethren (Dunkards), the Schwenkfelders, and the River Brethren. These groups are smaller in numbers and have shifted to English. Plainness can also be marked in ways other than dress, e.g., by general lack of concern over appearance of self and property and by use of horse and buggy transportation. In addition there are degrees of plainness, so that within the plain groups there are some that are “more plain” than others, though these differences will generally be of little interest here.

\(^{12}\) Huffines 1986: “The differences in the speech of the sectarians and the nonsectarians point to the existence of two separate Pennsylvania German norms” (152) and “In contrast to the Pennsylvania German of nonsectarians, the Pennsylvania German spoken by the sectarians shows evidence of substantial English influence in the form and function of verbal aspect” (153).
Huffines is the only researcher to muster statistical data in support of a plain v. nonplain dichotomy. It is difficult, however, to verify Huffines’ claims, because details about the ages of her informants and the distribution of their responses are not supplied. The information Huffines does supply suggests that her informant pool is not balanced for age: there is a large number of older nonplain native speakers but few older plain speakers.\textsuperscript{13} This leaves open the real possibility that age, not religious affiliation, is the factor which best accounts for the observed variation.\textsuperscript{14}

Data from Keiser 1999a, for example, support the reality of strongly age-correlated patterns of variation for the accusative-dative case merger in two plain Deitsch communities in the Midwest. Furthermore, Costello (1992:261) offers evidence which suggests that the usages which auxiliary duh shares with the present tense—as well as those which it does not share with the present tense—are identical in both plain and nonplain usage. It may be that small quantitative differences exist for some features in the Deitsch of plain and nonplain speakers. However, the simplest account for these differences is to assume that the same contact-induced changes have impacted both plain

\textsuperscript{13} Of Huffines’ non-plain speakers, only two out of thirteen are below age 50, and these two younger speakers pattern differently from the other non-plain speakers, most of whom are over age 60. Of Huffines’ plain speakers, at least twelve and perhaps as many as eighteen out of a total of nineteen are below age 51.

\textsuperscript{14} Huffines acknowledges this possibility only for the dative-accusative merger for non-plain speakers. But see Keiser 1999a: 272-77 for an analysis of data on the dative-accusative merger gathered from an age-biased informant pool within the plain community of Kalona, Iowa. The data for Keiser 1999a and 1998 suggest that age 70-80 is the minimum cut off for productive use of the dative in both Kalona, Iowa and Holmes County, Ohio Deitsch. Given that these data were collected approximately fifteen years after Huffines’ data in Northumberland, we might expect (in Huffines’ data) only speakers over the age of 55-65 to have productive dative forms. We can confirm only one such speaker among Huffines’ plain informants.
and nonplain speakers, and that language death has halted the process in midstream for the nonplain speech communities.

This is not to deny the existence of any qualitative variation between plain and nonplain Deitsch.\(^{15}\) Certainly some lexical variation exists; Beam's dictionary notes a few examples of Old Order Amish usage—presumably in Lancaster County, Pennsylvania. Most are pronunciation variants as noted in Table 3.

<table>
<thead>
<tr>
<th>Old Order Amish variant</th>
<th>other variant</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>gwunnerich</td>
<td>neigierich</td>
<td>'curious'</td>
</tr>
<tr>
<td>Oschder</td>
<td>Oschdere</td>
<td>'Easter season'</td>
</tr>
<tr>
<td>reiglesst</td>
<td>reiglosst</td>
<td>'let in'</td>
</tr>
<tr>
<td>daadi = 'grandpa'</td>
<td>daadi = 'daddy'</td>
<td>'grandpa' v. 'daddy'</td>
</tr>
<tr>
<td>schteik</td>
<td>schtarick</td>
<td>'fast'</td>
</tr>
</tbody>
</table>

Table 3. Lexical variation reflecting plain v. nonplain usage from Beam 1994 (1991).

A different example of variation correlating with religious affiliation is found in research on Lancaster County, Pennsylvania, where the phonetic realization of intervocalic /t/ as

\(^{15}\) Van Ness states that the future auxiliary zehle /tselə/ exists only in plain communities, but does not cite the source for this claim (1994:432).
the American-style approximant [n] (in, e.g., sie waare ‘they were’) and of syllable-final /l/ as “dark” [l] (e.g., der Balle ‘the ball’) separate the Old Order Amish from their neighboring Mennonite and nonplain speakers (Raith 1992). This echoes Anderson and Martin’s (1976) findings that Old Order Mennonite phonology is more conservative than the Amish. Together they suggest that the most significant linguistic differences correlating with religious affiliation occur within the plain groups and not between plain and nonplain.

In the course of my fieldwork, commentary on dialect differences within the plain groups was limited to Lancaster County, Pennsylvania, which is one of the few communities in which the two groups live in close proximity. “You can hear the difference [between Amish and Mennonite speakers],” said one Mennonite, noting also several lexical shibboleths marking the Amish v. Mennonite distinction: Rock v. Frock ‘dress’, Vames v. Rock ‘coat’, Ebbire v. Arble ‘strawberries’, hunde v. yawe ‘hunt’, Mike v. Muke ‘flies.’

The division of this socioclect along denominational lines is a recent development which is rooted in regional variation within Lancaster County. Figure 2 shows the geographical distribution of informants with respect to their production of variants of the lexical item ‘strawberry’ as documented in Reed and Seifert 1954. Figure 3 shows where in Lancaster County the Amish are concentrated based on farm-ownership data (Kraybill

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16 Anderson and Martin briefly survey Old Order Mennonite (OOM) communities in Ontario and Pennsylvania—an interesting comparative speech island study in itself. Their recurring theme is that the Pennsylvania OOMs are in more intense contact with English than the Ontario OOMs (and the Amish, in turn, are in the most intense contact situation) and thus show greater evidence of borrowing from English in their phonology (e.g., non-trilled /r/), morphology (loss of dative case), and lexicon.
2001:11). Together, these maps show that the area in Lancaster County in which Reed and Seifert’s informants resided does not overlap with the area in which the Amish resided (and continue to reside), but matches more closely the area in which Mennonites were (and are) concentrated.

Figure 2. Map of regional variation of lexical item ‘strawberry’ in southeast Pennsylvania, with Lancaster County outlined (adapted from Reed and Seifert 1954: Map 18)
Figure 3. Map of Amish-owned farmland in Lancaster County, Pennsylvania (adapted from Kraybill 2001:11)
Variants that are associated with the Amish production were, until perhaps the 1950s, limited to an area roughly delimited by highway 23 on the north and highway 30 on the south in eastern Lancaster County. Variants associated with Old Order Mennonites were formerly found north of the highway 23 divide. Reed and Seifert’s 1954 *Linguistic Atlas of Pennsylvania German* does not include informants from south of highway 23, which suggests that it does not include Amish speakers and thus reflects usage only of Mennonites and nonplain groups in the northern part of the county and not of the Mennonite and Amish settlements further south. This will become significant as we make comparisons between Amish speakers in the Midwest and in Lancaster in section 2.3.2. As the Old Order Mennonites and especially the Amish have grown in numbers, they have begun settling in other parts of Lancaster County and beyond carrying their local variants with them. Both groups indicate that interaction with the other is limited. Whether cross-denominational interaction is limited enough to allow for the maintenance of these differences is a question for future research.

2.3 Regional variation

Early scholarly works on Deitsch recognized the significant regional variation within southeast Pennsylvania, but only recently have researchers completed studies of Deitsch outside of Pennsylvania. The Swiss- and Alsatian-speaking communities founded in Ohio and Indiana by certain 19th-century Mennonite and Amish immigrants will not be considered here, since these Alemannic dialects are distinct from Deitsch—itself generally considered a Palatinate-based dialect (see chapter 5)—and indeed the two are
hardly mutually intelligible.\footnote{The communities include: the Bernese Swiss Mennonite settlements at Sonnenberg (Kidron, Wayne County), Ohio; Putnam County, Ohio; and Berne, Indiana (see Wenger 1969); also the Alsatian Amish settlements in Allen County, Indiana and Fulton County, Ohio (the latter now Mennonite); and, finally, the Bernese Swiss Amish of Adams County, Indiana. When Deitsch-speaking Amish encounter “Schweizer” Amish (as both Bernese and Alsatian speakers are called), the conversation is usually conducted in English (Johnson-Weiner 1992:36 and Thompson 1994). For more on the Alsatian of the Allen County, Indiana Amish, see Thompson 1994, who also notes the role of Deitsch as a pan-Amish lingua franca in this community. Although it will not be explored in this study, it is possible that the 19th century immigration of Swiss and Alsatian Anabaptists in the Midwest had an impact on Deitsch in certain communities. Anecdotal evidence suggests that Alemannic features are present in the Deitsch of Amish settlements in Hicksville, Ohio and Daviess County, Indiana.} With the exception of Louden 1997, who is the first to refer to a “Midwestern” dialect of Deitsch, recent studies have focused on specific communities and have avoided cross-community comparisons and regional characterizations.

2.3.1 Variation within Pennsylvania

In their 1954 linguistic atlas Reed and Seifert mapped out the areal distribution in Pennsylvania of eighty variants such as ‘lard,’ \textit{fed-schnals}, and ‘to bark,’ \textit{gauзд-blaffd}, (see Figure 4 and Table 5).\footnote{A number of additional lexical variants are noted in Seifert 1971 and these will presumably be included in the \textit{Wordatlas of Pennsylvania German}, a collection of 144 maps of Reed and Seifert that is being prepared for posthumous publication by the University of Wisconsin.}
Figure 4. Major isoglosses in southeast Pennsylvania, with Lancaster County outlined (source Reed and Seifert 1954: map 86)

The differences divide the region in two main areas: Lancaster, Lebanon, and York Counties in the south and Lehigh, Northampton, and Monroe Counties in the northeast with a large transition zone between and to the northwest of these two. Lexical differences are most numerous, followed by phonological variation, and lastly morphological variation (Buffington 1939:285).
<table>
<thead>
<tr>
<th>gloss</th>
<th>southern counties</th>
<th>other Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>'lard'</td>
<td>fet</td>
<td>/mals</td>
</tr>
<tr>
<td>'floor'</td>
<td>bodæ</td>
<td>bodæm</td>
</tr>
<tr>
<td>'short nails'</td>
<td>kadst</td>
<td>kadsə</td>
</tr>
<tr>
<td>'I see him'</td>
<td>gse</td>
<td>sen</td>
</tr>
<tr>
<td>'mowed'</td>
<td>gmed</td>
<td>gamed</td>
</tr>
<tr>
<td>'you (pl) need'</td>
<td>brauxə</td>
<td>braixə/braixt</td>
</tr>
<tr>
<td>'strawberries'</td>
<td>ærabla</td>
<td>ærbiræ</td>
</tr>
<tr>
<td>'the flies'</td>
<td>muku</td>
<td>miko</td>
</tr>
<tr>
<td>'to sit'</td>
<td>sidæ</td>
<td>hoko</td>
</tr>
<tr>
<td>'little cup(s)'</td>
<td>kobli(n)</td>
<td>kobxæ/kobxə</td>
</tr>
</tbody>
</table>

Table 4. Examples of dialect variants in Pennsylvania: southern v. other

<table>
<thead>
<tr>
<th></th>
<th>eastern counties</th>
<th>other Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>'to bark'</td>
<td>bлаfо</td>
<td>gаudsо</td>
</tr>
<tr>
<td>'lantern'</td>
<td>lудsæ</td>
<td>lадаn</td>
</tr>
<tr>
<td>'orchard'</td>
<td>бuнет</td>
<td>бамгodo</td>
</tr>
<tr>
<td>'you should'</td>
<td>сед JIT</td>
<td>sed JIT</td>
</tr>
</tbody>
</table>

Table 5. Examples of dialect variants in Pennsylvania: eastern v. other
In general, the features that separate the southern region from the other counties can be attributed to Alemannic influence resulting from the relatively dense Swiss settlements in Lancaster.\footnote{Seifert 1971 gives a classic dialectological treatment to lexical (and to a certain extent phonetic) variation within Pennsylvania. Four main areas with unique lexical variants are delineated: South 49 maps (34\%), East 29 (20\%), Northwest 18 (13\%), Central 10 (7\%). “Complex” distributions make up 24 maps (17\%), and the remainder have cross-regional distributions. Seifert suggests that Berks County, in the center of the dialect area, is where leveling began and was carried closest to completion (35-6). As Gilbert suggests (in discussion of Seifert 1971:40), a repeat of Seifert’s study in Lancaster and in Midwestern communities could help determine the extent to which Amish communities today carry on the usage of local Pennsylvania dialect differences. Such a study is carried out in Keiser 2002a. For another description of regional variation in southeast Pennsylvania see Buffington 1949.}

Regional variation does not impede mutual intelligibility and, in fact, speakers are often familiar with variants from regions other than their own, and a certain amount of variation exists even between families and individuals (Buffington 1949:219, 251). Still, there is also overt commentary on these distinctions, attesting to the psychological reality of the dialect divisions, e.g., Frey observes “…one can notice almost at once what part of Pennsylvania the speaker comes from by the particular type of Dutch he speaks” (1985:88). These distinctions continue to be salient for Deitsch speakers in southeast Pennsylvania. But the Midwestern Amish, whose contact with speakers from southeast Pennsylvania is limited to Lancaster County Amish, are not aware of the variation within Pennsylvania (see, e.g., Keiser 2001a, Keiser 2002b).\footnote{The other major long-standing Amish community in Pennsylvania with which Midwesterners have some contact is Belleville (Mifflin County) in the central part of the state. The Deitsch of Belleville has not been investigated in detail, but anecdotal evidence and casual observation suggest that for most features—including those distinguishing the Midwest from Lancaster noted later in this section—it patterns closely with Lancaster County.}
The numerous and clear dialect divisions within the Deitsch of Pennsylvania are in the process of disappearing since, with the exception of the Lancaster varieties spoken by Old Order Mennonites and Amish, all of these dialects are moribund. Among the non-plain groups, no children are acquiring the language and there are few speakers below age seventy.

2.3.2 Variation in the Midwest

The boundaries of the Midwest are not easily defined. In its broadest geographic definition the Midwest comprises the states stretching between the Appalachian and Rocky mountains and lying north of the Ohio river and north of an imaginary line extending west from the Ohio’s confluence with the Mississippi. The oldest and largest Amish settlements outside of Pennsylvania are in this broadly defined region, in Ohio, Indiana, Illinois, Iowa, and Kansas—states generally considered historically, culturally, and geographically Midwestern. It is these communities—and by extension their numerous recent daughter settlements—that I consider here.²¹

Despite the excellent descriptive work on regional variation in Pennsylvania in the mid-20th century, descriptions of varieties in other states and especially their relationship to

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²¹ Since the mid-1900s many daughter settlements of Midwestern Amish have been founded within the Midwest, e.g., in Michigan, Wisconsin, and Minnesota. Other Midwestern Amish have migrated out of the region to Kentucky, Tennessee, Texas, Montana, and New York, among other states. For the purposes of this study, recent settlements founded by Lancaster County, Pennsylvania Amish and Old Order Mennonites in the Midwest (e.g., in Parke County, Indiana) will not be considered “Midwestern” given their ongoing ties with and orientation toward Lancaster (see section 7.3). Also not included in the Midwest are the Amish and Old Order Mennonite settlements founded in Ontario in the late 18th and 19th centuries. Recent Amish settlements such as Aylmer, Ontario do have significant proportions of Midwestern Amish in them. Some information on language use in Old Order Mennonite communities in Ontario (e.g., retention of diphthongal [ai] (Kate Burridge, p.c.)), suggests that the communities in Ontario may pattern with Lancaster and not the Midwest.
each other and to varieties in Pennsylvania are noticeably absent. For example, Seifert’s extensive work on lexical variation in Pennsylvania German explicitly excludes settlements founded after 1830—effectively excluding the entire Midwest from consideration.\footnote{Seifert (1971:16) acknowledges that settlements existed in Ohio and Ontario prior to 1830, and that Indiana, Illinois, and Iowa settlements could also be considered among the “secondary” settlements (i.e., founded after the Revolutionary War up to 1830), but he does not include them in his analysis. Seifert also does not include the Somerset County, Pennsylvania Amish community which was founded in the 1780s and which later served as a conduit for Amish settlement in the Midwest (see section 6.2).}

There are three notable exceptions: Bender’s 1929 thesis on the dialect of the Amish-Mennonites of Johnson County, Iowa (also known as the Kalona, Iowa community); Shoemaker’s 1940 dissertation on the dialect of the Amish community of Arthur, Illinois; and Schlabach’s 1980 thesis on (Holmes County) Ohio Pennsylvania German. These studies provide our best glimpse of Deitsch in the Midwest at earlier points in time and thus offer the means by which we can establish that linguistic changes have taken place in real time. Comparisons of the findings in Bender, Shoemaker, and Schlabach to the regional variation in Pennsylvania show that the lexical and morphological variants present in these three Midwestern Amish communities pattern most closely with—though are not identical to—the usage of the Amish in Lancaster County, Pennsylvania. This is suggestive of their common origins in 18th century Amish communities in Europe and Pennsylvania (see Chapter 5).
Figure 5. Map of selected Midwestern Amish settlements

Bender's thesis provides a list of over 2000 lexical items used in Johnson County, Iowa. A comparison of these with Reed and Seifert's list of lexical items that vary by region in southeast Pennsylvania shows that the Iowa variants match the variants used in Lancaster County, Pennsylvania, e.g., *Ladaen* 'lantern,' *gauze* 'bark,' *Bodde* 'floor,' *Bese* 'broom,' *Fett* 'lard,' *brauche* 'to need,' -li diminutive marker, *gwunnerich* 'curious,' *Kiwwel* 'bucket,' and *Hefli* 'yard.' There are a few exceptions to this pattern, e.g., *Schpotyaahr* 'autumn' (v. Lancaster *Harrebsht*), *Emer* 'bucket' (alongside *Kiwwel*) and *Aebbaer* 'strawberry' (v. Lancaster *Areble*). The latter, however, may be exceptional only in comparison with Reed and Seifert's data set, since it does match current Amish usage (*Aebbaer*) in southern Lancaster, an area not covered by Reed and Seifert (see section 2.2.
above). On the other hand, the Johnson County word for ‘fly,’ Muck, which matches the (northern) Lancaster usage in Reed and Seifert, turns out to contrast with current Amish usage (Mick ‘fly,’) in southern Lancaster.\(^{23}\)

Shoemaker compares and contrasts the Arthur, Illinois dialect directly with his own Lehigh County, Pennsylvania dialect. Among other contrasting features, Shoemaker notes ninety-eight lexical differences between the two dialects and an additional forty lexical pronunciation differences (1940:70-77). Although he does not equate the Arthur variety with that of Lancaster County, Pennsylvania, Shoemaker does note a historic connection between the two communities, and a comparison with the regional variation described in Reed and Seifert 1954 shows that Arthur usage—like Kalona (Johnson County), Iowa—patterns most closely with Lancaster.\(^{24}\) He also describes Arthur as a community in which English has made “inroads” just as it has in Pennsylvania, though it is not clear whether he is referring here to language shift or to contact-induced changes in Deitsch (1940: i-ii).\(^{25}\)

\(^{23}\) Spelling reflects C. Richard Beam’s manuscript of Bender 1929. Beam of the Center for Pennsylvania German Studies at Millersburg (Pa.) University has a version of this thesis with annotations added in the 1980s and 1990s by several native speakers from Iowa. Both Kiwvel and Heffl are of interest because they contrast with current usage in another Midwestern community: Holmes County, Ohio. In addition, variation within Johnson County is noted, e.g., for the words ‘door’ Daer–Deer–Dier and ‘apron’ Schatz ~ Schaetz, ‘peach’ Pasching~Paesching, and ‘basket’ Karb~Kaerlb.

\(^{24}\) E.g., [bodz] floor, [besa] broom, [fet] ‘lard,’ [braxo] ‘to need,’ -li diminutive marker. Shoemaker also notes in passing a considerable amount of variation within Arthur as speakers employ both variants of lexical items which are diagnostic for regional dialects in southeast Pennsylvania, e.g., [sela]~[sela] ‘should,’ [mek]~[mek] ‘fly,’ [dun]~[din] ‘do,’ [der]~[din] ‘door’ (Shoemaker 1940:10, 12, 13, 63, 64).

\(^{25}\) Shoemaker’s list of 529 words not found in Marcus Lambert’s 1924 Pennsylvania German dictionary cannot be taken as a list of dialect contrasts, but rather as an indication of the incomplete nature of Lambert’s work (see, e.g., Shoemaker 1940:iii). A reprinting of this list (Beam 1981) includes some annotations by a Lancaster (PA) Amish person, and these may indicate possible dialect contrasts between Arthur and Lancaster.
Schlabach 1980 provides a description of the phonology of Deitsch as spoken in the Holmes County, Ohio area and makes occasional comparisons with Deitsch in other parts of Ohio—especially the Madison County dialect of his wife—and in Pennsylvania. He notes, for example, unspecified dialect differences that render a New Testament translation from Pennsylvania "rather unacceptable to the Ohio reader" (1980:3). However, a review of Schlabach's data reveals no features clearly different from the Amish variety spoken in southern Lancaster County, but rather several lexical and morphological affinities, e.g., [æpbað] 'strawberry,' [bræːʃt] '(you sg.) need,' [senʃt] '(you sg.) see,' -li diminutive marker, -i plural adjective inflection.

These three early descriptions of Deitsch in Iowa, Illinois, and Ohio offer little evidence of differences between Midwestern speech islands. A complete comparison is not possible given that only Shoemaker's study provides a comprehensive picture of the phonology, morphology, and lexicon. Still, the evidence indicates that these Midwestern varieties of Deitsch have strong affinities to the Lancaster, Pennsylvania varieties and to each other. Furthermore, there is at least as much evidence for variation internal to each of these communities as there is for variation between them. Of the three, only Schlabach notes a difference within the Midwest—a monophthongal variant of /əː/ in Madison County, Ohio. Ironically, this phonological variant, as we shall see shortly, is now characteristic of the entire Midwest, and thus contributes to the apparent homogeneity of Deitsch in the region. Speaker's perceptions reinforce this view of an undifferentiated variety of Deitsch across the Midwest. In contrast to Frey's observation about Deitsch in Pennsylvania—"...one can notice almost at once what part of
Pennsylvania the speaker comes from by the particular type of Dutch he speaks” (Frey 1985:88)—both Pennsylvanians and Midwesterners acknowledge that the Deitsch of Midwesterners is of little help in identifying their home community or state within the Midwest (Keiser 2001a).

If Midwestern Deitsch is so similar to that of Lancaster County, Pennsylvania, then what is the source of the comment made by Schlabach, and echoed by speakers throughout the Midwest, that Pennsylvania Deitsch is significantly different?

Three recent studies have increased our understanding of variation in Deitsch in the Midwest. Van Ness 1992 and 1995 describe morphological innovation in one Ohio community, while Louden 1997 develops the first list of features characterizing “Midwestern” Deitsch.

In the Holmes County, Ohio area some speakers use non-feminine forms, i.e., masculine or neuter forms, when referring to a feminine antecedent, if the antecedent is a human female (Van Ness 1992, 1995). For example, in possessive constructions, the non-feminine possessive pro-form sei can be used with feminine Schwester as in (1) below.26

(1) non-feminine possessive for feminine possessor: Mei Schwester sei haus
POSS/1sg sister POSS/3sg.m/n. house
‘My sister’s house’

26 The alternation of feminine with masculine/neuter forms is also found in the paradigms for subject/object pronouns and for determiners with personal names (Van Ness 1995:73,75).
The regular possessive construction in Deitsch consists of possessor + possessive adjective + item possessed. The adjective is marked for agreement in gender, person, and number. Thus, the expected form in (1) would be: Mei schwester ihre haus, with the feminine possessive adjective ihre. See (2) and (3).

(2) feminine possessor: 

<table>
<thead>
<tr>
<th>Linda</th>
<th>ihre</th>
<th>haus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linda</td>
<td>POSS/3.sg.f.</td>
<td>house</td>
</tr>
<tr>
<td>‘Linda’s house’</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(3) masculine possessor 

<table>
<thead>
<tr>
<th>Em</th>
<th>man</th>
<th>sei</th>
<th>hut</th>
</tr>
</thead>
<tbody>
<tr>
<td>DET/3sg.m/DAT</td>
<td>man</td>
<td>POSS/3sg.m</td>
<td>hat</td>
</tr>
<tr>
<td>‘The man’s hat’</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Van Ness’ data this change is perceived as a marker of local social networks defined by generation and gender, with younger New Order Amish\(^{27}\) women among the most prolific users of the innovative forms (1995:77-78). This incipient reshaping of the Deitsch system of grammatical gender has no precedent in the varieties spoken in Pennsylvania. The change has been observed in Ontario among the Old Order Amish, though not among Old Order Mennonites (Burridge 1992:234). Even so, speakers appear unaware of the potential for this feature to distinguish Deitsch speech islands from each other. Only during my fieldwork in Iowa in 2001 did a speaker comment that the use of non-feminine forms such as (1) above is typical of speakers from Ohio.

---

\(^{27}\) The New Order Amish groups originated in the late 1960s, splitting off from the Old Order Amish church because of, among other things, their advocacy of stricter moral standards for their youth. Although New Order Amish typically allow greater use of modern technologies such as tractors and telephones, they continue to use horse and buggy transportation and meet in homes for worship services (Nolt 1992:266-8).
Later in this study (section 9.4) we will take another look at this change in progress, to see if it is indeed restricted geographically and thus a portent of dialect differentiation in the Midwest, or if it is spreading across Midwestern Deitsch speech islands, thus reinforcing a distinct and homogeneous regional dialect.

Louden is the first researcher to go on record as identifying a Midwestern dialect of Deitsch.\textsuperscript{28} He lists three phonetic features and one morphological feature as diagnostic of the region which he contrasts directly with Lancaster County, Pennsylvania (see Table 6).

\textsuperscript{28} Louden 1997 does not define what he means by “Midwestern”, but since he uses the term most often in reference to “Midwestern Amish,” it is probable that he has in mind the same region that I have defined at the beginning of this section.
<table>
<thead>
<tr>
<th>feature</th>
<th>Midwest</th>
<th>Lancaster</th>
<th>Earlier Deitsch</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g., Deitsch 'German'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/r/ in syllable-initial and intervocalic positions,</td>
<td>[r] tapped</td>
<td>[ɾ] approximant</td>
<td>[r] tapped</td>
</tr>
<tr>
<td>e.g., Ohre 'ears'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e.g., Balle 'ball’</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>future auxiliary verb</td>
<td>figgere</td>
<td>zeele/zelle</td>
<td>none</td>
</tr>
</tbody>
</table>

Table 6. Proposed features of Midwestern Deitsch (adapted from Louden 1997)\(^{29}\)

Most of these features have been noted by other researchers in specific communities (e.g. Raith 1992:160-1 describes [ɾ] and [ɾ] among Lancaster County, Pennsylvania Amish and Schlabach 1980:39 describes monophthongal /ai/ in Ohio), but Louden is the first to posit a broader areal distribution for them. For some of these features, namely the retention of

\(^{29}\) Louden also notes a difference in naming practices. The Midwestern Amish are more likely to innovate and give their children non-Biblical first names (e.g. Duane, Luann) than are the Lancaster Amish. This is not a linguistic trait per se, but may reflect regional differences in attitudes toward the majority culture which in turn may affect the outcomes of English-Deitsch language contact.
tapped [r] in prevocalic and intervocalic position and the retention of non-velarized [l] in syllable-final position, the Midwest is conservative with respect to the Lancaster varieties and earlier Deitsch in the Midwest. For the other features it is innovative.

Louden offers details of the changes involving /ɑːl/, noting that the sound change is also occurring in Lancaster, albeit in extremely limited environments (1997:81).

Lancaster rule:  Monophthongize only before liquids

/ɑːl/ > [ɛː]/[ɬ, l]  e.g., [mɛː hɛː] ‘we marry’
[ɑː] elsewhere  e.g., [dɑːtʃ] ‘German’

Midwestern rule:  Retain diphthong only before unstressed central vowels.

/ɑːl/ > [ɑː]/[ə, ə]  e.g., [mɪə həərə] ‘we marry’
[ɛː] elsewhere  e.g., [dɛːʃ] ‘German’

Figure 6. Phonetic environments for the monophthongization of /ɑːl/ (Louden 1997)

The significant advance in the monophthongization of /ɑːl/ in the Midwest along with the innovation of approximant [ɬ] in Pennsylvania are the two features most often cited by Deitsch speakers as differentiating the Midwest from Pennsylvania. In addition to this
there is a small number of native lexical items which differ between the two regions, e.g., Midwest [ʃpɔtʃə] v. Lancaster [hɔbʃt] ‘autumn.’ Finally, there is the higher rate of lexical borrowing from English in the Midwest, a phenomenon noted in section 2.1 above. It is this bundle of lexical and phonological contrasts that make up the dialect division most salient to Deitsch speakers today. It is the homogeneous distribution of the Midwestern variants of these linguistic features across Deitsch speech islands from Ohio to Kansas that this study seeks to explain.
CHAPTER 3

LINGUISTIC DIFFUSION ACROSS SPEECH ISLANDS: INTERNAL AND EXTERNAL CONSTRAINTS

In this chapter I consider various explanations for the emergence of a homogeneous variety of Deitsch in Amish communities throughout the American Midwest. First, I review proposals for how linguistic structure (both universal and language family-specific) might motivate parallel independent development of language in different speech communities. Linguistic universals, though suggestive, do not provide sufficient detail about changes, and appealing to the vague Sapirian notion of drift obscures the crucial phonetic and social explanations for changes such as monophthongization of /aɪ/ to [ɛi] in Midwestern Deitsch. Then I turn to social and geographic constraints on the diffusion of linguistic change. In the third section I explore the possibility that Midwestern Deitsch simply preserves linguistic features found in the varieties of the Amish who settled in the region. In the fourth section I consider the traditional wave model for the spread of linguistic change through time and space and the possibility that peripheral isolated communities such as those of Midwestern Amish might be rather islands of preservation where relic forms of earlier submerged variation persist. Next, I
explore proposed models of dialect contact that allow for geographic non-contiguity such as the gravity model and insider/outsider contact. This leads into a discussion of methods for studying speaker interactions between speech islands at the macrolevel (transportation and communication networks) as well as the microlevel (social network models for the preservation of vernacular forms and the spread of linguistic change). Finally, I consider the degree of similarity of the context of contact with English speakers in effecting linguistic changes in different Deitsch speaking communities.

3.1 Internal (linguistic/structural) constraints on language change

Weinreich, Labov, and Herzog 1968 hold that “...the state of a language may itself function as a determinant of changes within it” (123).\textsuperscript{36} That is, the outcomes of linguistic change, at least in the short run, are not entirely unpredictable but are constrained by the structures of a language’s subsystems. There is, thus, an inevitable intertwining of the synchronic and diachronic study of language. What we know about the possible structure of a language at a particular point in time informs our understanding about how languages might change. What we know about the possible changes a language undergoes over time informs our understanding of the structure of languages. Proposed structural constraints on linguistic change have appealed both to universal and to language specific aspects of linguistic structure.

\textsuperscript{36} Weinreich, Labov, and Herzog follow the lead of Martinet in making this statement which serves also as a critique of Bloomfield’s unwillingness to look beyond opaque social factors for explaining language change.
3.1.1 The inadequacy of proposed universal constraints on linguistic change

The search for universal constraints on linguistic change has yielded few strong predictive results, and the general tendencies it has revealed are of limited help in explaining how language varieties in isolated speech islands could evolve in very similar ways.

An example of a proposed universal constraint can be found in the “theory” of grammaticalization. Some linguists suggest that grammaticalization—the development of content words into function words/clitics, summarized in the statement “today’s morphology is yesterday’s syntax” (Givón 1971)—is a unidirectional, diachronic trend constraining language change (Hopper and Traugott 1993). The development in Midwestern Deitsch of an auxiliary verb marking future tense (*figgere, borrowed from English ‘to figure’[^31^]) might be seen as evidence of such a trend. But there are counterexamples to the claim that the only direction of change involving grammatical elements is from less grammatical to more grammatical[^32^]. Too, there are fundamental cognitive processes such as semantic extension and analogy that can account for the same changes (Joseph 2001, Janda 1999 and 2000).[^33^] Thus, the movement of a word such as

[^31^]: Previous to this change, a similar development—the emergence of a future auxiliary from the verb *zahle* ‘to count’—took place in both the Midwest and Pennsylvania.

[^32^]: In the Deitsch of Mennonites in Ontario, Burrage (1998) shows that the preterite subjunctive of the modal verb *wotte* ‘will’ is reanalyzed as a full-lexical verb ‘wish.’ Janda (1999) provides evidence that the Old English genitive suffix –*e* is reanalyzed as a possessive determiner *his* in constructions such as *Gwenayfer his love* ‘Guinevere’s love’. These counterexamples indicate that, in fact, today’s morphology can become tomorrow’s syntax and today’s syntax can become tomorrow’s lexicon. Hopper and Traugott (1993) acknowledge the existence of a few counterexamples, but suggest that the strongest type of counterexample—“evidence that grammatical items arise full-fledged... without a prior lexical history”—does not exist (126), however, see Joseph 2001 for just such a counterexample.

[^33^]: It is possible to conceive of grammaticalization not as a theory, but rather as a convenient cover term for a set of processes such as semantic extension and analogy which often function together to produce change.
"figgere" from lexical to grammatical status is not an inevitable process but simply an unsurprising universal tendency, and the details of the change (i.e., why the future tense is the locus of the change, and crucially why this particular lexical item was selected and why the change should have happened in the Midwest and not in Pennsylvania) are not accounted for by grammaticalization. These details are better explained by considering the structures of the specific languages involved and the processes of semantic extension and borrowing available to Deitsch speakers.

We turn then to proposed universal constraints on sound change. These can be fit into two general categories: constraints that make reference to (abstract) linguistic structure and those that make reference to the "physical phonetic character of the sound involved" (Ohala 1993:265), and thus to physiological constraints on production and perception. A problem with abstract structural constraints is that they are, paradoxically, unconstrained in that they often lack the independent evidence that articulatory, acoustic, and perceptual phonetics supply.

Louden makes implicit reference to a universal structural constraint of symmetry in the front and back series of (long) vowels as a means of accounting for the monophthongization of /au/ to /e:/ (1997:81). Weinreich, Labov, and Herzog (1968:175) also recognize front-back symmetry of the vowel space "as one of the near-universal conditions of linguistic change." However, in the same discussion they note that sound
changes occur which undo symmetrical relations, and that sound changes that repair symmetry may lag behind by decades, thus making the proposed causal structural relationship “more remote and less compelling.” Figure 7 and Figure 8 provide examples of languages with vowel asymmetrically distributed.

\[
\begin{array}{c}
i \\
e \\
o \\
a
\end{array}
\]

Figure 7. Klamath (Penutian) vowel space

\[
\begin{array}{c}
i: \\
e: \\
o: \\
a:
\end{array}
\]

\[
\begin{array}{c}
u: \\
o: \\
a:
\end{array}
\]

Figure 8. Dialectal German vowel space

\[34\] Weinreich Labov and Herzog consider specifically the raising of (eh), i.e., /æ/ followed decades later by the raising of (oh) /a/ in New York City.
Klamath lacks high back round /u/ in opposition to /i/; also dialectal German, which has an asymmetry opposite that of Deitsch preceding the monophthongization of /a1/ lacks a low back /ɔː/ as a counterpart to long front /eː/ (Hock 1991:155). Early Attic-Ionic is an example of a language that underwent changes that eliminated front-back symmetry: high back vowels were fronted resulting in a system with a three height contrast in the front vowels and only two in the back vowels (see Figure 9 and Figure 10).

\[
\begin{array}{ll}
\text{i:} & \text{u:} \\
\text{e:} & \text{ɔ:} \\
\text{eː} & \text{ɔː} \\
\text{a aː}
\end{array}
\]

Figure 9. pre-Attic-Ionic vowel space (Hock 1991:155)

\[
\begin{array}{ll}
\text{i:} & \text{y:} \\
\text{e:} & \text{ɔ:} \\
\text{eː} & \text{ɔː} \\
\text{a aː}
\end{array}
\]

Figure 10. Early Attic-Ionic (Hock 1991:155)
There appears to be no principled means for predicting when a particular vowel system will lose or regain its symmetry. Indeed, tendencies toward vowel space symmetry are epiphenomenal and better accounted for with reference to maximal perceptual contrast (Liljencrants and Lindblom 1972).

A more interesting proposed universal trend in sound change is found in studies of chain shifts in vowel systems. The nuclei of long, tense vowels have been shown to rise on a peripheral track, either up the front of the vowel space, or up the back (Labov 1994:116, 122). This tendency has been recorded in languages as disparate as Albanian and Akha. The fronting and raising of the nucleus of /æ:/ to [ɛ:] (with concomitant loss of the offglide) in Midwestern Deitsch speech islands follows this trend, though there is not yet sufficient evidence to show that this movement forms part of a larger chain shift.

Proposed principles of chain shifting, inasmuch as they appeal to universals of human physiology in the production and perception of vowels (Ohala 1993 and Labov 1994:221), apply to a linguistic subsystem with a restricted number of possible contrasts, and constitute “systems” of structurally-motivated changes based on broad cross-language surveys, have some promise of explanatory value. Even so, given the general formulation of these principles, one would expect that the details of the chronology of a change such as the monophthongization of /æ:/—not to mention the linguistic and social factors which condition the change—might well differ significantly between speech islands. Indeed, major differences between Pennsylvania and the Midwest with respect to this change (see section 2.3.2) have been observed, but, as we shall see in chapter 8, there
remains the unexpected and unexplained near-uniformity of the chronology and linguistic and social conditioning of the monophthongization of /au/ in Amish communities across the Midwest. A general universal principle cannot account for this phenomenon.

The same limitation applies to another structural account based on broad cross-linguistic evidence: patterns of vowel coalescence. Parkinson shows that when sequences of low vowel + high front vowel (often across morpheme boundaries) resolve into a single vowel containing properties of both input vowels, the result is the lowest front vowel in the language’s inventory (1996:93-95). In a language such as Deitsch, then, the sequence /au/ would be predicted to yield /ae/. Again, though, this general prediction is not sufficient to explain the similarities in the timing and conditioning of the sound change in question here.

A more specific variety of “universal” constraints has been proposed in a recent study of the vocalization of /l/ in Australian and New Zealand English (Horvath and Horvath 2001). In these studies, speakers in nine urban centers show identical patterns for the relative strength of the conditioning environments which favor the vocalization of /l/. For /l/ as the first element in a cluster, for example, the following environment that is most favorable to vocalization is a dorsal consonant while the least favorable environment is a coronal consonant.35 This holds true for speakers in every city in the study. Even so, a universal constraint which regulates the spread of a change across linguistic

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35 There is no constant quantitative relationship between the conditioning factors in Horvath and Horvath’s data (e.g., it is not the case that dorsals always favor /l/ vocalization twice as much as coronals); only a qualitative relationship. Thus dorsal environments favor vocalization in every city, but in some the effect is huge, while in others it is quite small.
environments does not require that the change occur at the same time in every dialect—or even that it occur at all. In fact, in the Horvath and Horvath study it was the geographic factor group which had the strongest effect on vocalization of /l/, that is, the actual rate of vocalization varied greatly between speakers from different cities.\(^{36}\) A universal phonological constraint of this sort, specific though it may be, would still fail to account for the similar chronology and rates of the monophthongization of /æu/ across Midwestern Amish communities.

The absence of universal constraints on linguistic change which are both strong and specific is not surprising. On the contrary, we should expect there to be a very limited role for universal processes in the explanation of linguistic change, because, on the whole, stability—not change—is the rule in language, and also because it is clear that languages do not all change in the same way (else all languages would be the same). This is also in line with the predictions of a “Big Bang” theory of sound change (Janda and Joseph 2001a and 2001b). This theory builds on the insights of both Ohala and Labov in greatly circumscribing the duration of purely phonetic conditioning on sound change in a highly specific geographically and chronologically localized context—the “point of origin.” After this point, a general trajectory may be set for the spread of the sound change through the phonological system and the speech community, but the change is thereafter governed largely by social factors.

\(^{36}\) For example, the rate of vocalization of clustered /l/ ranged from 6% of tokens in Melbourne to 57% of tokens in Christchurch (Table 2 in Horvath and Horvath 2001).
3.1.2 The inadequacy of language specific constraints (drift) on linguistic change

Linguistic change which has taken place in similar ways in two or more related language varieties has led some researchers to postulate another level of linguistic constraints which are not universal but operate only within language families or subgroupings of languages. Thus, the innovation of Deitsch monophthongal /au/ in multiple Midwestern Amish communities might be attributed to a strong tendency for Deitsch, or for German dialects in general to undergo such a change. The most well known term for parallel independent innovations operational within a group of related languages is “drift,” an expression coined by Sapir in the early 20th century.

In a chapter entitled “Language as a Historical Product: Drift” Sapir writes with poetic flourish: “Language moves down time in a current of its own making. It has a drift” (1921:150). Although this statement starts out as a simple metaphor for linguistic change—change which happens even though we might expect random individual variations in production to cancel each other out\(^\text{37}\)—here we are concerned with Sapir’s later formulation of drift as a particular pre-ordained evolution that the members of a language family undergo. As he states later in the book: slower “fundamental” changes work so that “languages long since disconnected will pass through the same or strikingly similar phases” (172). The examples he provides are those common to much of Indo-

\(^{37}\) The application of chaos theory to linguistic change (Butters 2001 and Schneider 1997) helps to resolve this conundrum (noted also in Hock 1991). Random variation in (the individual’s and the speech community’s) production of, e.g., phonetic tokens, must eventually yield apparent structure and/or direction. Once random variation—guided, of course, by phonetic naturalness—results in a change and becomes salient at some level to speakers, it is available for social and linguistic factors which may aid or end its spread (Janda and Joseph 2001a and 2001b).
European: the loss of morphological case marking and the development of invariant word order (also umlaut, specific only to Germanic). 38

The reduction of a more elaborate case system in all varieties of Deitsch is a change that appears to mesh with Sapir’s statements about drift. Though contact with English can also be invoked to account for the change, similar innovations can be found in non-contact German varieties in Europe as well as in other contact varieties of German (Keel 1994), so an exclusively contact-based explanation is not necessary. Furthermore, the Deitsch varieties spoken in the Amish settlements of Holmes County, Ohio and Kalona, Iowa, though 500 miles apart from each other, show nearly identical patterns of age-distributed usage of dative case marking (Keiser 1998). What is more, Deitsch in Pennsylvania also follows the same pattern (Huffines 1989). But including Pennsylvania in the same linguistic “drift” as the Midwest with respect to dative case marking poses a problem for a drift-based account of a unique Midwestern variety of Deitsch. That is, can drift be constrained so that it applies only to a subset of Deitsch dialects—in this case to those in the Midwest which have the phonological innovation of monophthongal /aɪ/?

The idea that structure can explain or predict linguistic change has been revived and applied to phonological change in Trudgill et. al.’s account of Southern-Hemisphere

38 Malkiel 1981 reviews both Sapir’s and other linguists’ early references to drift. Many scholars employ drift in Sapir’s original sense (that is, as a metaphor for gradual internally-motivated linguistic change), e.g., Weinreich, Labov and Herzog 1968, Thomason and Kaufman 1988, among others. But, some clearly define drift in mysterious teleological terms, e.g., Antilla 1989: “an observable tendency toward a goal” (194) and “conspiracy” (200). Perhaps because of the messiness of the term, or perhaps because of its dubious explanatory value, four recent textbooks in historical linguistics (Hock 1991, Labov 1994, Hock and Joseph 1996, and Campbell 1999) avoid the term altogether.
English. Certain phonetic changes common to New Zealand, Australia, and South Africa are said to have resulted from inherited "shared tendencies or propensities" [authors’ emphasis] for such changes in their phonetic and phonological structure (2000:112).39

Trudgill notes that the Southern Hemisphere English dialects (Australia, New Zealand, South Africa) share the following three phonetic features: tensing of /l/ to /i:/ in unstressed word-final position as in happy, reduction of the phonetic distance between the two elements of diphthongs (e.g., /æʊ/ to /æə/ in mouth), rounding of the vowel in words such as nurse (i.e., /ɜː:/ to /œə/). Given the absence of these features in records from New Zealand dating back to the mid-19th century, Trudgill suggests that these three varieties have inherited in their phonetic/phonological structure a propensity for such changes.

The time depth for linguistic change in Deitsch in the Midwest is very similar to that of English in the southern hemisphere, and one might invoke an argument similar to Trudgill’s to explain developments shared across Midwestern Deitsch speech islands. Such an argument would posit that the varieties of Deitsch that were transplanted to the Midwest in the 19th century all inherited a vowel system whose structure favored the monophthongization of /æʊ/ to /œə:/.  

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39 Trudgill et. al. in fact note two types of changes attributable to drift: continuations of changes begun in the parent language and "the development of similar but new changes and hence similar but new characteristics, even after separation" (112). They note that some universal tendencies (Labovian vowel shifts) may be at play, but also invoke "much less well understood" language-specific changes (113).
However, proposals of this sort, which suggest that structural constraints can direct change within a language family, lack explicit explanatory power in that they appear to distance actual speakers from the language change equation.\textsuperscript{40} According to Joseph 1992, “drift” is better conceived as a post-hoc descriptive label for changes that adhere to substantive language universals or naturalness conditions.\textsuperscript{41} This less mysterious conception of drift attributes no causative or predictive power to drift. Instead it points to a more plausible account for patterns of “parallel independent innovation” in geographically and socially distinct language varieties (such as those in Deitsch speech islands)—an account which foregrounds the role of speakers in a particular sociohistorical context and (in this case, phonetic) naturalness.

The situation described by Trudgill for southern hemisphere Englishes raises interesting questions about the relative roles of universal tendencies on the one hand and the role of diffusion via contact between speakers of these varieties (esp. Australia and New Zealand) on the other. Trudgill himself posits a plausible natural account based on acoustic phonetics for the vowel in \textit{nurse}: lip-rounding preserves some of the formant structure of the (previously) /ɪ/-colored vowel. It is possible that there exist similar cross-linguistic phonological/phonetic constraints for the other two features, thus rendering Trudgill’s language-specific “drift” hypothesis uninteresting. In the absence of explanations based (at least partially) on phonetic universals/naturalness, we must

\textsuperscript{40} A problem Sapir acknowledged himself (1921:154-5).
\textsuperscript{41} Joseph 1992 summarizes and refines earlier statements by Janda (1990) and in collaboration with Janda (Janda and Joseph 1987). Weinreich Labov and Herzog (1968:140-1) also suggest that a cross-linguistically robust “system of trends” [emphasis in original] is needed before we can assign any explanatory value to accounts based on drift.
consider social factors such as the settlement histories and degree of social isolation/contact between English speakers in South Africa, Australia, and New Zealand. These external factors form the subject of the following section.

3.2 External (social and geographic) constraints on language change

The apparent failure of proposals based solely on internal constraints, i.e., on the structure of language, to account for homogeneous linguistic change across speech islands leads us to consider proposals which look outside of linguistic structure proper to the social and geographic particulars of speaker interactions. In fact, the most common explanation for the occurrence of the same linguistic change in two communities is not parallel independent innovation but rather the spread of a single change from one community to another.

The diffusion of linguistic change occurs when innovating speakers interact regularly and intensely with other speakers.\(^\text{42}\) Occasionally speakers in these interactions modify their speech in the direction of their interlocutor’s in order to be (clearly) understood, but more often they do so because they feel there is something to be gained (empathy, respect, face, etc.) by minimizing, if only temporarily, the social and linguistic distance that separates them from their interlocutor.\(^\text{43}\) These modifications need not be conscious

\(^\text{42}\) With the exception of lexical changes which may occur with sporadic or isolated interaction, see, e.g., ‘surferspeak’ in the Midwest in footnote 57.

\(^\text{43}\) Trudgill 1986 discusses at length this notion of “accommodation.” The same motivations apply to both change within a single community and change across communities (i.e., dialect contact), as Kerswill notes: “In both cases we’re dealing with individuals modifying their vernacular for social-psychological reasons” (1996:181). Some researchers have tried to keep separate the two scenarios, e.g., Wrede, in his 1919
decisions, since linguistic change is often gradual and, as Labov notes, often "the only evidence for such acts of identity is simply the fact that successive generations change their ways of speaking" (Labov 2001:xv). Thus social factors are central to the spread of linguistic change, and in this section I consider studies that have tried to model how social and geographic factors account for changes shared across speech islands.

This is not to say that there are no cognitive/linguistic factors at play in the social transactions that are the locus of dialect contact. Trudgill 1986 notes that in order for speakers to adopt a linguistic variant introduced by speakers from another speech community, the variant must be salient and learnable. Also, variants that simplify the structures of one or both dialects in contact are favored. The monophthongization of /aʊ/ in Deitsch meets at least the first two of these criteria: it is salient (indeed the focus of overt commentary by speakers) and as a regular sound change is not difficult for speakers of all ages to acquire.\(^4^4\) It is not clear that the change [aɪ] to [ɛ] simplifies Midwestern Deitsch in any meaningful way, and we might just as easily view it as a complicating change. While it is true that the change reduces the number of diphthongs in Midwestern Deitsch to only one (that being /əʊ/), there is no reduction in the phonemic inventory, and in addition there is the real possibility of homophony resulting from incipient phonemic merger (see section 8.12). In short, linguistic factors cannot of themselves restrict the

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\(^{44}\) Kerswill (1996:199-200) proposes a nine-stage "difficulty hierarchy for the acquisition of second dialect features." Among the features that he suggests as being acquirable throughout one's lifespan are: lexical borrowings, regular sound changes, vowel mergers, and morphologically conditioned changes. Among those restricted to pre-adolescence are prosody, new phonological oppositions, and lexically unpredictable phonological rules.
spread of monophthongal /a1/ across speech communities via dialect contact. For the “why” and the “how” of the diffusion of this variant, we then look to social and geographic factors.

First, therefore, I investigate accounts for dialect emergence which side-step the question of the diffusion of linguistic change by suggesting that innovative variants might already have been present in one or more of the specific language varieties that served as inputs to the new dialect. The study of settlement histories foregrounds social factors such as numerical superiority and the attitudes of speakers of different varieties toward each other. Next I review the traditional wave model for linguistic diffusion which assumes geographic proximity as a prerequisite for speaker contact. Speech islands do not fit neatly into a wave model, but they might be considered peripheral areas which preserve relic forms, though this cannot account for innovations such as monophthongal /a1/ in multiple Midwestern Deitsch-speaking communities. I then examine the factors that contribute to the development and maintenance of geographically and socially isolated speech communities. Models of linguistic diffusion which take into account geographic discontiguity are the gravity model and insider/outsider contact. The latter approach leads into a discussion of approaches to linguistic diffusion which model at the microsocial level the networks in which individuals interact. After reviewing the insights and limitations of the current network approaches, I offer in the next section, my multi-pronged research design for the investigation of linguistic diffusion across speech islands.
3.2.1 Resistance to change: settlement history and common input dialects

One possible explanation for the apparent homogeneity of speech island varieties such as those that constitute Midwestern Deitsch is to argue that these varieties have always been very similar and that not enough time has passed to allow for them to diverge from each other. This type of explanation looks to the settlement histories of the communities in question for evidence of common patterns of immigration—which would suggest, in turn, commonalities in the dialects which served as inputs for Deitsch in various Midwestern Amish settlements. This hypothesis essentially reverses the research question at hand, asking instead why one should expect Midwestern speech islands to be different from each other in the first place.

An example of the role of settlement histories in the parallel development of noncontiguous dialects can be found in American English. In the 17th and 18th centuries English speakers from southeastern England settled in the American northeast and south, while speakers from northern areas of England and the Scots-Irish predominated in the mid-Atlantic region. The systematic differences in vocabulary, pronunciation, and grammar already present or emerging in these dialects took root on the east coast of America. For example, r-lessness (i.e., the loss of /r/ in coda position) in southeastern English dialects spread also into the American south and northeast, so that these two areas, separated by a mid-Atlantic region of speakers of r-ful dialects, evolved in similar ways with respect to this feature.45

45 Of course the dialects of the American south and northeast have also, over the course of three centuries, diverged from each other in many ways as a result of internal developments and contact with other dialects (e.g., Scots-Irish in the Appalachian south).
3.2.1.1 “Majority rules”: numerical superiority as social constraint on the spread of linguistic change

Crucial to the above account of r-lessness in American English dialects are the identification of an input dialect or dialects containing the feature in question and the demonstration that speakers of these dialects figured prominently in the emergence of the new world varieties. All other social factors being equal, the prominence of a given dialect in a contact situation is usually determined by the numerical superiority of its speakers. Since changes in (im)migration patterns can result in changes in the relative numerical dominance of speakers of a particular input dialect, sometimes a particular time period (usually early on) in the emergence of the new dialect is identified as a critical, formative stage during which the major features of the new variety gelled. The impact of the dominant language variety at this formative stage has been dubbed the “founder effect,” a term borrowed from population genetics (Mufwene 1996).

In Deitsch dialectology, the numerical superiority of certain German immigrants in colonial Pennsylvania can explain some of the regional differences (primarily lexical) in Pennsylvania. For example, Swiss forms, such as the diminutive -li, are preserved in Lancaster where Mennonites and Amish of Swiss descent settled in great numbers (see sections 5.4 and 6.2). But this “founder effect” in Lancaster Deitsch is limited; it does
not extend, for example, into phonology which reflects rather the numerical superiority of Palatines in Pennsylvania in general.\textsuperscript{46}

In order to put forward a strong case for settlement histories as the basis for the homogeneity of Midwestern Deitsch speech islands, we must first demonstrate similarities in both the inventory of input dialects and the number of speakers of these dialects relative to each other. We must also show that the settlement histories of the Midwest differed from that of Pennsylvania. These questions will be explored in chapters 6 and 7. Then we must show that the features in question are present in one or more of the input dialects, preferably in one which is numerically dominant or at least well represented in the settlement. Given that the data show the monophthongization of /au/ to be a recent change in progress (i.e., older speakers retain diphthongal /au/), we predict that we are not likely to find a precedent for this feature in the input dialects.\textsuperscript{47}

This will be explored in chapter 10.

\textsuperscript{46} The distinctiveness of the obsolescent Pendleton County, West Virginia dialects of Deitsch may be accounted for by assuming a founder effect, that is a unique combination of dialect speakers who first settled the area in the 18th century during the years in which leveling was underway in Pennsylvania (Van Ness 1990:14). Van Ness notes several phonological and morphological distinctives in the two West Virginia communities including the retention of /au/ in some words where Deitsch has /e/ as in /hans/ 'hot' and /fluaj/ 'meat' (32), the retention of intervocalic /bl/, where Deitsch weakens to /w/ as in /gloβel/ 'I believe' (52), and the innovation of a past participle prefix de- where Deitsch has ge-.

\textsuperscript{47} In the absence of an input dialect with monophthongal /au/, we might envision yet another possibility: variable realization of /au/ in the input dialects. In this scenario, one could propose that monophthongal variants were present, though infrequent in the input dialects and did not become socially salient until the mid 20th century. This proposal is difficult to disprove.
3.2.1.2 Shallow time depth: time as a constraint on linguistic divergence

Change takes time. Though rate of linguistic change is variable and ill-understood, one noted text on dialectology suggests that any time span less than two centuries is hardly sufficient for significant linguistic divergence (Trudgill and Chambers 1980:108). Midwestern varieties of Deitsch have been in existence for just less than two hundred years. If it can be shown that Midwestern speech islands have settlement histories that unite them to each other and that distinguish them from Pennsylvania and that the distinctive Midwestern linguistic variants were present among the input dialects, then the linguistic homogeneity of the Midwest would hardly be surprising. Instead, it would be the features showing divergence in the Midwest over such a short lifespan that would be of greater interest. Indeed the notable overall homogeneity of Deitsch is also a result of its relative youthfulness as a distinct variety of German. Given that Deitsch emerged between 200-300 years ago, we are studying a relatively shallow time depth in terms of linguistic history.

The study of settlement histories may provide a crucial piece of the puzzle of homogeneous Midwestern Deitsch. Still, we cannot discount the potential for independent changes, as insignificant as they may appear to the outsider, to take place in separate Amish communities over the past two hundred years. Also, we must consider

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48 In fact, we know very little about the rate of linguistic change. Findings such as lexicostatistic studies which suggest that basic vocabulary changes at the rate of 19% every 1000 years are not helpful since, for example, all of the vocabulary turnover for a particular language could conceivably be concentrated into a short time period and then remain inert for centuries.

49 This proposal appears to assume the absence of significant external motivation (e.g., contact with speakers of other varieties).
the possibility that linguistic innovations common to these communities occurred first in one and then spread to others, or speeded up an already occurring change in others.

3.2.2 The wave model of the spread of linguistic change

The spread of linguistic change across (geographic and social) space and time has been likened to the waves created when a stone is thrown into a quiet pool. The community in which the change begins is equated with the point of entry of the stone. The change first spreads to immediately adjacent communities and then to those farther out, losing strength (i.e., fewer speakers and lower frequency of usage), generality and (phonological) regularity as it spreads (Hock 1991:437). The wave model of the spread of linguistic change thus includes dimensions of space, time, and energy. Some changes advance more slowly than others; they spread into fewer speech communities and eventually peter out before they reach peripheral or isolated areas (which, as a result, may retain older forms) leaving isoglosses to mark their passing.50 Crucially the wave model invokes the notion of geographic adjacency as a prerequisite for sufficient social contact to pass on change.

Because of their physical and social isolation, speech islands do not fit neatly into the wave model of linguistic change. At the risk of confusing the metaphors, let us imagine

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50 E.g., the “Rhenish fan” which reflects the variable spread of different innovations that were part of the Old High German consonant shift (see, e.g., Hock 1991:432-455). For an example taken from Deitsch dialectology, consider Seifert 1971’s implicit assumption of the importance of travel routes and the wave model for the diffusion of change. He holds Berks County to be central geographically and linguistically within southeast Pennsylvania and considers the Berks County dialect to be the most completely leveled dialect of Deitsch with the “peripheral” dialects of Lancaster to the south and Lehigh Valley to the east retaining distinctive characteristics.
speech islands as ponds scattered across the countryside: throwing a rock in one pond does not cause waves in a pond a few mile away. In the same way, speech islands might be considered beyond the periphery of influence of linguistic changes underway in the larger ancestral language region. The Deitsch dialects in Pendleton County, West Virginia serve as examples of extraperipheral communities in the wave model to which certain changes, e.g., weakening of intervocalic /b/ > /w/ in the larger Pennsylvania region, never spread (Van Ness 1990).

Even if the social isolation is not complete, the place of speech islands in the wave model is usually perceived to be not at the active “core” area of change, but at the conservative periphery where the effect of change is late, incomplete, or even nonexistent (Chambers and Trudgill 1980:183). Indeed, speech island varieties are frequently offered as examples of linguistic stability, having preserved relic features that have not been retained in the language’s main territory.\(^{51}\) The isolation of the speech island from the currents of change in the main territory is the most frequently cited reason for the preservation of archaic features. Schirmunski (1930), for example, suggests that differences in the retention of “pure” dialect features in German speech islands in the former Soviet Union can be explained by differences in their degree of isolation.\(^{52}\)

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\(^{51}\) Wiesinger, for example, notes that the dialect of Zimbrische der Sieben Gemeinden preserves lexical items such as [kœːdən] sagen ‘to say,’ distinctions in final, unstressed vowels (e.g., [kœː ðə] Käse ‘cheese’, [hano] Hahn ‘rooster’, [tsunna] Zunge ‘tongue’) and a distinction between Middle High German is/ and ly/ (e.g., between the final sounds in haus v. aua) among others (1973:369). The phonetic transcriptions here are Weissinger’s.

\(^{52}\) Schirmunski notes that the early 19th century Schwabish colonies in Transcaucasia and along the Azov Sea were separated by a great distance from other German settlements (and from the “general church organization”) for a long time. Unfortunately, Schirmunski specifies neither the geographical nor social distance separating these communities, nor does he specify what is meant by a “long” time, though we can assume from the starting date of the settlements (1818-22) that it was no more than one hundred years. At
But there is a problem with attributing linguistic stability to peripheral or isolated status. First, neither peripherality nor isolation prevents linguistic change. Hock (1991:440-41) notes that peripheral areas are only “relic areas” with respect to particular changes that have impacted the so-called core area. With respect to other linguistic features, communities on the periphery may, in fact, be innovative. The very notion of a “core” area is defined relative only to a particular linguistic change. Too, non-peripherality does not necessitate linguistic change. Once a change has spread to another region it is, in principle, disconnected from its point of origin. That is, linguistic change takes place at the local level, and one instance of contact and diffusion of linguistic change between two regions is not evidence that any or all later changes in one of the regions must impact the other. This is true, for example, for the timing and spread of particular changes in the Old High German sound shift (Hock 1991:435-439).

Depending upon how one interprets the relative isolation of speech islands, there are two possible predictions that the wave model makes for the development of Deitsch in the Midwest. One prediction would be that changes that originate in the “core” Pennsylvania region or in one Midwestern speech island simply would not spread to other islands. A less bold prediction would be that changes would spread but would be most vigorous in the oldest communities and in those geographically closest to the point of origin.

the time of his research, isolated towns such as Elisabethial preserved old diphthongs /ao/, rather than standard /au/ in words such as /haax/ hoch ‘high,’ whereas less isolated towns such as Helendorf had lost the distinction.
The data on the change of /au/ to /e:/ in Midwestern Deitsch do not match either of these predictions. Instead we note the appearance of the same innovation in multiple “peripheral” areas, i.e., speech islands, across the Midwest. It is possible that additional data collection from other Midwestern speech islands might reveal quantitative differences in the spread of this sound change which could be interpreted to indicate the late arrival of the sound change to a speech island relatively distant from the point of origin. But, to this point, the Midwestern data for monophthongal /au/ do not show nearly the sharp degree of differentiation between speech islands as do, for example, the data on vocalization of /l/ in Australian and New Zealand English (Horvath and Horvath 2001a, 2001b).\(^{53}\)

I now turn to accounts that explicitly address the geographically discontinuous spread of linguistic change.

3.2.3 Assumptions about isolation

Exploring the spread of linguistic change between geographically noncontiguous speech communities requires a close examination of the relationship between geography and social isolation.

Mattheier’s definition of a speech island (see section 1.1) does not attempt to clarify what it means for a speech community to be “cut off” and “separate”, in other words, isolated.

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\(^{53}\) There is also the confounding factor of “place effects” (i.e., differences between localities in the social evaluation and linguistic conditioning of a particular linguistic change) noted by Horvath and Horvath 2001 which further problematizes the wave model.
This is no small matter, because a basic assumption about linguistic change is that isolation leads to social and linguistic divergence, while mobility leads to linguistic convergence (Weinreich 1953:viii). This effect has been called a "natural linguistic law" (Chambers 1995:66); self-evident to the point that isolation is rarely defined or measured.

Geography, inasmuch as it can account for patterns and intensity of human interaction, has been central to explanation in dialectology, and definitions of isolation often make reference to geographic distance. For example, the gravity model for the spread of linguistic change across discontinuous space explicitly incorporates geographic distance in its formulation. But it is clear that the isolation of a language variety entails the isolation of a community of people, and social isolation is only partially dependent upon geographic isolation. For example, the relative social isolation of speakers of African American Vernacular English from speakers of standard varieties of English is dependent upon attitudes (of both Euro- and African-Americans), cultural practices, and economic opportunities just as much as geographic isolation in segregated neighborhoods.

Wolfram (forthcoming) lists the following collection of sociohistorical circumstances that contribute to isolated speech communities: geographic remoteness, small population (often only in the hundreds), economic autonomy, passage of time (often a century or two, though sometimes just a couple generations), historical continuity of the population, relatively little in-migration, social subordination to a dominant regional or national variety, strong positive group identity, and, if there is open communication with the outside, a strong focus on local linguistic norms. Other researchers have defined group
membership—and by implication relative social isolation from other groups—with reference to predefined social categories, i.e., age, ethnicity, occupation, etc. (Labov 2001:58-68).

All of these circumstances may contribute to, but are neither necessary nor sufficient conditions for isolation. If we accept that the acquisition and spread of linguistic norms occurs only in the course of regular "intimate" face-to-face interaction between speakers (Rickford 1999:106), then isolation must be defined and measured not in terms of geographic distance nor of social categories but in terms of the frequency, duration, and intensity of these face-to-face interactions. The development of discontinuities in the regular communication networks which allow for person-to-person interaction is what is crucial here. But what counts as a "discontinuity?" What is a "regular" communication network?

The gravity model discussed below incorporates these interactional factors only indirectly (via the factor "population"). Social network models for the spread of linguistic change (e.g., Milroy and Milroy 1985, Milroy 1987, and Eckert 2000), consider the actual physical and social locus of speaker interaction, thus they would appear better suited for the modeling of isolation. Descriptions of social networks and communities of practice, however, typically include only those people with whom an individual has the most frequent interaction. As a result, they exclude as irrelevant any liminal contact with speakers from non-local speech communities, i.e., other speech islands (Trudgill's
proposed insider/outsider contact is an exception to this). But this is precisely the kind of contact that is crucial to this study.

The following sections are concerned with modeling the development and maintenance of social (read “dialect”) contact in spite of geographic isolation. If a certain minimal level of interaction is maintained between speakers of different speech islands, then we might predict that dialect divergence would be slowed and that (certain types of) linguistic changes might spread between them. Can social isolation be measured? If so, can we then predict at what point the curtailing of face-to-face interaction will begin to have linguistic consequences?

3.2.4 Gravity model of dialect diffusion

The gravity model for the spread of linguistic change is based on the observation that economic and political ties often bring speakers of different dialects into contact in spite of the geographic distance separating them. As a result, quantitative analyses of transportation and telecommunication networks can help define paths of diffusion for language change in dialect contact, though a proposed mathematical gravity model does not directly incorporate such measures.54

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54 Trudgill (1983:64-72) provides an example of a qualitative study of changes in transportation networks. He describes the transition in the Brunlanes peninsula, Norway from sea routes to paved roads as a means of defining central places for linguistic diffusion. This transition is mirrored in the geographical distribution of the production of innovative lowered and backed variants of /æ/. Older speakers in some now isolated harbor towns have a relatively high number of innovative forms, while younger speakers in these same towns have relatively conservative forms as compared to their peers.
Typically communication networks are stronger between widely-separated urban areas than they are between urban areas and adjacent rural areas. The linguistic reflexes of such patterns can be seen in the replacement of trilled /rr/ with uvular /rr/ which spread between urban areas in Europe (Chambers and Trudgill 1984:189), and the Northern Cities vowel shift in American English which derives its name from the fact that it is most advanced in Buffalo, Detroit, and Chicago and not on the farmsteads between these metropolises. Inasmuch as cities thus function as dialect “islands,” they can provide possible points of comparison for speech islands.

Chambers and Trudgill (1980:197) note that larger cities exert more economic and cultural (and thus linguistic) influence than smaller ones and that the closer cities are, the more likely they are to mutually influence each other. They incorporate these facts into a mathematical model for predicting the relative influence of urban areas on each other called the gravity model.

Figure 11. Gravity model

\[ I_{ij} = S \times \left( \frac{P_i P_j}{d_{ij}} \right) \times \left( \frac{P_i}{P_i + P_j} \right) \]

I = influence of city i on city j
S = index of prior-existing linguistic similarity
P = population
d = distance between i and j

The mathematical gravity model faces several problems, not the least of which is the development of a workable metric for “linguistic similarity.” Perhaps more significant is the fact that no real measure of actual contact is incorporated into the model. Still, with
some tweaking, Chambers and Trudgill get reasonable predictions in their application of the model to Norwich\(^{55}\). When the model fails, they suggest it still serves a purpose in focusing researchers’ attentions on possible factors (linguistic or otherwise) inhibiting the diffusion of linguistic change.

When applied to Deitsch, the formal gravity model predicts that linguistic changes would be more likely to spread between large Amish settlements that are relatively close to each other. This prediction is simply wrong. Holmes County, Ohio Deitsch is much more similar to the variety spoken in the small settlement of Harvey County, Kansas (nearly one thousand miles distant) than it is to the variety spoken in the large Mifflin County, Pennsylvania settlement only two hundred miles to the east.

Other researchers have noted the limited predictive power of the gravity model (Boberg 2000, Horvath and Horvath 2001a, 2001b). One reason for its failed application to Deitsch in the Midwest is that as rural communities with small populations, Amish settlements do not fit the typical urban setting upon which the model was based. A second reason is that the Amish restricted use of transportation and telecommunication technologies may yield less robust long-distance networks than normally expected. But the most significant failure of the model, as noted above, is that it fails to directly measure the quality and quantity of interactions between speakers.

\(^{55}\) In measuring the influence of London on secondary regional cities, Chambers and Trudgill factor in the regional influences first (i.e., towns close to Norwich will be affected after (via) Norwich and not before (not directly from London?)). This is done by adding up the scores of urban centers with higher scores and subtracting out the influence of those that are left (201). This method, however, doesn’t do well when applied to data around Chicago (202).
3.2.5 Macro-level studies of interaction between speech islands

More direct analyses of contact between persons from noncontiguous dialect areas might include components such as raw measures of airline, rail, and highway travel, records of immigration to other dialect areas, and statistics on commerce conducted between dialect areas among others. Since these measures give some indication of the frequency with which speakers from different geographic regions come into contact with each other, their explanatory potential is much greater than the factors included in the gravity model. The quantitative study of maxima and minima of communication networks—specifically vehicular traffic flow—has predicted, for example, the boundaries between dialect areas in the Eastern US (Labov 2001:19).56

Trudgill (1986:56-7) suggests an additional facet for studies which consider records of migration (e.g., Horvath and Horvath 2001a): speakers native to a dialect area who emigrate then later return to their home area. He suggests that these cultural insiders may bring back with them linguistic features from the outside. This is one possible explanation for the rapid diffusion of Cockney [f] and [d] replacing [θ] and [ð] respectively in the speech of young people in Norwich who have no obvious contact with

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56 In one particular study, Labov looked at east-west interstate traffic flow across different points in the state and showed that the bundle of lexical isoglosses across central Pennsylvania “falls in a natural trough of communication” where the traffic flow was lowest (Labov 1994:317). These macrolevel data account for the relative stability of the lexical isoglosses by demonstrating the relatively low intensity of the transportation network connecting the two dialect areas. Labov goes on to note that the isogloss marking the expansion of the cot/caught merger has moved away from sparsely populated central Pennsylvania toward the populous eastern half of the state, a move which he claims demonstrates the strength of phonological mergers since it goes “…against the natural tendency for [dialect] boundaries to follow minima in networks of communication” (1994:317-8).
Londoners.\textsuperscript{57} Norwichers return from a period of time in London and, sporting freshly-acquired London dialect features, these influential "language missionaries" help disseminate Cockney far from its home base. A similar phenomenon is reported among speakers of Belizean creole, as speakers returning from time spent in the U.S. bring back with them American pronunciation variants such as /mæn/ ‘man’ and African-American English slang.\textsuperscript{58} The existence of such “insider/outsiders” is an empirical question, but documenting their existence and their influence requires yet more detail of speakers’ patterns of interaction. Macro-level studies of speaker contact between speech islands must then be complemented by microlevel studies which observe actual speaker interaction on a local level.

3.2.6 Micro-level studies of interaction between speech islands

Ultimately the study of the spread of linguistic change, whether it be within a homogeneous village or between distant speech islands, must be based on the actual face-to-face interactions of individuals in a particular social setting.\textsuperscript{59} Any model, be it the wave theory, or gravity model, or insider-outside contact is helpful only to the extent that it accurately reflects the outcomes of these local interactions.

\textsuperscript{57} This is a strongly stereotyped feature associated with a street-tough attitude. Trudgill allows one other possible means for diffusion: TV. Bobber also suggests that mass media may play a role in the diffusion of change at the "less stable level of lexicon and phonemic incidence" (2000:22). Perhaps this is similar to the way that ‘surferspeak’ (e.g., unrounded back vowels in words like \textit{Dude!} and \textit{cool}) has spread in the U.S. apparently via the media. For most Midwesterners, however, ‘Surferspeak’ appears to be lexical borrowing and not wholesale phonological shift (that is words like \textit{food} and \textit{pool} are unaffected). To be sure, the impact of the media factors very little into considerations of linguistic change in Dettch.

\textsuperscript{58} Thanks to Don Winford for this example.

\textsuperscript{59} Again, with the exception of lexical change as noted in footnote 57.
3.2.6.1 Network theory and methods

One methodology for observing and analyzing the spread of linguistic change at a micro-level is network theory, elaborated by Milroy and Milroy 1985 and Milroy 1987. Researchers operating in this framework characterize the relationships between individuals on the basis of their density (the extent to which group members interact with most or all of the other individuals in the group) and multiplexity (the extent to which a particular relationship is operative in a number of settings, e.g., home, work, leisure time). Though in principle a definition of social networks requires no direct reference to geography, in practice territorial boundaries (neighborhoods) are explicitly included in the Milroys' definition of networks, and network strength, especially network density, is correlated with geographical location (1985:359, 363).

A key finding of network studies (e.g. Milroy and Milroy 1985 in Belfast) is that the social isolation of a group from other groups (as defined by its dense, multiplex networks) encourages the retention of local, vernacular features over and against the adoption of standard forms. Linguistic change, on the other hand, spreads from one social network to another via 'weak' network links, that is individuals with uniplex relationships to another network.60

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60 Labov (2001:364) suggests that speakers who utilize innovative variants are both centrally located within a local network and have a high percentage of weak ties to non-local networks. Labov calls this “expanded centrality.” There is a structural explanation for the proposal that only weak ties can form a bridge for the spread of linguistic innovations between groups: maintaining strong ties requires a significant time commitment which entails extensive overlap (density) of in relationships in the groups, and this means that little new information is passed between group members (Milroy and Milroy 1985:364-65).
Geographic distance militates against the establishment of strong network links between speech islands; therefore if network links exist between speech islands, they would be characterized as weak links and would allow for the spread of linguistic innovation. But the crucial challenge here is to establish the existence of such network ties between individuals in different speech islands. As it turns out, this may be an insurmountable challenge. The number and nature of weak ties a given individual may have is extremely difficult to define given both their great number and the relative lack of importance that the individual assigns them. As Milroy and Milroy note: “There is no obvious way of characterizing quantitatively looseknit uniplex ties which extend over vast distances and are often contracted with large numbers of others” (1985:363). In other words, network theory cannot help us to identify when contact between two speech islands is sufficient to allow for the diffusion of linguistic change between them. 61 This puts us in a quandary. We would like to analyze real speaker contact across speech islands, and yet a viable model for quantifying and comparing these individual interactions does not exist.

3.2.6.2 Predictions of network theory for Deitsch in the Midwest

Although network theory does not claim to provide the tools to measure the interactions between individuals in different speech islands, it does make some assumptions and

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61 Network strength across geographic distance is noted in Milroy and Milroy’s discussion of Icelandic, a language which, like Deitsch in the Midwest, apparently has little dialect divergence in spite of geographically diffuse settlements (1985:376 et passim). The ties between widely separated Icelandic communities are assumed to be “in some sense” strong. There are, however, at least two unresolved questions with the Icelandic example. First, the argumentation sounds circular, i.e., the linguistic similarities are seen as evidence that network ties between communities are relatively strong. Second, the emphasis is on maintenance of similarities rather than the diffusion of innovations, so it is not clear that any significant linguistic innovations have been spread between distant Icelandic speech communities (as they have in Deitsch).
predictions about the nature of linguistic change in speech islands such as the Amish communities in the Midwest.

Rural areas are associated with dense, multiplex networks (Milroy and Milroy 1985:354), thus we would predict that within a particular Amish speech island vernacular norms would be maintained, but that these norms would not be stable across speech islands leading to dialect divergence. This has not happened in the Midwest where the monophthongization of /aɪ/ is a unifying linguistic feature.

However, Amish communities also have several characteristics of urban communities described in Milroy and Milroy: they are fast-growing communities, and they are, in spite of their sedentary appearance, relatively mobile (see chapter 6 section 6.3.3 and chapter 7). It has been suggested that closeknit network structure cannot survive changes of location and that societies with social and geographical mobility and dissolution of closeknit networks “provide the conditions under which innovations can be rapidly transmitted along considerable social and geographical distances” (Milroy and Milroy 1985:370).

But countering this prediction is evidence that the Amish maintain strong network ties—often along family lines—in spite of their persistent, almost habitual tendency to migrate. The portable community is a well-developed Amish tradition (Reschly 2000:182 et passim). This, along with the fact that Amish society is not (yet) clearly stratified along
socioeconomic dimensions, suggest that geographical mobility may not completely disrupt closeknit Amish networks.\textsuperscript{62}

On the other hand, the maintenance of dense, multiplex networks does not preclude making new ties with other Amish networks.\textsuperscript{63} And a high degree of mobility makes possible the development of numerous weak ties (e.g., via marriage, new neighbors, and former neighbors) between Amish settlements. Seen from this perspective, the Amish in the Midwest match the prediction of a network model: “where groups are linked by many weak ties they will be susceptible to [the spread of] innovation” (Milroy and Milroy 1985:367).

Milroy and Milroy qualify this prediction with the proviso that these weak tie encounters be “frequent.” This returns us to the point made in the previous section: how can we quantify interactions that are by their very definition both great in number yet sporadic and brief in their occurrence? Milroy and Milroy do not specify a minimal frequency of interaction for the diffusion of linguistic change to occur. In the case of the innovative strong network of girls in the Clonard, weak tie interactions happen throughout the work day with customers in retail shops where the girls work (Milroy and Milroy 1985:373). In contrast with this example, the weak ties between Deitsch speakers in different Amish settlements are very infrequent (see chapter 7).

\textsuperscript{62} That is, the links between those network members who together move to a new community may remain strong. Of course the links between members who move and those who do not are weakened.

\textsuperscript{63} Milroy and Milroy (1985:369) seem to suggest otherwise, but there does not appear to be any principled reason for not considering the possibility that some individuals may have high numbers of both strong and weak ties.
Interestingly, every day most Amish speakers interact with monolingual English-speaking neighbors, friends, relatives, and customers in ways that match the cited examples of frequent, weak-tie interactions. So it is not unreasonable to explore the common nature of contact with English speakers as a means for the diffusion of linguistic changes across Amish speech islands—or rather the development of common independent innovations.

3.2.7 Language contact: do shared outcomes of common language contact overwhelm dialect divergence?

In settings of long-term, intense language contact (as opposed to dialect contact), the changes resulting from language contact can be the primary criterion for differentiating one dialect from another. Such is the case with the Romani language whose dialects are classified as Vlach or non-Vlach based largely on the degree of Romanian influence on the former (Matras 1995:x). We might wonder whether the Deitsch dialect differences in question here might also reflect differences due to language contact. That is, does the language contact situation in the Midwestern Amish communities differ from that in Pennsylvania in ways that might account for the both the differences between Deitsch in the Midwest and in Pennsylvania as well as the homogeneous nature of Deitsch in the Midwest?

The short answer is no. All Deitsch speaking communities, plain as well as nonplain, have been in steady contact with English throughout their existence, and the varieties in
all of these communities share features which show some degree of convergence with English (see section 2.1). What is more, it is not possible to demonstrate an American English dialect source for the sound change /ai/ to /e:/, which is diagnostic for Midwestern Deitsch.

Still, some dialect differences make reference to the attitudes Deitsch speakers hold with respect to English speakers and how these might be correlated with the intensity of language contact. Martin and Anderson 1976 suggest that increased contact with English speakers by Lancaster County, Pennsylvania Old Order Mennonites and Amish has led to the borrowing of the non-trilled [1], as well as more rapid loss of dative case marking. The same argument could be made for the presence of velarized [1] in syllable-final position in Lancaster Deitsch.

Amount of contact with English cannot, however, explain all the patterns of contact-induced change in Deitsch varieties. Though Lancaster Deitsch speakers have borrowed some English phonetic features, they have not borrowed as many lexical items as their Midwestern counterparts. This would indicate that contact with English is more intense in the Midwest—precisely the opposite scenario suggested above on the evidence of borrowed [1] and [1] in Lancaster. Are we seeing different linguistic reflexes of similar contact situations due to different attitudes and different choices made by speakers in these regions? Furthermore, Amish varieties in the Midwest differ in their norms for the incorporation of loan words into native phonology, a phenomenon that must reflect
community differences in attitudes toward sounding “English” or sounding “Dutch” (see section 2.1).

3.3 Summary

The search for an explanation for the spread of a sound change across Deitsch speech islands in the Midwest has led us to review proposed constraints on linguistic change both internal and external to the language. Those internal accounts based on universal properties of speech production and perception and supported by broad cross-linguistic evidence (Ohala 1993, Liljencrants and Lindblom 1972, Labov 1994) have more explanatory power than unconstrained accounts that appeal to abstract structure or vague notions of “drift.” Thus we might look to Labov’s principles of vowel shifting and to cross-linguistic studies of vowel coalescence (Parkinson 1996) to demonstrate the possibility for independent innovation of a sound change such as the monophthongization of /au/ to [ɛ:] in the Midwest. However, given the general formulation of these universal accounts (which contrasts with the specific nature of the similarities in social and linguistic conditioning of this sound change in the Midwestern speech islands) and a perspective informed by the Big Bang Theory of sound change (which limits the effects of purely phonetic conditioning to only the earliest point of origin of a sound change), we give rather more consideration to social constraints on the spread of sound change.

It appears unlikely that the monophthongization of /au/ is a founder effect, that is a variant preserved from a continental German input dialect common to the Midwestern settlements (though this possibility is explored in Chapter 10). External constraints
making reference to geography, such as the wave model and the gravity model are inadequate for the task of accounting for changes in speech islands. Ultimately attempts to quantify degree of isolation in order to predict linguistic divergence appear doomed to fail. Some models fall short because they do not attempt to directly measure face-to-face interaction (gravity model and macro-level studies of communication networks). Models that do study actual speaker interactions, such as network theory, are able to make predictions only insofar as the interactions are frequent, which is not the case in speech island studies. Finally, contact with English speakers—a daily fact of life for many Amish—offers the possibility for shared innovations, though an English source for the sound change in question is lacking.

Given the absence of a single compelling constraint, either internal or external, to account for a sound change spreading across speech islands, the approach adopted here draws on the strengths of several methods. In the following chapter, I offer my approach to the study of linguistic preservation/change across speech islands, one which focuses on establishing phonetic naturalness and especially on detailing the intertwined settlement histories of the communities which have led to persistent ties between Amish across the Midwest.
CHAPTER 4

RESEARCH DESIGN

Each of the approaches to the study of the diffusion of linguistic change across speech islands discussed in the previous chapter yields some insights to the problem, yet ultimately falls short of satisfactory explanation. Given this state of affairs, the research design of this dissertation draws upon the complementary strengths of several levels of analysis in order to fashion a more complete account of linguistic change in Midwestern Deitsch.

Of primary interest are descriptions of the settlement history of the communities and the patterns of interaction within and between communities both past and present. These patterns of interaction are analyzed at the macrolevel (i.e., (dis)continuities in migration and communication networks over time) as well as the microlevel (individual reports of interactions of real people within a specific network of speakers). These analyses are reported in chapters 0, 0, and 0. I then identify a particular linguistic variable (the phonetic realization of the phoneme /au/) and describe the linguistic and social distribution of its variants within and across these communities (chapter 0). Eventually the similarities in these distributional patterns across Deitsch-speaking communities in
the Midwest—as well as some emergent differences—are accounted for both with reference to the histories of the communities and to phonetic naturalness constraints (chapter 10).

4.1 Sociohistorical analysis of settlement history and interaction between Amish communities in Midwest.

This dissertation studies the Amish-Mennonite communities of Holmes County, Ohio and Kalona, Iowa, and the Deitsch language as spoken in them. The Deitsch-speaking communities of Lancaster County, and Montgomery/Bucks Counties, Pennsylvania are also studied, though in less detail, to provide a point of comparison. Reasons for choosing these communities and a brief description of them are given in section 1.2.3.

Data on the settlement histories of the communities and on patterns of interaction in the 19th century were gathered from written histories of the Amish (e.g., Nolt 1992, Hostetler 1993, Kuhns 1901, MacMaster 1985, Yoder 1985) and of the communities in question (e.g., Gingerich 1939, Reschly 2000, Lind 1994, Stoltzfus 1969, Kaufman and Beachy 1990) as well as from family genealogies (e.g., Slabaugh n.d.). The Amish community directories have proven to be a rich source of sociological data (see, e.g., Meyers 1994), and for this study they were an invaluable source for data on patterns of interaction in the 20th century. The directories for Holmes County and for Iowa list the birth dates and the addresses of parents and grown children, thus revealing Amish patterns of migration as well as changes in these patterns. Supplementing these data are newspaper correspondents’ accounts of travel between Amish communities. Finally I conducted
personal interviews of family histories and family travel patterns as well as written surveys of travel patterns. The earliest sets of personal interviews were conducted in English. As I gained a working command of the language, the interviews were conducted increasingly in Deitsch. Summaries of data collection including questionnaires used in oral interviews are provided in the appendix.

In addition to formal data elicitation techniques, observations of daily personal interactions in homes and in the workplace were made over the course of a two-month stay as a participant-observer in Holmes County, Ohio. In August and September 1998, I lived in an apartment attached to the home of a Beachy Amish family in Holmes County. During this time I was employed in a large woodworking factory owned and operated by this family. Over 90% of the nearly two-hundred employees at the factory are Amish, and the majority of those that are not Amish still speak Deitsch. At the time of my stay, only three employees were non-native speakers of Deitsch. The default language of the workplace is Deitsch, and this aided my acquisition of the language. Significant interaction in English in this workplace is limited to the relatively few employees with regular customer contact, mostly young, female employees in the front office. In addition to workplace interactions, I was a day guest in the homes of several Amish coworkers and attended other community events such as auctions, family and neighborhood picnics, Amish and Beachy Amish church services, and an Amish wedding. The data gathered as a participant-observer allow for details of personal interactions to be described, though not quantified and no quantitative network study is attempted here.
4.2 Linguistic analyses

4.2.1 The selection of the dependent variable

The dependent variable which is the focus of the linguistic analyses in this dissertation is the phoneme /aɪ/. In Midwestern Deitsch this phoneme is variably realized as monophthongal [æː], [ɛː], or [ɛː]. Monophthongal variants of /aɪ/ have social significance as markers of Midwestern Deitsch, though this can only be strictly applied to younger speakers since older speakers retain a greater number of diphthongal forms.

This phoneme occurs in a number of high-frequency words in Deitsch, e.g., the first and second person possessive pronouns, the words ‘maybe,’ ‘three,’ ‘people,’ ‘time,’ and ‘today,’ not to mention the name of the language itself, ‘Deitsch,’ so that it is heard regularly in the course of natural conversation.

Other linguistic features—some that serve to differentiate; others that serve to unify regional varieties of Deitsch—will be briefly discussed in Chapter 9. These are the retention of non-approximant /ɪ/, certain lexical items, and nonfeminine morphological marking for human female referents.

4.2.2 The selection of independent variables

The independent linguistic variables selected are the language of the lexical item, and the following phonetic environment. The independent social variables are place, age, gender, religious affiliation, occupation, family and work networks, and style.
The independent variable “language of the lexical item” is included because researchers have noted differences across time and between Amish settlements in the degree to which speakers include borrowed English words in the phonetic and phonological processes of Deitsch (Louden 1997, Keiser 2001c). It is a dichotomous categorical variable coded as either English or Deitsch. The independent variable “following phonetic environment” is included because the first description of the conditioning of this sound change makes reference to this environment (see Figure 6 in section 2.3.2, and Louden 1997). This variable is in fact coded as four separate categorical variables: segment, voicing\textsuperscript{64}, place of articulation, and manner of articulation.\textsuperscript{65}

The independent social variable “place” is a categorical variable coded according to the speaker’s home: Pennsylvania, Holmes County, Ohio; or Kalona, Iowa. Age is included in the analyses to explore the spread of the sound change across apparent time. This variable is coded both as a continuous scalar variable and also as a categorical variable grouping speakers into four generational cohorts: 0-25 year-olds, 26-50 year-olds, 51-75 year-olds, and 76 years and older. The dichotomous categorical independent social variable “gender” is included because a number of studies have indicated gender-based

\textsuperscript{64} The phonetic variable “voicing” was included because in some languages (e.g., southern American English) voiceless consonants inhibit monophthongization (Thomas 2001:37). However, given the neutralization of the voicing contrast in word-final position in Deitsch, the significance of this variable can only truly be tested via morphological alternations such as /ʃɑŋ/~ /ʃɔŋ/ (‘fast’ (m.sg.)~ ‘fast’ (n.sg.)) and this was not done in this study.

\textsuperscript{65} Coding for the following place of articulation posed some difficulties when the following environment had the potential to be an inflectional suffix which began with a vowel. Ordinarily a form such as ‘your new friend’ would be realized as either masculine dei nei-er friend or feminine dei nei-i friend. Both tokens of ‘new’ thus have /æ/ (here rendered as orthographic <ei>) occurring before a vowel, i.e., in hiatus. The possibility also exists, especially given some changes in the marking of morphological gender for human female referents in Holmes County (see section 2.3.2) for a zero neuter form: dei nei-Ø friend. It is difficult to differentiate between especially the feminine and the nenter forms of this adjective. When there was doubt, I assumed the feminine form as a default and coded the following place of articulation as hiatus.
differences in the adoption of sound changes in progress—specifically that men lag behind women in the use of innovative forms (Labov 2001). Likewise, since notions of correctness and conscious attention to speech may affect the degree to which speakers use innovative forms, “style” is included as a categorical dichotomous variable classifying tokens from the translation task separately from tokens from conversation during the interview and outside the frame of the interview. The variable “religious affiliation” is included because of the primary role that church affiliation plays in shaping personal social networks in Amish communities. It is coded as a categorical variable with five variants: Old Order Amish, New Order Amish, Beachy Amish, Conservative Mennonite, and Mennonite. Amish communities are not highly socially stratified. Still, the movement of Amish into non-farming occupations in the last half of the 20th century has permanently changed the social and economic structures in Amish communities. In order to explore the possible impact of these changes, I include “occupation” as a categorical variable coded as office worker, student/teacher, small business owner/worker, homemaker, factory worker, farmer, retired, or unknown. The social networks of certain families and workplaces are considered as well, though they are not entered into the statistical analyses, because the relevant observations could be made for only a subset of speakers.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Variants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language of lexical item</td>
<td>English, Deitsch</td>
</tr>
<tr>
<td>Following phonetic segment</td>
<td>/b/, /p/, /f/, etc.</td>
</tr>
<tr>
<td>Place of articulation of following segment</td>
<td>labial, coronal, palatal, velar, glottal, word boundary, vowel (hiatus)</td>
</tr>
<tr>
<td>Manner of articulation of following segment</td>
<td>lateral, rhotic, nasal, (af)fricative, stop, word boundary, vowel (hiatus)</td>
</tr>
<tr>
<td>Voicing of following segment</td>
<td>voiced, voiceless</td>
</tr>
<tr>
<td>Place/home community</td>
<td>Holmes County, Kalona, Pennsylvania</td>
</tr>
<tr>
<td>Age</td>
<td>continuous scalar</td>
</tr>
<tr>
<td>Age cohort</td>
<td>0-25 years old, 26-50 years old, 51-75 years old, 76+ years old</td>
</tr>
<tr>
<td>Gender</td>
<td>female, male</td>
</tr>
<tr>
<td>Style</td>
<td>translation task, conversation</td>
</tr>
<tr>
<td>Religious Affiliation</td>
<td>Old Order Amish, New Order Amish, Beachy Amish, Conservative Mennonite, Mennonite</td>
</tr>
<tr>
<td>Occupation</td>
<td>office worker, student/teacher, small business/service, homemaker, factory worker, farmer, retired, unknown</td>
</tr>
</tbody>
</table>

Table 7. Summary of independent variables and their variants
4.2.3 The selection of informants and their distribution

The selection of informants, much like the selection of the communities themselves, was guided by questions of access. In both Kalona, Iowa and Holmes County, Ohio friendship and kinship ties granted me simple, direct introduction to local persons. In Kalona, the primary contact was my grandmother, a native-speaker of Deitsch and Kalona native who taught school in the area for forty years and was well known among the older generation. She accompanied me on a number of the initial interviews in 1995. In Holmes County, my primary contact was the family with which I stayed and through whom I obtained employment in a local woodworking factory with an Amish workforce. As I conducted successive rounds of interviews in both communities, I also queried subjects for names of other people who they thought might be interested in speaking with me. In this manner I was able to develop an extensive network of informants, most of whom knew at least one other person in the network. In Holmes County, the friendships and acquaintances I developed on the job at the factory afforded me access to many willing informants.

A total of one hundred sixty-nine persons were interviewed: seventy in Holmes County, seventy in Kalona, Iowa, and twenty-nine in Pennsylvania. Not all of the interview data are utilized in this study. The Holmes County data are more extensive than those of the other communities studied. In order to complete the analyses in a timely fashion and to maintain some balance in the sample size from each of the communities, I selected the interviews from the latter stages of my fieldwork in Holmes County. As a result, twelve translation tasks and many hours of conversational data from the early stage of my
Holmes County fieldwork remain unanalyzed. The Kalona interviews in 1995-96 included a disproportionate number of speakers in the oldest age cohort (sixty years and older) and so in order to maintain balance between age cohorts in the 1995-96 Kalona data set, I selected for analysis only ten from among twenty-six translation tasks completed by speakers over age sixty in 1995-96.
<table>
<thead>
<tr>
<th>Independent variable variant</th>
<th>Kalona, Iowa</th>
<th>Holmes Co., Ohio</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># speakers</td>
<td># tokens</td>
<td># speakers</td>
</tr>
<tr>
<td><strong>Age cohort</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-25</td>
<td>9</td>
<td>143</td>
<td>10</td>
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<td>7*</td>
<td>209</td>
<td>2</td>
</tr>
<tr>
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<td>9*</td>
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<tr>
<td><strong>Style</strong></td>
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<td></td>
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</tr>
<tr>
<td>translation task</td>
<td>43**</td>
<td>681</td>
<td>41**</td>
</tr>
<tr>
<td>conversation</td>
<td>21**</td>
<td>182</td>
<td>31**</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>49</td>
<td>863</td>
<td>48</td>
</tr>
</tbody>
</table>

* total for occupation for Kalona is 50 (not 49) because one Kalona speaker is listed twice: he was a teacher in 1996 and a farmer when interviewed in 2001.
** The speakers total more than 92 with respect to style, because most speakers provided data during both the translation task and conversation and thus are counted twice.

Table 8. The distribution of Midwestern informants across selected social variables
The informants in Pennsylvania were selected rather differently than those in the Midwestern communities. In Bucks and Montgomery Counties, I contacted a local historian who provided me with a list of names of people he knew to be Deitsch speakers. I then contacted these persons myself and requested interviews. Because I had lived in the area previously, I was acquainted with several of these persons, though most I met for the first time when I interviewed them. In Lancaster County all of the speakers were friends of my friends. On two occasions these friends accompanied me to the interview, but for the majority, I contacted the person directly to request an interview. Because the Pennsylvania data are analyzed only briefly for comparative purposes, they are not included in Table 8 on the distribution of informants across independent social variables. For the sake of partial comparison with Table 8, in the Pennsylvania data there are a total of 29 speakers from whom 351 tokens were selected for analysis. Of the 29 speakers, 9 are female and 20 are male, 11 are over age 76, 11 are ages 51-75, and 7 are ages 25-50. Of the 352 tokens, 62 are from conversation (4 conversations involving 7 different speakers) and 290 are from the translation task.

4.2.4 The interviews

The data in this study have been pulled from a series of investigations into processes of language change, language contact, dialect divergence, dialect convergence, and the use of language in the construction of social identity in Deitsch-speaking communities (see Keiser 1998, 1999a, 1999b, 2000a, 2000b, 2001a, 2001c, 2002a, 2002b). As a result, the data have been collected over the course of six years and during several trips to the communities to do fieldwork. On the one hand, this has resulted in some unevenness in
data collection, since the tools and techniques—specifically the translation tasks—were adapted several times to suit the specific purposes of various studies, not all of which were intended to elicit tokens of the dependent linguistic variable in consideration here. On the other hand, the opportunity to revisit the field has allowed me to study this variable across a far greater number of speakers in different locations than might have been possible otherwise. Summaries of the nature and scope of these studies, the questionnaires which guided the oral interviews, and the various translation tasks can be found in the appendix.

Most of the linguistic data were collected during personal interviews with informants in their homes, though some were conducted in the other locations, such as the workplace. The interviews generally comprised three parts: (1) questions about personal background, language acquisition, language attitudes, and language use; (2) an oral translation task (English to Deitsch); and (3) follow-up questions and casual conversation. These three parts of the interview roughly parallel those of the classic sociolinguistic interview which attempts to elicit both spontaneous speech as well as speech from the careful/formal end of the style spectrum (Labov 1972). However, not all interviews contain extended conversational data and some of the best conversational data were catalyzed not by the interviewer’s questions, but by the interviewees’ extended discussion with other native speakers on issues important to them such as house plans, a terminally ill brother, or a printing job. In addition, a number of extended conversations took place outside the context of the interview in settings where I was a participant-observer listening in on and occasionally taking part in the conversation with others.
Although these conversational data go a long way toward ensuring that the linguistic data are “natural,” that is, not subject to significant deviations from normal speech due to the presence of the interviewer and the discourse frame of the interview, it is not possible to completely rule out the effects of the observer’s paradox (Labov 1972). In particular, my status as a language learner impacted some conversations as I occasionally misunderstood the informants or asked them to repeat what they had said, and as both I and the informants code-switched into English in order to facilitate intelligibility—though code-switching, as I note below, is a regular and expected feature of conversation in Deitsch in plain communities. Even so, my subjective observations of language use in situations where my presence as a researcher and non-native speaker was either unknown or unnoticed match up well with the objective data recorded in both translation tasks and conversations.

The translation tasks provide most of the linguistic data to be analyzed in Chapter 8. The increasing functionality of English in plain (i.e., Amish) Deitsch-speaking communities and the fully bilingual status of all adult Deitsch speakers have led speakers to adopt the complementary discourse strategies of regular code-switching between English and Deitsch as well as borrowing lexical and grammatical structures from English in order to facilitate code-switching (Huffines 1997). As a result, oral translation on the fly is something that most speakers do on a daily basis and they are both comfortable with the task and skillful in completing it. I introduced the translation section to the interviewees by saying, “I have here (x number of) sentences. I will say them in English and you say
them in Dutch.” For the earlier interviews these instructions were given in English, but for most of the interviews they were given in Deitsch. Speakers were not allowed to look at the sentences as they translated, though only a few requested to do so.

Before each interview, permission was requested to audio record the session. In all but one instance, permission was granted.\textsuperscript{66} For the sole session where audio recording was not permitted, I transcribed with pencil and paper, the relevant features (e.g., the vowel quality of the tokens of /a1/) of the informant’s responses as he spoke. When possible, the entire interview was tape-recorded. In many instances, though, I took notes on the linguistic background and attitudes section of the interview, and tape-recorded only the translation task and conversation. The recording equipment utilized for gathering the 1995-96 Kalona data were a Sony Walkman cassette recorder and a Sony lavaliere battery-powered microphone. For the rest of the data collection (Holmes County, Ohio 1998; Pennsylvania 2000; Kalona 2001) I used a Sony DAT recorder with a Sony lavaliere microphone. In most instances the microphone was attached to the interviewees’ shirt or dress, though sometimes, particularly in a group setting, the microphone was placed on a central surface such as a table.

\textsuperscript{66} This may surprise some readers since the majority of my informants are members of Amish communities which generally prohibit the ownership and use of technologies such as audio recording equipment. Too, Amish generally do not wish their images to be recorded, especially if a photograph allows them to be identified individually. Although speakers were unaccustomed to the use of audio recording equipment, there was no hesitancy in granting permission. I never inquired about general community practices related to being audiotaped, so it is not clear to me whether any researcher would be allowed to do so or whether I was granted permission to record as a trusted semi-insider by kinship and friendship and membership in a related church group (Mennonite). My impression, however, is that researchers who are patient enough to develop relationships and a level of trust with Amish friends would eventually be allowed the same level of access as I was. The one refusal came from a twenty-nine-year-old Old Order Amish man in Lancaster, Pennsylvania. Other Old Order Amish informants in Lancaster consented to be recorded. In addition, I canceled an interview with a member of the strictest order of Amish in Holmes County, the Swartzentruber Amish, when he declined to be recorded.
The majority of the tokens analyzed for this study come from the translation task (74%, see Table 8). There are good reasons for this. First, since conversational data with some informants are extremely limited, the translation tasks offer data from the widest range of informants. Second, since the conversational data are not evenly distributed across informants, a small number of informants—perhaps a dozen out of a total of over one hundred twenty—would be responsible for the vast majority of tokens. Third, some of the conversational data were recorded in less than ideal conditions (e.g., outside with a chorus of cicadas in the background or with many speakers participating) making transcription much more difficult. Finally, the sheer volume of the conversational data makes it impossible to include all of them.

4.2.5 The statistical analyses

The statistical analyses in this study were made using the software package SPSS for Windows 10.1.0. The relative significance of each of the independent variables for creating an accurate predictive model for the occurrence of the dependent variable (i.e., monophthongal /aɪ/) was tested using logistic regression analysis. Logistic regression models are able to handle dichotomous variables, that is, variables that can have only two values—an event occurring or not occurring (Norušis 1994:1). To further test the independence of the relationship of “place” to the other variables—that is the relative insignificance of where one lives (Holmes County or Kalona) in accounting for patterns of realization of /aɪ/—I generate a number of crosstabulations and utilize the Pearson’s
chi-square statistic\textsuperscript{67} to accept or reject the null hypothesis (that being that the two data sets—from Kalona and from Holmes County—could have been pulled at random from the same larger sample). Further explanations of statistical methods and results are detailed in Chapter 8 below.

\textsuperscript{67} Using a chi-square statistic is somewhat problematic, since it requires generating a contingency table of token counts and each token must in principle be independent of all others. It is not possible to demonstrate (and in some instances may not even be true) that a number of tokens generated by the same speaker are independent of each other (Woods, et. al 1986:149). Lack of complete independence may occur, for example, when several tokens are generated in close succession—as in a translation task. I acknowledge that some of my sampling methods may violate strict assumptions of independence for a chi-square statistic. Results may be treated with appropriate skepticism.
CHAPTER 5

THE ORIGINS AND HISTORY OF DEITSCH IN 18TH CENTURY EUROPE AND PENNSYLVANIA

In this chapter I review the development of Deitsch in Europe and colonial Pennsylvania and provide an account for the relative homogeneity of the language in all of North America.

Researchers agree that Deitsch can be classified as a “Franconian, Palatinate dialect with some Alemannic features” (Seifert 1971:19), and have without exception stressed its overall homogeneity. Buffington (1939:276), for example, allows for “a few significant Alemannic peculiarities” in the Swiss settlements of Lancaster and York Counties in Pennsylvania, “yet, on the whole, the dialectal variations in the dialect as spoken in the various sections of Pennsylvania are very slight.” Also Van Ness’ introduction to the language states that “Pennsylvania German is surprisingly uniform across geographic regions” (1994:423). When compared to the considerable variation found in continental varieties of German—variation which stretches to the breaking point the litmus test of mutual intelligibility—the homogeneity of Deitsch is indeed remarkable.
Several factors can account for the relative absence of variability in Deitsch. First, there was a relative lack of variability in the continental dialects which served as inputs to the new American variety. Second, settlers from the Palatinate were most numerous in the early 1700s during the crucial development period of the emergent variety. Third, the leveling process which favored Palatinate dialect features must have begun already in Europe, since many of the settlers of non-Palatinate origins (e.g., especially, the Swiss) lived in the Palatinate for a generation or more before coming to the new world. Fourth, patterns of interaction confirm that the early settlers of different regions and religious practices did not remain isolated from each other. Finally, only two centuries have elapsed since the formative stage of Deitsch, a relatively short time in the context of linguistic change.

5.1 The German dialects in colonial Pennsylvania which served as inputs to Deitsch. German speakers began arriving in the new world in the late 17th century at the invitation of William Penn. The earliest settlement was founded in 1683 in Germantown, Pennsylvania (now part of Philadelphia). A steady stream of German-speaking immigrants continued arriving in Pennsylvania up until the Revolutionary War when immigration ceased for a couple decades. The mixing and leveling of dialect features which led to the formation of a distinctive new world dialect must have taken place during the 18th century, that is, during the colonial era in Pennsylvania through the end of the Revolutionary War. The year 1800, then, is a convenient date for marking the
emergence of this dialect which became known as Pennsylvania German or Pennsylvania Dutch.\textsuperscript{68}

The immigrants during the formative period came overwhelmingly from the southwestern part of German-speaking Europe: the Palatinate, Baden, Würtemberg, Alsace, Switzerland. Though the differences that existed between these dialects were significant, they are not representative of the breadth of difference that existed across all German dialects. With some patience, these speakers would have had little trouble understanding each other.

\textsuperscript{68} See Seifert 1971: 14-21 for a fine summary of the colonial period settlement and leveling process.
Figure 12. Map of European places of origin of German-speaking immigrants to America in the 18th century.
5.2 The numerical dominance of Palatinates among German immigrants in colonial Pennsylvania.

In the first four decades of immigration, the flow of new arrivals was rather slow totaling perhaps three to five thousand (Kuhns 1971[1901]:52, MacMaster 1985:59). The absence of ship records prior to 1727 makes it difficult to establish the precise number and origins of early settlers. The first settlers were of Dutch origin, though soon Palatinate arrivals became more numerous, including some of Dutch origin living in the Palatinate. Beginning in 1710, Swiss immigrants—many of whom also came to the new world after a sojourn in the Palatinate—began to arrive in significant numbers.

Mufwene has proposed that groups that are numerically dominant early on in a language/dialect contact situation may have a lasting impact on the outcome of that contact, in spite of the arrival of larger groups at a later point in time. This is dubbed the “founder effect,” a term borrowed from studies of population genetics (Mufwene 1996). On the basis of the available data from the earliest years of German settlement in Pennsylvania, there is no clear choice of dialect group to which we might attribute a founder effect. Both the Dutch and the Swiss are prominent, but were accompanied by many Palatines. In addition, during this time period, German-speaking settlers as a whole were few and thinly scattered across the region.

Between 1727 and 1741, the number of German-speaking immigrants jumped sharply, averaging over 1000 new arrivals per year with the vast majority hailing from the Palatinate (Kuhns 1945[1901]:57,160) and Raith 1992:154 citing Veith 1968:267). So
great was the number of Palatine immigrants during this period that the term “Palatines”
became synonymous for “Germans” in general. If there is a founder effect in the
development of Deitsch, it would stem from this surge of immigration in the middle
decades of the 18th century, when settlers from the Palatinate overwhelmingly established
their numerical superiority in the colony.

The flow of new arrivals increased even more in the years preceding the French and
Indian War (i.e., the Seven Years’ War in Europe, 1756-63) during which immigration
came to a temporary halt. The European origins of these settlers were somewhat more
heterogeneous including, for example, groups and individuals from Württemberg, Alsace,
Nassau, Darmstadt, and Basel in addition to the Palatinate (Kuhns 1971[1901]:56).

By 1775, approximately 80,000 German-speaking immigrants had arrived in
Pennsylvania. The actual number of German-speaking settlers—adding in a natural
increase of perhaps twenty five percent over one or two generations—was around
110,000 which accounted for one-third of the total population of Pennsylvania (Kuhns
1971[1901]:59). These immigrants fanned out north and west from Philadelphia,
establishing relatively dense settlements across a region stretching from present-day York
to Allentown—approximately 100 miles along an axis from southwest to northeast and
approximately 50 miles wide. The demographic figures noted above suggest that
speakers of the Palatinate dialects were more numerous than any other group during this
formative period of Deitsch.
The linguistic data back the demographics. Buffington 1939 and Reed 1972 show that the phonology, morphology, and lexicon of Deitsch closely match Palatinate dialect features, specifically the Eastern Palatinate area south of Mannheim near Speyer and Neustadt. This poses a small problem for a straightforward account of the development of Deitsch, because Eastern Palatinate settlers were far less numerous in colonial Pennsylvania than settlers from the Western Palatinate. One possible reason for this
apparent mismatch is the changes that have occurred in either the European varieties or in Deitsch itself that obscure earlier similarities. Buffington appears to suggest that eastern Palatinate linguistic norms may have prevailed because they were less idiosyncratic (1939:278). All of the features that Deitsch and the Eastern Palatinate have in common that are listed in Buffington 1939 (mostly morphological variants of verb forms and regular sound changes) are ranked low on Kerswill's difficulty hierarchy for second dialect acquisition (see footnote 44 in section 3.2). This indicates that it would be relatively easy for speakers of other dialects to acquire these features even as adults and that simplification of paradigms did not play a major role in the development of Deitsch. Still, why the Eastern Palatinate forms should have prevailed, must at this point be left to the vagaries of the process of dialect leveling and accommodation (see Trudgill 1986).

As to the relative influence of other dialects, particularly the Alemannic dialects, we can make only rough estimates. Louden ventures that Amish and Mennonite immigrants totaled 5000 in 1775 (1988:73). If we assume that the majority of these were of Swiss background, then Swiss Anabaptists made up no more than 5% of the total German-speaking population. Of course there were non-Anabaptist Swiss immigrants as well, but their number has not been ascertained. So it is safe to say that in the dialect contact

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69 Both Buffington 1939 and Reed 1972 appear to be comparing the Deitsch of the early to mid 20th century with cosynchronous dialect descriptions of the European varieties. Even were they to use the earliest dialect descriptions available, these would still post-date the state of the dialects during the formative period of Deitsch by at least one hundred years. This is not a long time when considering linguistic change (though see footnote 48 in section 3.2.1.2), but it still leaves open the possibility that some changes could have taken place. In fact, Buffington (1939:280) gives an example of a recent change in West Palatinate dialects (intervocalic dental to 'r') which then does not appear in Deitsch.
situation in colonial Pennsylvania, the Swiss dialects were underrepresented, except in certain areas of primarily Mennonite concentration such as Lancaster County.

5.3 Dialect contact in the Palatinate prior to emigration to America.

The significance of Palatinate varieties of German is strengthened when it is noted that many of the early Dutch and Swiss settlers arrived in America after sojourning for a generation or two in the Palatinate. The political, economic, and social instability of southwestern Germany during the 17th and 18th centuries made migration within this area a common fact of life for many and was one reason why many were willing to undertake the risky move to the new world (Wokeck 1985:5).

In the early settlement of Germantown, for example, the number of Palatines outstripped the number of Dutch already in the 1690s, though among the Mennonites, at least, many of the Palatines were of Dutch background. After 1707, most Mennonites from the Palatinate were of Swiss ancestry (MacMaster 1985:39,48). This mixed European background was not restricted to Anabaptists. Many Swiss of the Reformed church also moved into the desolation that was post-Thirty-Years-War Palatinate in the late 17th and early 18th centuries (Burgert 1985:3). The settler Peter Drachsel represents perhaps a common pattern. Born in Canton Bern, Switzerland, Drachsel moved with his family to Rieschwiler in the Palatinate by 1708, and then sometime in the 1730s emigrated to Lehigh County, Pennsylvania (Burgert 1985:348).

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70 Wolf (1985:69) notes that some Dutch had moved to Krefeld as early as 1609 and most had lived in Krefeld for a generation or two before coming to America. Still, in early record-keeping, most Germantown residents wrote in Dutch, while community leader Francis Pastorius wrote in German (68).
It is probable, then, that after living in the Palatinate for a generation or more and with some intermarriage with local people, these Swiss settlers who arrived in colonial Pennsylvania were already well-acquainted with the Palatinate dialect of the majority of their fellow immigrants. It is also likely that some degree of leveling out of differences between Alemannic (i.e., Swiss, Alsatian, Schwabian?) and Palatinate dialects had already occurred in Europe especially among the younger generations.\footnote{Yoder (1985:43) proposes just such a scenario for the Swiss in particular: “Most of them had stayed in Germany a generation or two and had married German wives, and their children spoke with a Palatine or Swabian rather than with Schweizerdütsch accents.” Perhaps Yoder is one source for the comment, ubiquitous in Amish communities, that Deitsch is a Swabian dialect. Miller (1976:272-4) also notes intermarriage of Amish-Mennonites and locals in northern Alsace and the Palatinate. Both Schlabach (1988:22) and Wenger (1961:6) assume that Deitsch was a dialect adopted by Swiss Anabaptists in the Palatinate and brought to Pennsylvania.}

5.4 Patterns of interaction in colonial Pennsylvania

We cannot precisely reconstruct how 18th century German settlers in Pennsylvania interacted with each other, but the evidence suggests that interaction—and not isolation—was the norm. Although the new settlers were of diverse religious backgrounds, these differences apparently posed few barriers to interaction, even among the more separatist Anabaptist groups. Mennonites settled beside and among Reformed and Lutheran neighbors, they worked at the same occupations, and even shared schoolteachers (MacMaster 1985:138 passim).\footnote{Seifert (1971:36) and many other scholars assume that the Anabaptist groups rigorously shun contacts with outsiders. While it is true that the social, economic, and religious practices of these Amish and Mennonite communities led to relatively less contact with persons from other groups, one must be careful not to exaggerate the degree of separation. This theme is nicely documented in MacMaster 1985.}
To be sure, Mennonites and Amish, because they were better organized and financed than the average immigrant, were often able to settle near each other. The Lancaster County settlement offers the clearest evidence that Mennonites of Swiss background aided each other in purchasing some of the best land in that area as it was made available starting in 1710 (MacMaster 1985:82 and passim). As a result, in Lancaster in particular, the density of immigrants of Swiss background was higher than in other areas, though again it should be emphasized that this did not preclude interaction with settlers of other backgrounds.\textsuperscript{73}

Few class distinctions existed among the immigrants—most were farmers and craftworkers—and they would have interacted on equal social footing, with no clear notions of the prestige of one group of speakers over another.\textsuperscript{74}

Given the egalitarian nature and frequency of interactions among German speakers in colonial Pennsylvania, we might reasonably suggest that numerical superiority (i.e., of the Palatine immigrants) was the most important factor influencing the outcome of the leveling process.

\textsuperscript{73} Seifert (1971:37) probably overemphasizes the influence of the Mennonites of the Lancaster settlement upon the Alemannic-flavored dialect that was to emerge there. The presence of a sizable and dense Mennonite settlement in Montgomery County, for example, did not result in the retention of Alemannic features in that region. It seems likely that the Mennonites in Lancaster County formed just part of a significant general Swiss immigration to that region in the early 1700s.

\textsuperscript{74} Veith has also suggested that the Palatinate dialect, which diverged less from the written standard than, e.g., the Alemannic dialects, was perceived as having greater utility (1968:270 cited in Raith 1992:157). But see Louden 1988:82-92 for an excellent overview of the (limited) role of standard German varieties in Deitsch-speaking communities. Louden rightly questions that standard varieties could have had any significant role in the development of Deitsch.
5.5 Short length of time since the emergence of Deitsch.

Two centuries is not a long time in the history of a language—hardly enough time for significant dialect divergence to take place—and that is roughly how long Deitsch has been in existence as a unique, independent German language variety in North America (Chambers and Trudgill 1980:108). Given the generally slow nature of linguistic change (though rate of change may be variable, see footnote 48 in section 3.2.1.2), it is no great surprise that after two hundred years Deitsch does not exhibit a great deal of geographic variation.

However, as Seifert is careful to point out, we can speak of a single Deitsch dialect only “if we bear in mind that the processes of dialect leveling [in colonial Pennsylvania] were not carried to their complete and ultimate conclusion” (1971:20). In other words, regional variation has existed in Deitsch from the outset.
CHAPTER 6

THE HISTORY OF DEITSCH IN THE MIDWEST: EXPANSION AND MOBILITY

Dialectology both builds upon the foundations of social history and aids in the reconstruction of that history. Isoglosses are synchronic reflections of changes in social networks over time (Weinreich, Labov, and Herzog 1968:153). So it is no surprise that the emergence in the 20th century of a cohesive Midwestern dialect of Deitsch as a salient marker of regional identity for Amish west of Pennsylvania is rooted in the settlement history of Deitsch speakers in the Midwest.

In this chapter I will describe primarily the history of Amish settlements in the Midwest. Although many Deitsch speakers eventually settled in the Midwest in the 19th century, only in Amish and some Mennonite communities was the language maintained into the late 20th century. Today, with the exception of several recent Old Order Mennonite settlements, Deitsch is a living language only in Amish settlements or among persons having Amish ancestral background. For this reason, I focus on the histories of Amish—and not Mennonite—communities in the Midwest. This is, admittedly, taking a simplistic view of the development of Deitsch since in some areas, e.g., Holmes County, Ohio, both Mennonites and Amish were present among the early settlers. However, so
many Amish congregations eventually became affiliated with the Mennonite church that they outnumber those Mennonites of non-Amish background. In Ohio, for example, the majority of Mennonite churches have Amish beginnings (Stoltzfus 1969:71). Thus, by studying the history of just the Amish settlements, we can get a reasonably good picture of the events important to the development of Deitsch in both Amish and Mennonite communities in the Midwest.

This chapter begins with a brief overview of the movements of Anabaptists in Europe before their migration to the new world. Then it focuses on the Amish settlements in colonial Pennsylvania and the paths by which Amish moved west in the 19th century. I note the possibility that the choices 18th century Amish made between the frontier in Somerset County, Pennsylvania and the established Lancaster County settlement may mark the earliest point of linguistic and cultural divergence among the Amish. The settlement histories of the Holmes County, Ohio and Kalona, Iowa Amish communities illustrate the high degree of mobility of 19th century Amish and the resulting interconnectedness of their communities in the Midwest. The influence of 19th century Amish immigrants on the cultural of these settlements is also explored, though their impact on language usage was minimal. I conclude by describing the patterns of travel between Midwestern Amish settlements in their early years.
6.1 Amish and Mennonite migration within Europe 16th-19th centuries

In order to understand linguistic developments in the 21st century Midwest, we must start with 16th century Europe. The present day Amish and Mennonites form the two largest groups emerging out of the Anabaptist movement, or Radical Reformation, which began in Switzerland in the 1520s and spread north along the Rhine River as far as Holland (and also emerged independently in some parts of northern Europe). Known in the upper Rhine River area as the Swiss Brethren during much of their early years, many Anabaptists (literally, “re-baptizers,” so named because of their conviction that baptism must be a choice reserved for adults) eventually adopted the name Mennonite because of the influence of Menno Simons, an early Dutch Anabaptist leader. In the late 17th century, disagreements over the practice of church discipline led to a division in 1693 among Anabaptists in Switzerland and Alsace, with the more conservative group taking the name “Amish” from their leader Jakob Amman.

Two centuries of war and persecution pushed many Swiss Anabaptists, both Amish and Mennonite, north down the Rhine River valley into Alsace, then the Palatinate, and eventually Hesse-Kassel. Swiss Anabaptists were specifically invited to settle in the Palatinate in the 1670s. In 1671 some 700 persons left Canton Bern, Switzerland for the

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75 Other key tenets of Anabaptism include a practical spirituality of simplicity and economic sharing (sometimes referred to as “discipleship” or “following Christ daily in life”), radical separation of church and state, and pacifism. For concise overviews of early Anabaptist history and beliefs see http://www.thirdway.com/menno/menas.shtml, Hostetler 1993 Ch.2, and Nolt 1992 Ch. 1 and 2.

76 Many non-Anabaptist Swiss also left Switzerland for Alsace and the Palatinate in the 17th and 18th centuries, thus official church persecution cannot have been the only motivating factor in the migration of Anabaptists. Burgert (1992:10-11), for example, shows that most Swiss who moved into northern Alsace in these years were of Reformed background and, like the Anabaptists came from Canton Bern. Exact numbers of Anabaptists are hard to determine, because they are not noted in Lutheran, Reformed, or Catholic church records (Burgert 1992:xiv).
Palatinate and by the end of the 17th century over one thousand Swiss Anabaptists had moved to the Palatinate. At the time, perhaps only Alsace had more Swiss Anabaptists living within its borders (Luthy 1988:112-3, Nolt 1992:23). In the early 1700s, facing heavy taxes and little opportunity to own land, many Anabaptists in the Palatinate along with some from Switzerland joined the large wave of Germans who chose to leave for the new world. These formed part of the first wave of German immigrants in colonial Pennsylvania (see sections 5.2 and 5.3). Others remained or moved on to more tolerant lands in the Netherlands, Hesse, and, in the late 1700s, Eastern Europe and Bavaria.
By the end of the 18th century, Hesse had the densest population of Anabaptists in Europe—though still perhaps not many more than 1000 total (Gerlach 1990:2-3). The principalities of Waldeck and Wittgenstein—some one hundred miles north of the Palatinate near the city of Kassel in the present day region of Hesse—allowed religious minorities to settle on their lands in the early 1700s. As early as 1732 Amish families of
Swiss and Alsatian origin moved from the Palatinate to this area to become tenant managers on noble estates and many followed (Luthy 1988:115 and Reschly 2000:22). This region straddles the northern boundary of the Rhine-Franconian dialect and the southern boundary of the Westphalian dialect.\footnote{A number of isoglosses that distinguish the High German dialects from the Low German dialects traverse this area, e.g., \textit{ich}/\textit{ik}, \textit{ machen}/\textit{maken}, \textit{Wasser}/\textit{wâier}, \textit{zuck}. Amish in Waldeck lived in areas both south (e.g. Netze) and north (e.g., Mengeringhausen) of these major isoglosses as described by early 20th century grammars.} The Amish remained in Waldeck for nearly a century and became well integrated in the local society before land became scarce in the 1830s, sparking an exodus of several hundred Amish to America or other parts of Germany. Upon departing in 1833, one young Amish man reflected on the “long...intimate association” that his family had experienced with the people of Waldeck (Reschly 2000:24).\footnote{Reschly (2000:24) points out that often the Amish in Europe experienced hostility and persecution only “…from official sources, while local populations got along quite well with Amish farmers and business people.”} After such long, intense contact with the locals, it would be surprising if the Waldeck Amish had not shifted from their Alemannic or Palatinate varieties to the Waldeck varieties by the time they set sail for America as part of the wave of Amish immigration from 1815 to 1860.

Other European sources of the mid-19th century Amish immigration to North America include Alsace, Switzerland, Luxembourg, Bavaria, and the Palatinate. Most of the Amish who remained in Europe at the end of the 19th century eventually unified with neighboring Mennonite congregations, and by the early 20th century, there were no Amish congregations in Europe (Gerlach 1990:3 and passim).
6.2 Amish and Mennonite migration to Pennsylvania in the 17th and 18th centuries

The most important fact about the Amish and Mennonite migrations to colonial Pennsylvania is that they in large part mirrored the general migration patterns in terms of motives, numbers, and demographic profile. Mennonite and Amish immigration peaked when immigration from the Palatinate peaked, though they remained a minority among the more numerous Lutheran and Reformed settlers, constituting about 5% of the total German-speaking population in 1775 (MacMaster 1985:60, Kuhns 1971[1901]:160, and Louden 1988:73). Their small numbers and the degree to which they were incorporated into colonial society (see section 5.4, p.109) suggest that the Amish and Mennonite immigrants of the 17th and 18th centuries acquired the same emerging Pennsylvania German dialect as their neighbors.

Even before the Amish split occurred in Europe in the late 17th century, the first Anabaptists were coming to the new world. The first Mennonites arrived in Philadelphia from Holland in 1683. Mennonite settlements remained small, with only two churches and one hundred members, up until 1707 when Mennonites from the Palatinate—most of whom had Swiss or Alsatian roots—began to arrive in increasing numbers. As noted in section 5.4, many Swiss Mennonites purchased land close to each other in Lancaster County and also in Montgomery County.

The first documented arrival of Amish in Pennsylvania was in 1737, though some individual families probably arrived a decade or so earlier. In the mid-18th century the largest Amish settlement was at Northkill in northern Berks County, Pennsylvania with
about two hundred settlers at its peak (Nolt 1992:48, 56). The other major settlements were also in Berks County at Maiden Creek and Conestoga (Morgantown). Even though today Lancaster County has a very large Amish population, in the colonial years the Lancaster Amish settlements were small and outnumbered by the Amish in Berks County. Northkill remained the largest Amish settlement until after the Revolutionary War when its people made the choice either to move south to better farmland in Lancaster County, or to head west to the new frontier in Somerset County, Pennsylvania. As inconsequential as it may have appeared at the time, the dissipation of the major Berks County Amish settlements serves as a watershed point in the history of the Amish in North America.

Those Amish who moved to the Lancaster area in the late 1700s found an agricultural paradise and most never left. Those who chose Somerset County formed the vanguard of Amish settlers in the Midwest. As Euro-American conquest of native populations continued west making available more and cheaper land, the Amish of Somerset followed.  

It is out of and through Somerset that most of the Midwest Amish settlements were founded.  

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79 Reschly (2000:45) notes the striking parallels between 17th century Amish migrations to the Palatinate and the 19th century move west in North America: “Amish farmers [settling in the American Midwest] participated in the same geopolitical process that had served them so well in Europe: securing conquered space to stabilize a growing nation-state and feeding industrializing cities...”

80 Schlabach 23, 26 notes also the importance of the Big Valley settlement in Mifflin County (founded 1791). The Logan and Champaign Counties, Ohio settlement (now Mennonite) was almost entirely from Big Valley and included some from Lancaster (e.g., Isaac Schmucker who later moved to Indiana) Nolt 99, citing S. Duane Kauffman 1991. Also the Fairfield County, OH settlement (founded c.1819, now extinct) may have been from Mifflin County (Leroy Beachy, p.c., 3.15.90)
Figure 15. Map of some major Amish settlements in Pennsylvania in the 18th century.

Thus the moves to Lancaster County and to Somerset County effectively and quite literally divided the North American Amish "family tree" into two main branches, and there are, in fact, certain surnames which are found almost exclusively in one or the other areas.\textsuperscript{81}

\textsuperscript{81} For example, Lancaster names King, Stoltzfus, Lapp are nonexistent among Holmes County, Ohio Amish. Meanwhile, European Amish names of 19th century immigrants (e.g., Gingerich, Swartzentruber) are not represented among the Lancaster Amish (Hostetler 1993:245 and Leroy Beachy, p.c., 3.15.00)
Though we do not have detailed linguistic profiles of these two groups of early American Amish in the years when Deitsch was in its formative stages, it is probable that the Berks County Amish who moved to Somerset County retained some features of Deitsch as it was emerging in Berks County, while those Berks County Amish who moved to Lancaster eventually adopted features of (Alemannic-influenced) Lancaster County Deitsch.

To be sure, as Amish moved from Somerset to the Midwest during the 19th century, they carried with them a linguistic heritage in many ways similar to that of the Lancaster Amish. Still, throughout the 19th century ties of family and friendship were forged and strengthened between the Midwestern Amish, while ties with the east weakened.

6.3 Amish settlement in the Midwest 19th century

6.3.1 Holmes County, Ohio

The settlement of the Holmes County area in Ohio—currently the largest Amish community in the world—is an example of the importance of the Somerset Amish in the Midwest settlements. In 1809 four households of the Miller-Stutzman family arrived from Somerset. The next two years saw the arrival of nine more families, all related to the first settlers. Dozens more families moved from Somerset in 1812, 1815 and 1818 settling around and between the first settlers (Beachy 1990). This settlement pattern—in which a group with family ties would settle in an area and other Amish would move in

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82 Here and following I use “Somerset” to refer to the several Amish communities centered in southern Somerset County, PA and across the border in Garrett (formerly Allegheny) County, MD.
later filling in the gaps to create a dense community—turned out to be typical of Amish migration in the Midwest (MacMaster 1985:72 and footnote 42).

Arrivals from the old southeastern Pennsylvania communities were few. So few, in fact, that when several families from Lancaster settled in Holmes County in the years 1826-48, they are described as “a little island of Lancaster County culture” (Kaufman and Beachy:18). The vast majority of Holmes County Amish settlers, some 90% by one estimation, thus trace their origins to Somerset County.\(^{83}\)

As Amish moved further west, the web of interconnectedness persisted. Family groups from Somerset along with their kin from the newer Ohio settlements set off for new territories as soon as the conquered land was opened for American expansion. There was one significant variation. Beginning around 1815 and continuing up through 1860, a new stream of European Amish immigrants joined the Somerset Amish in settling the frontier (Nolt 1992:88-9). Most of these 19\(^{th}\) century Amish immigrants, whose numbers would eventually total 3000, bypassed the old Lancaster settlement and were acculturated to North American Amish ways of speaking and living by residing in Somerset for a period of time.\(^{84}\)

\(^{83}\) Leroy Beachy, p.c. 3.12.00, estimates the Holmes County settlement was 90% from Somerset County and 5% 19\(^{th}\) century Europe and 5% Mifflin and Lancaster. Names typical of Lancaster Amish such as King, Stoltzfus, Lapp, are nonexistent in Holmes Co. Likewise, European Amish names typical of Hesse-Kassel Amish, such as Gingerich and Swartzentruber are underrepresented in Holmes County (these two names account for only 31 and 26 families, respectively in the 1996 Ohio Amish Directory which includes some 5000 families.

\(^{84}\) Many 19\(^{th}\) century Amish immigrants never made strong associations with the Amish who had arrived in the 18\(^{th}\) century. The new arrivals often found the American Amish to be more traditional in their practices. As a result 19\(^{th}\) century immigrants tended to found their own communities (e.g. Butler and
6.3.2 Kalona, Iowa

The Amish settlement in Kalona, Iowa, founded in 1846 some four decades after Holmes County, illustrates the growing interconnectedness of Amish communities in the Midwest as highly mobile extended family units often moved multiple times before and after arriving in Iowa.

The early settlers in Kalona arrived from Somerset County, Pennsylvania; Holmes County, Ohio; and Fairfield County, Ohio (see Table 9). But for only about half of the 99 individuals arriving by 1860 (comprising 51 nuclear family units and, eventually, 326 children) was the move to Kalona their first. Most had lived in Somerset and one or more settlements in Ohio or Indiana before moving to Iowa. None list Lancaster County, Pennsylvania as a former residence. For some families, Kalona too ended up being just another stop on the pioneer road: ten of the first fifty-one family units moved on to new settlements after five to fourteen years in Iowa. This high degree of mobility was the norm for Amish in the 19th century (Nolt 1992:99).

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Fulton Counties in Ohio and Tazewell Co., Illinois) which eventually affiliated with the Mennonite church (Hostetler 1993:65).
<table>
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</thead>
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<tr>
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Table 9. Former residence(s) of adult Amish settlers to Kalona, Iowa 1846-1860\(^{85}\)

Connections with multiple communities in the Midwest often drew families from different settlements to a new one. William and Helena Gingerich Wertz arrived in Kalona in 1846 from Fairfield County, Ohio. Over the next fourteen years they were followed by her parents and three adult siblings with their families, all from Fairfield County; the family of a brother of her sister-in-law, from Holmes County; and finally the family of a sister of one of her other sisters-in-law, from Elkhart County, Indiana. In Kalona, fully two-thirds of the first ninety-nine adult settlers were part of some extended

\(^{85}\) Source for data is Lind 1994.
family unit, and thirteen percent had two separate extended families represented in Kalona.

These general patterns of frequent relocation along with extended family continued through the mid-19th century. The Somerset County and Ohio settlements continued supplying the majority of new arrivals in Kalona up through 1872 when the settlement was twenty-five years old, but these were joined by more and more Amish from other Midwestern settlements in Indiana and Illinois.

In contrast to Holmes County, Kalona has a significant percentage of European-born Amish among its early settlers. Nearly half were born in Europe, with the principality of Waldeck in Hesse the most frequently cited European place of birth (see Table 10).
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<td></td>
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</tr>
<tr>
<td></td>
<td>Ontario</td>
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</tr>
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<td></td>
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</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>99</strong></td>
</tr>
</tbody>
</table>

Table 10. Birthplaces of adult Amish settlers to Kalona, Iowa 1846-1860

Given that Deitsch in Kalona does not appear to have any features that might be traceable to Waldeck dialects—especially those with Low German features—the Kalona settlement provides an example of the apparent linguistic assimilation of 19th century Amish immigrants from Europe into Deitsch-speaking Amish communities in North America. Had the Waldeck/Hesse immigrants traveled directly from Europe to Kalona, things may have turned out differently. Several other communities founded by 19th century Amish retained distinctive dialect features, e.g., Alsatian in Fulton County, Ohio and Bernese

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86 Source for data is Lind 1994. Lind (1994:356) also notes that if one considers family names of Amish who arrived during the colonial period, these make up about half of the family names represented in Kalona by 1869. The rest are 19th century immigrant names.
Swiss in Adams County, Indiana. However, many of the 19th century Amish immigrants—including nearly all those who eventually settled in Kalona—landed in Baltimore harbor and followed the National Road to Somerset, Pennsylvania where they remained for as few as four and as many as thirty-five years before moving on to Iowa. Daniel Schoetler is perhaps typical of this group. Born in Germany in 1810, he left Waldeck in 1833 and emigrated to Somerset where he lived for seven years and married Helena Schwarzendruber, also a native of Waldeck. In 1840 the Schoetler family moved to Butler County, Ohio for two years, then to Fairfield County, Ohio for seven years, before moving to the new settlement in Kalona in 1850. Five years later, Helena’s parents followed from Somerset.

6.3.3 Intercommunity mobility

Highly mobile extended families like the Schoetler’s and the Wertz’s were typical of Amish in the 19th century. Frequent moves often linked families to multiple midwestern communities in much the same way that a strawberry vine spreads via its runners. As Reschly notes: “The Amish exhibit the ability to migrate to multiple locations, retain networks of support among those locations, and create similar communities” (2000:183).87

Another major Midwest Amish settlement, Arthur, Illinois, founded in 1864, illustrates the growing interconnectedness of 19th century midwestern Amish communities as its

87 The strawberry vine imagery is Reschly’s. Reschly also views mobile community as an ongoing trait of the Amish: “Migration is common sense, an expected behavior, essential to what it means to be Amish” (2000:182).
early settlers came from Somerset County, Pennsylvania as well as Iowa, Indiana, and Ohio. One early Illinois settler, Joseph N. Keim, had links to all of these communities within his own family. Born in Somerset, Keim moved to Kalona, Iowa around 1850 and served as a minister there. In 1864 friction in the church precipitated a move to Indiana and from there to Arthur, Illinois. His son Joseph W. Keim was born in Iowa in 1859, and after living in Indiana and Illinois, moved to Holmes County, Ohio where he married in 1880 and where his son began a prosperous lumber company (Kaufman and Beachy:44 and Lind 119).

Figure 16. Map of major 19th century Midwestern Amish communities and movements of selected families
An extreme example of the Amish tendency to roam was Noah Troyer. Troyer was born in Holmes County, Ohio in 1831 and as a child moved with his parents to Knox County and Champaign County in Ohio and finally to Indiana. As a young adult Noah returned to Holmes County from Indiana to marry Veronica Mast, and between 1860 and 1875, Noah and Veronica lived in Ohio, Michigan, and Indiana before moving to Iowa where they joined his parents and two brothers.88

A half-century later the “strawberry runner” pattern of Midwestern Amish settlement continued as the William Miller family moved from Holmes County to Madison County, Ohio in 1908, then lived in Indiana from 1911 until 1916 when they returned to Ohio even as other relatives moved to Arthur, Illinois.89 As Reschly notes, even today “it is not unusual to meet elderly Old Order Amish who have lived in Arkansas, Oklahoma, Kansas, Missouri, and many other states” (Reschly 2000:203).

As a result of these many moves, it was—and still is—common for Midwestern Amish to make extended visits to friends and relatives in other Midwestern states. Amish young people in particular have, over the years, traveled to other Amish communities to visit and work for a season or longer. One man in the early 1900s traveled regularly to

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88 Ironically, Veronica was a member of the small contingent of families in Ohio from Lancaster, Pennsylvania (see sections 6.3.1 and 6.3.5). Noah Troyer gained fame in the late 1870s as a “sleeping preacher” and spoke to large crowds in Indiana and Michigan and Mifflin County, Pennsylvania while visiting relatives. Sleeping preachers delivered sermons in an apparent trance state. In Troyer’s case, the sermon was delivered in German or English depending upon the makeup of his audience. For more on sleeping preachers, see Reschly (2000:132 and passim).

89 Romas Miller, plc., 3.24.00. Other families have similar stories, e.g., the Moses Slabaugh family moved from Holmes County to Madison County, Ohio in 1896, then to Michigan in 1904, then back to the Holmes County area in 1907 (Slabaugh n.d.: 72-74). In Iowa, additional examples include the Peter B. Miller family, Jacob Swartzendruber who remarried in Indiana, Jacob J. Kauffman and son, and S.D. Gingerich (Reschly 2000:56, 72, 115, 165).
Indiana with other “boys from Holmes County” to do carpentry work, and often spent the harvest season in Illinois husking corn at the lucrative wage of forty cents per hour. Gingerich (1939:246) says: “There has always been visiting between the Amish Mennonites of the different States. Young people from the East came to the Iowa settlements each winter. Sometimes they stayed for a year or two, and if they were looking for mates, they usually found them and settled here permanently.” Given that Iowa was farther west than most Amish settlements, “the East” could be understood to include nearly all other Amish communities, but in practice visitors from Lancaster, Pennsylvania were few. Gingerich gives as examples visitors from Ohio, Ontario, and Somerset, Pennsylvania.

6.3.4 Mobility as general Midwestern phenomenon

The mobility of “settlers” in the 19th century Midwest was not a phenomenon restricted to the Amish, though they may represent some of the most extreme cases. Those who pioneered the Midwest were often pulled from one place to the next by the promise of more and cheaper land. The Ingalls family of Little House on the Prairie fame is but one example. As a child, Laura Ingalls Wilder, moved with her family from Wisconsin to Missouri, Kansas, Iowa, Minnesota, and South Dakota between 1868 and 1879. Just as the 18th century Amish immigration mirrored the general patterns of the time (see section 6.2), so too did the paths of Amish and Mennonite migration in the 19th century “fit the larger patterns of general national and international migration” (Schlabach 1988:42).

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90 Leroy Beachy, p.c., 3.15.00.
6.3.5 Cultural divergence between Midwest and Eastern Amish in the 19th century

Linguistic data from the 19th century are scarce, so it is difficult to assess the degree to which Midwestern Deitsch was emerging as a separate entity. Still, in other cultural domains—economic, religious, and social divisions between the frontier Midwest and the established Eastern Amish were emerging by the mid 1800s. Lancaster arrivals to Holmes County in mid-century are described as having a "distinctive culture" marked by apparent wealth, stone architecture, furniture designs, and folk art.91

Too, the Midwestern Amish generally had a greater tolerance for diversity in religious practice. Midwestern Amish experimented with singing nontraditional hymns, building meetinghouses, having Sunday school, and relaxed shunning practices.92 No bishops

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91 "They seem to have formed a little island of Lancaster County culture which, at this first survey, appears to have had at least some features that distinguished it from the larger settlement [i.e., of Somerset origins] to the east. Though many of that group could also trace their ancestry to Lancaster, they seem to have lost much of that distinctive culture during their years of living on the western Pennsylvania frontier." (Kauffman and Beachy, 18). Though Kauffman and Beachy say the Somerset and Ohio Amish "trace their ancestry to Lancaster," they likely mean simply that there were kinship ties between Lancaster and Somerset Amish traceable either to Berks County or to Europe. The oddity of "Lancaster [Pennsylvania] in Ohio" is noted in Kauffman and Beachy 1990, 18-22, 31-33. Three main families relaxed by marriage settled several miles NW of Walnut Creek arriving in 1826, 1829, 1837, and 1848. They were relatively wealthy as evidenced by their valuables (chests, chairs, clock) which they shipped separately (18), and may have brought a builder along to construct 3 stone barns and one stone house (21), plus 3 brick houses (40). Chairs, stone barns (and barns with projecting sheds), needlework, and fraktur are among the distinctive cultural items noted.

92 For example, Schlabach 211-12 notes a specific incident in 1820, in which Ohio Amish accepted as a member a Mennonite who had refused a request by Pennsylvania Amish that he be rebaptized as precondition to membership. Amish in Somerset County, in Illinois, and in Iowa experimented with using hymnals other than the traditional 16th century Ausbund, and in 1881 Somerset County became the only Amish settlement to build meetinghouses (Nolt, 199). With regard to shunning see Nolt, 207. Also Nolt 265 describes a later incident in 1925 in which a preacher of "assurance" was excommunicated in Lancaster, but apparently not in Ohio. There are some practices in which Lancaster appears to have been more progressive, e.g., having a cover for buggies was common in Pennsylvania in the late 1800s, but not in the Midwest until the early 1900s. It is not clear, however, to what extent this may have been an economic consideration (Nolt, 195 and note n.14).
from southeastern Pennsylvania ever attended the national Amish bishops meetings of 1862-1878, possibly because they were seen as a venue for change-minded Amish.\textsuperscript{93}

It appears, then, that a pragmatic spirit, born of frontier living and perhaps the influence of progressive European Amish immigrants distinguished the Midwestern Amish from those in the East resulting in cultural divergence already in the 19\textsuperscript{th} century.

To be sure, Amish in the Midwest still had deep connections with their fellow Amish in the East. Midwestern Amish often consulted with those in Pennsylvania with respect to questions on orthodox community practice, and in many cases the conservative voice of the Eastern Amish won out. Easterners did on occasion visit relatives and friends in the Midwest. Toward the end of the 19\textsuperscript{th} century nationwide Amish connectedness was further aided by the availability of news from distant communities in national editions of "correspondence" newspapers such as the Sugarcreek (Ohio) Budget (Nolt 1992:192). Thus, a core pan-Amish identity was maintained across all Amish communities, even as a new sense of regional differences was developing.

6.4 Summary

This chapter has reviewed Amish history and migrations with particular focus on the broad changes in Amish social networks in the New World over the past two-hundred fifty years. At the end of the 18\textsuperscript{th} century, the Amish in North America were divided

\textsuperscript{93} In fact, the meetings resulted in many Amish congregations taking a more moderate Amish-Mennonite approach (Schlabach 1988:217).
between the emerging Lancaster County, Pennsylvania settlement and the frontier settlements in Somerset County, Pennsylvania. This early geographic division had far-reaching consequences as the former settlement remained largely insular, while the latter launched wave after wave of Amish to new settlements in the Midwest. The Midwestern Amish and the hundreds of European Amish who joined them during the 19th century displayed an astonishing degree of mobility. Families moved multiple times between different Amish settlements in just one or two generations. As a result kinship and friendship ties linked Amish communities in the Midwest to each other and ensured that communication between them would continue into the 20th century.
CHAPTER 7

PATTERNS OF INTERACTION BETWEEN AMISH COMMUNITIES IN THE MIDWEST IN THE TWENTIETH-CENTURY

Current contacts between Amish communities continue to reflect the patterns of interaction that arose in the 18th and 19th centuries as Amish chose between pioneering the Midwest and remaining in southeastern Pennsylvania. In both areas historic family ties and intermarriage strengthened the connections within the regions and weakened the ties between them.

The family ties in the Midwest, together with economic and church connections, remained strong throughout the 20th century and can be illustrated by surveys of Amish travel destinations, by studying current migration trends of Amish within the Midwest, and by personal stories.

7.1 Current demographic data for communities studied

The Amish settlements in Holmes County, Ohio and Kalona, Iowa remain rural communities. The social landscape, however, has grown more complex as different groups among the Amish choose divergent paths of accommodation and resistance to
“English” cultural ways. In the Holmes County area, for example, there are over a dozen
groups that have their origins in or that have drawn many members from the Old Order
Amish. Some groups are more strictly separated from the majority society while others
have assimilated to North American culture. Table 11 breaks down Holmes County,
Ohio and Kalona, Iowa into the several major Anabaptist affiliations in each community
that include most Deitsch speakers.
<table>
<thead>
<tr>
<th>Group</th>
<th>Language Use</th>
<th>Population in Holmes Co., OH</th>
<th>Population in Kalona, IA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old Order Amish</td>
<td>Fluent bilingualism: Deitsch with intimates, English with outsiders</td>
<td>20,796</td>
<td>1000</td>
</tr>
<tr>
<td>New Order Amish</td>
<td>Fluent bilingualism: Deitsch with intimates, English with outsiders</td>
<td>3420</td>
<td>48</td>
</tr>
<tr>
<td>Beachy Amish-Mennonite</td>
<td>Fluent bilingualism among most adults; many children favor English</td>
<td>750</td>
<td>145*</td>
</tr>
<tr>
<td>Conservative Mennonite</td>
<td>Monolingual English. Some Deitsch speakers, mostly over 50</td>
<td>4400</td>
<td>438*</td>
</tr>
<tr>
<td>Mennonite</td>
<td>Monolingual English. Some Deitsch speakers, mostly over 70</td>
<td>4650</td>
<td>1723*</td>
</tr>
<tr>
<td>Total Anabaptist-related</td>
<td></td>
<td>34016</td>
<td>3354</td>
</tr>
<tr>
<td>Other (non-Anabaptist related)</td>
<td>Monolingual English</td>
<td>36297</td>
<td>2760</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>70313</td>
<td>6114</td>
</tr>
</tbody>
</table>

*Number of members—does not include, e.g., children

Table 11. Populations of Anabaptist-related groups in Holmes County, Ohio and Kalona, Iowa

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94 Thanks to Lois Gugel of the Iowa Mennonite Archives in Kalona and to Verna Schlabach at the Mennonite Information Center in Berlin, Ohio for assistance in obtaining these figures. The Total population figures (and by subtraction the non-Anabaptist figures) are from 2000 census data. In selecting the geographic areas from which to gather census data, I selected the level of the township with the
In spite of the proliferation of religious schisms, the Old Order Amish remain prominent in both settlements, thus ensuring the continuing vitality of Deitsch in them. The Old Order Amish are clearly the dominant group in the Holmes County area, which today is the largest Amish community in the world. Kalona, though relatively smaller than Holmes County, remains, at least for the time being, the largest Amish community west of the Mississippi. These figures should be interpreted in light of the explosive growth in the population of Amish in general across North America in the last half of the 20th century. The Amish have doubled their population approximately every twenty years since 1950 and the total Amish population in North America today is estimated at 180,000 (Kraybill 2001:336). This growth is reflected in census data from Holmes County which has increased by 69% since 1970 and by 19% between 1990 and 2000 alone (vs. only 5% for all of Ohio). But the growth in population, while it has increased the size of the early settlements such as Holmes County and Kalona, has largely been absorbed by new settlements. Only 19 Amish settlements (including Kalona and Holmes County) were in existence in 1900; in 1970 there were nearly 100 settlements; today there

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exception of Holmes County which is included in its entirety. Townships provide local census data that exclude the populations of large nearby cities like Iowa City, Wooster, and Canton. In Kalona the data are gathered only from three townships in which the settlement is concentrated: Sharon Twp. and Washington Twp. in Johnson County and English River Twp. in Washington County. The figures for Holmes County include all of Holmes County as well as eleven townships in surrounding counties: Salt Creek, Sugar Creek, Paint, and East Union in Wayne County; Wayne, Sugar Creek, Auburn, and Bucks in Tuscarawas County, and Crawford, Mill Creek, and White Eyes in Coshocton County. Of course, the Holmes County settlement is not precisely co-extensive with these townships and within the county the settlement concentrated in the eastern half. In the Kalona data for Mennonites, there are seven churches counted including four churches with about 850 members just outside the three townships that form the nucleus of the community. These four churches are included under the assumption that some of their membership lives within the three township core area.

95 Holmes County's population in 1970 was 23,024 and in 2000 was 38,943. The growth continues as children under age 18 account for 36% of Holmes County residents in the year 2000 vs. 25% for all of Ohio. The Holmes County area Amish community is not limited to Holmes County, but due to the large size of the Amish community in a rural county (unlike Lancaster County, Pennsylvania or even Kalona which is near Iowa City, Iowa) it is particularly amenable to study via county-wide data. Census data are obtained from www.census.gov.
are well over 200 (Nolt 1992:284) This demonstrates the continuing importance of migration in the maintenance of Amish community. It also illustrates, as we shall see in section 7.5, below, that though the web of intercommunity contacts in the Midwest remains strong, it is no longer concentrated between a few settlements, but is becoming more diffuse, connecting hundreds of settlements.

For the sake of comparison, Table 12 shows some of the Anabaptist-related groups in Lancaster County, Pennsylvania.

<table>
<thead>
<tr>
<th>religious affiliation</th>
<th>membership*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old Order Amish</td>
<td>10,650</td>
</tr>
<tr>
<td>other Amish</td>
<td>1,033</td>
</tr>
<tr>
<td>Old Order Mennonite</td>
<td>6,057</td>
</tr>
<tr>
<td>other Mennonite</td>
<td>18,598</td>
</tr>
<tr>
<td>Old Order Brethren</td>
<td>255</td>
</tr>
<tr>
<td>other Brethren</td>
<td>13,314</td>
</tr>
</tbody>
</table>

*does not include children. Including children increases Old Order Amish count to 22,000

Table 12. Population of Anabaptist groups in Lancaster County, Pennsylvania (adapted from Kraybill 2001:15)
Population growth coupled with the growth of tourism have brought about economic change in the larger Amish communities. In Holmes County the last several decades have seen a sea change in the economic base of the settlement as men move out of farming and into more lucrative occupations in factories and small businesses. In the 1960s two-thirds of the adult Amish males in Holmes County earned their living farming; today less than one-third do so. This change in work-venue further increases the amount and intensity of contact with English speakers—at least for adult males and for other family members employed outside the home—and thus increases the potential for contact-induced structural changes in Deitsch and even language shift. The presence in Holmes County of many Amish-owned businesses and, in particular, many businesses owned by Beachy Amish or Mennonite persons with close family ties to the Amish provides an important counter-balance in all this economic unrest. These sympathetic employers fashion workplaces where Amish employees are grouped together and may continue to speak Deitsch on the job.\footnote{For more on economic change and linguistic change see Keiser 2001b. Kraybill also affirms that Amish in Lancaster County, Pennsylvania who are employed outside the home remain enmeshed in ethnic networks and thus “toil in an ethnic cocoon” (2001:247) which attenuates the threat of cultural and linguistic assimilation—though he also muses that “contamination” of Deitsch with English may so “dilute” the dialect that it may eventually be retained only as a language for religious services (2001:262). In Ohio, this scenario seems plausible only for the New Order Amish (see again, Keiser 2001b).}

We might well ask how population growth, religious schisms, and economic changes impact the interactions between Amish communities. First, as noted earlier, population growth spurs continued migration, though much of the migration is no longer between the old established communities but to recently-founded settlements. Second, changes in community practices may create social distance between Amish in different
communities—or lessen it. For example, Old Order Amish in Kalona whose community practices include limited use of tractors for farmwork, a relatively stronger emphasis on personal piety, and greater involvement of youth in the church, find that in these and other ways their practices mesh better with the Holmes County New Order Amish, than with the Holmes County Old Orders. Thus Kalona ties with the larger contingent of Amish in Holmes County have weakened, though some young people in Kalona have made acquaintances with New Order Amish in Ohio and at least one young Kalona man has moved to Holmes County in the 1990s. This move may have been precipitated in part by the economic opportunity that exists in Holmes County. In Kalona, where still some 80% of adult males farm for a living, there are relatively few job prospects for those who do not have the means or desire to farm.

The following sections explore in more detail the patterns of interaction between Amish communities.

7.2 Amish travel patterns as reported in correspondence and by drivers of Amish

A preliminary survey of selected Midwestern Amish correspondents' reports from January editions of the Sugarcreek (Ohio) Budget over a fifty-year period from 1950-2000 revealed the following trends in travel between Amish communities. Amish from Southeast Pennsylvania accounted for approximately 20% of the visitors to Ohio and Iowa communities. However, Southeast Pennsylvania was the destination for only 7% of Ohio Amish and was never listed for the Iowans. Midwestern origins and destinations
are by far the most common for Amish travelers—and visiting relatives is the most common reason for traveling.\textsuperscript{97}

Interviews with four persons who currently offer taxi services to Amish revealed a similar pattern. Out-of-state travel is primarily for the purpose of visiting family, often on the occasion of a wedding or funeral, and for a relatively short time: usually two to four days. The three drivers from the Midwest made more frequent out-of-state trips—ten to fifteen per year (not with the same family, of course)—with Indiana, Michigan, Wisconsin, and northwestern Pennsylvania being the most-traveled routes, and trips to southeast Pennsylvania occurring only once or twice a year. The one driver from southeast Pennsylvania made the least out-of-state trips, six per year. Most of his travel was in-state to and from Lancaster.\textsuperscript{98}

7.3 Migration patterns of Holmes County, Ohio and Lancaster County, Pennsylvania Amish in the 20\textsuperscript{th} century

A representative survey of addresses for children born before 1975 listed in the Holmes County Amish Directory (1996 revised edition) indicates that, when Amish move out of Holmes County, they stay in the Midwest.

\textsuperscript{97} The survey of correspondence included reports from the January editions (usually the first or second edition of the year in order to account for travel over the holidays) of 1950, 1955, 1960, 1990, and 2000, and one June edition of the Sagarcreek Budget National Edition. The focus was on travel to and from Iowa and to and from Ohio. Visitors to Iowa totaled 28; visitors to Ohio totaled 98. Travelers from Iowa totaled 31; travelers from Ohio totaled 67.

\textsuperscript{98} Interviews were conducted at the Eastern States Draft Horse Sale, in Columbus, OH, February 1, 2000. Three Holmes County drivers and one Perry County, PA driver were interviewed.
<table>
<thead>
<tr>
<th>emigrated to</th>
<th>number</th>
<th>percent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>elsewhere in Ohio</td>
<td>47</td>
<td>44%</td>
</tr>
<tr>
<td>Indiana</td>
<td>14</td>
<td>13%</td>
</tr>
<tr>
<td>northwestern Pennsylvania</td>
<td>12</td>
<td>11%</td>
</tr>
<tr>
<td>Montana</td>
<td>8</td>
<td>7%</td>
</tr>
<tr>
<td>Michigan</td>
<td>6</td>
<td>6%</td>
</tr>
<tr>
<td>unknown</td>
<td>6</td>
<td>6%</td>
</tr>
<tr>
<td>eastern Pennsylvania</td>
<td>4</td>
<td>4%</td>
</tr>
<tr>
<td>Kentucky</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>Minnesota</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>other</td>
<td>6</td>
<td>6%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>108</td>
<td></td>
</tr>
</tbody>
</table>

Table 13. Destinations of Amish leaving Holmes County, Ohio (data from 1996)\(^9\)

Of 108 adult Amish children from 43 different church districts who were no longer living in Holmes County in 1996, nearly half moved to other Amish communities in Ohio. Neighboring Indiana and northwest Pennsylvania (a settlement founded by Ohio Amish) each received over 10% of the out-migration. Only 4% moved to northeastern Pennsylvania to settlements that were likely founded by southeastern Pennsylvania (i.e., Lancaster County) Amish.

\(^9\) The survey selected roughly every fourth church district listed in the 1996 revised edition of the Ohio Amish directory and counted those children who were listed as “Amish living in another community” (coded as “C” in the directory) as well as the “single and Amish” (code “B”) individuals whose address indicated they lived outside the community. Only children born before 1975 were surveyed, because those born after 1975 are in many cases too young to have had the opportunity to move away from their parents.
On the one hand, these results are not surprising, since cheap farmland is often what Amish are in search of and precious little of that is available in the East. But on the other hand, the Lancaster Amish have founded nearly twenty new settlements within Pennsylvania for the same reasons (see Kraybill 2001:16-17, 337-38), yet very few Ohio Amish have joined them. What is more, Lancaster Amish have begun settling in the Midwest, too, but they remain, in the words of one historian “‘Lancaster Amish’ in dress, ordnung, and orientation.”\textsuperscript{100} Two such communities in Indiana reportedly travel back to Pennsylvania with much greater frequency than they have contact with neighboring Midwest Amish settlements. Another Amish historian stated that he would not expect Pennsylvania Amish and Midwest Amish to mix in new settlements these days: “they don’t think alike...one or other would have to change [the style of their] buggies.”\textsuperscript{101} Apparently community practices are different enough to help squelch partnership between Eastern and Midwestern Amish pioneers in the 21st century.

7.4 Migration patterns of Iowa Amish in the 20th century

Like their Holmes County counterparts, Amish who move out of the Kalona, Iowa settlement also relocate somewhere in the Midwest. A list of destinations for all of the

\textsuperscript{100} Steve Nolt, p.c., 3.29.00. “Ordnung” refers to the set of guidelines (unwritten and established by consensus in each church district) regulating daily living in matters such as dress and ownership and/or use of modern technologies. Communities of Lancaster origin exist in Wisconsin (5 settlements), Indiana (2 settlements), Kentucky, and Missouri. The Lancaster Amish in the Midwest are of considerable interest for future research both to see whether or not they are able to maintain meaningful long-term contact with distant Lancaster, and to see if they will facilitate the spread of Lancaster Deitsch features to the Midwest. Since the 1990s several Lancaster Amish settlements have co-existed in relatively close proximity to pre-existing Midwestern Amish settlements in Wisconsin (Marathon County, Clark County, and Grant County) and in Kentucky (Christian and Todd Counties) further increasing the potential for interaction between Amish of different regional, religious, and dialectal affiliations.

\textsuperscript{101} Leroy Beachy, p.c., 3.15.00
adult children in the Kalona church districts listed in the 1992 Iowa Amish Directory is
given in Table 14.

<table>
<thead>
<tr>
<th>emigrated to</th>
<th>number</th>
<th>percent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missouri</td>
<td>18</td>
<td>18%</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>12</td>
<td>12%</td>
</tr>
<tr>
<td>Indiana</td>
<td>11</td>
<td>11%</td>
</tr>
<tr>
<td>Other Iowa</td>
<td>9</td>
<td>9%</td>
</tr>
<tr>
<td>Kentucky</td>
<td>9</td>
<td>9%</td>
</tr>
<tr>
<td>Illinois</td>
<td>5</td>
<td>5%</td>
</tr>
<tr>
<td>Ohio</td>
<td>4</td>
<td>4%</td>
</tr>
<tr>
<td>Kansas</td>
<td>4</td>
<td>4%</td>
</tr>
<tr>
<td>Ontario</td>
<td>4</td>
<td>4%</td>
</tr>
<tr>
<td>Tennessee</td>
<td>3</td>
<td>3%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>other</td>
<td>19</td>
<td>19%</td>
</tr>
</tbody>
</table>

TOTAL 100

Table 14. Destinations of Amish leaving Kalona, Iowa in late 20th century (source: Iowa Amish Directory 1992)\(^\text{102}\)

\(^{102}\) Data taken from Iowa Amish directory 1992. I counted those children who were listed as “married and living in another community” (coded as “C” in the directory) as well as the “single and living away from home” (code “D”) individuals whose address indicated they lived outside the community. Only children born before 1970 were surveyed, because those born after 1970 are in many cases too young to have had the opportunity to move away from their parents. Because the 1992 Iowa Amish Directory does not indicate which individuals are no longer Amish, these figures, unlike those for Holmes County in Table 13, include some persons who grew up in Amish homes and have since left the church. However, given the high rate of retention of most Amish communities (typically more than 80% of Amish children join the...
Unlike Holmes County Amish who often moved elsewhere in their home state, few Amish from Kalona remain in Iowa (9%). Settlements founded in nearby Missouri and Wisconsin in the 1960s and 1970s attract the most Iowa Amish. Older settlements in Indiana are also a common destination. Since many Holmes County Amish also choose to resettle in Indiana, the Hoosier state seems to occupy a central place in the Midwest geographically and perhaps also in terms of maintaining a leveled regional dialect. As for Pennsylvania, once again it forms the merest blip on the radar screen for Midwestern Amish on the move: only one family from Kalona moved to Pennsylvania. Finally, in Table 14 we have the first evidence of direct on-going (albeit small-scale) contact between Kalona and Holmes County: three of the four Iowa families moving to Ohio list Holmes County addresses.

Out-migration from the Buchanan County settlement in northeast Iowa (founded in 1914 by Kalona Amish and now the second major Amish settlement in the state) differs from Kalona in several ways. First, nearby southwest Wisconsin (43%) is the main destination for those leaving (the total number of out-migrants is 113). Also, Iowa (15%) and Ohio (8%) are the next most popular locations. The connection with Ohio is significant with five families relocating to Holmes County and two to Madison County. There are no families from Buchanan County, Iowa who have moved to Pennsylvania.

_____________________
(church as adults), the figures for the places listed in Table 14 and their order relative to one another would not change much even if formerly-Amish persons could be factored out.

145
We can get some further indications of the direction and frequency of migration into and out of the Iowa Amish communities from lists of the settlements in which their ministers have served before and after coming to Iowa.

<table>
<thead>
<tr>
<th>State</th>
<th>Kalona</th>
<th>Buchanan County</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>number of ministers (n=44)</td>
<td>number of ministers (n=58)</td>
</tr>
<tr>
<td>OK</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>IL.</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>OH</td>
<td>5</td>
<td>19</td>
</tr>
<tr>
<td>IN</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>KS</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>WI</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>MO</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>KY</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>MI</td>
<td>2</td>
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</tr>
<tr>
<td>IA</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Canada</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>MN</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>percent</th>
<th>percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>14%</td>
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</tr>
<tr>
<td></td>
<td>14%</td>
<td>0%</td>
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<tr>
<td></td>
<td>11%</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td>9%</td>
<td>14%</td>
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<td></td>
<td>9%</td>
<td>16%</td>
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<tr>
<td></td>
<td>7%</td>
<td>19%</td>
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<tr>
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<td>7%</td>
<td>14%</td>
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<td>5%</td>
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<td>12%</td>
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<td></td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>0%</td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td>9%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Table 15. Places where Iowa Amish ministers (born after 1900) have served\textsuperscript{103}

\textsuperscript{103} Data from Iowa Amish Directory 1992 p.3-6 and 67-9. Some ministers moved several times and each move was counted, thus, the totals in the columns is greater than the number of ministers who have moved and the percentages do not total 100%.
In Kalona, of the forty-four ministers born after 1900, exactly half (i.e., 22) had served as a minister in another Amish settlement. Illinois, Oklahoma, Ohio, Indiana, and Kansas were the most common places listed with about 10% or more of Kalona ministers having lived in one or more of these states. In Buchanan County, the Ohio contribution is even more striking: nearly one-third of its fifty-eight ministers have also served in Amish settlements in Ohio (most commonly Madison County and Holmes County). In general, the Buchanan County ministers have been considerably more mobile than their Kalona counterparts as over 80% have served in other communities.

7.5 A sign of change? Variation in rates of Amish out-migration

Although the results of the surveys of Amish emigrants support the hypothesis that Midwestern Amish move within the Midwest and not to the East, variation in the overall rates of out-migration from Midwestern Amish settlements may signal changes in the patterns of interaction connecting them.

The relative influence of Holmes County out-migrants is called into question when we consider the large numbers of persons who have not left the community. The 108 individual emigrants from Holmes County in the survey account for only 5% of the adult children listed in the 43 church districts surveyed. The fourteen migrants to Indiana, the state receiving the largest Holmes County contingent, account for less than 1% of all adult children. Even if we take into account that typically between 10% and 20% of adult

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104 The 5% figure is based on a detailed study of children born before 1975 in 7 districts: only 27 of a total of 576 children in these districts were living in Amish communities outside of Holmes County. A count of children born before 1975 in several other districts suggests that this figure is accurate in general; districts average a total of about 50 adult children of which only 2 or 3 have emigrated.
children leave the Amish church, the migrants still form a small portion of those who have remained Amish. Thus, the Holmes County community is no longer as mobile as it was in the 19th and early 20th centuries, and it does not currently participate in significant population movement exchanges with any Amish communities in the Midwest, much less those in Pennsylvania.

The large Amish settlement in Elkhart and Lagrange Counties in Indiana has also seen a decrease in migration to other settlements during the course of the 20th century. A comprehensive study of out-migration by age cohorts (i.e., decade of birth) revealed that since the mid-1900s the rate of out-migration from the Elkhart-Lagrange settlement has fluctuated between 6% and 8% of the total in each age cohort. For the most recent cohort surveyed, born in the 1960s, the figure drops to 3% (Meyers 1994:380-1).

The Amish in Kalona, Iowa, however, do not follow the pattern of slowing out-migration that the larger Indiana and Ohio settlements have experienced. The one hundred adult children who have left Kalona account for an impressive 27% of the adult children from that settlement. Even if we factor in the possibility that some of these Iowa out-migrants are no longer Amish (see footnote 102 above), the rate of migration out of Kalona is still

---

105 The defection rate varies between settlements, church districts, and families. Kraybill (1994:10) suggests a defection rate of 20% or lower in general and only 14% for Holmes County Old Order Amish. Meyers 1994 provides figures for the Elkhart-Lagrange, Indiana settlement over a number of years which can be taken as somewhat representative for other communities.

106 The number of individuals in each age cohort who migrated ranged from 49 to 156. Destinations of those leaving Elkhart-Lagrange were not noted in Meyers 1994. The Elkhart-Lagrange settlement, with a current population of over 12,000, is the third largest in North America behind Holmes County, Ohio and Lancaster County, Pennsylvania. The conclusion that rate of out-migration is declining is based on the assumption that if Amish are to move, they are most likely to do so as young adults. Since the youngest age cohort in Meyers study was only in their twenties, it is entirely possible that the rate for that age group could increase over the next several decades.
at least three or four times that of Holmes County. The same holds true—and at an even greater rate—for the Buchanan County, Iowa Amish settlement. Of the three hundred fourteen adult children listed in the 1992 directory, one hundred thirteen (36%) have moved away from the community.

The Amish of Lancaster, Pennsylvania have also had high rates of out-migration. They have experienced the land squeeze as well as the most intense pressures from tourism and as a result as many as 15% have moved from the Lancaster area to other settlements in the 1960s and 1970s (Kraybill 1989:194-5). However, as noted above in section 7.3, the Lancaster Amish have in most cases moved to communities founded by other Lancaster Amish, and even the new Lancaster Amish settlements in places like Indiana do not interact with other Midwestern Amish.

In the absence of other patterns of interaction between Amish settlements (e.g., increased short term travel, returning migrants with insider-outsider perspective as in section 3.2.5) the recent decline in intercommunity migration in the Midwest—at least from the largest Amish settlements—suggests that these speech islands are becoming increasingly isolated from each other. In contrast, the smaller and younger settlements, such as those in northeast Iowa, Wisconsin, and Missouri, remain vitally connected. These patterns are not surprising given the dramatic population increase of the Amish in the last half of the twentieth century which has in turn led to an explosion of new settlements which dilute the traditional direct migratory paths between the older settlements.
7.6 Travel patterns reported in perceptual dialectology questionnaires and oral interviews

Although the nearly two-centuries-old direct links between the old Midwestern Amish communities are being diluted by the emergence of hundreds of new settlements, they are robust when compared to the minimal contacts with Pennsylvania Amish. A written questionnaire investigating folk perceptions of dialect differences asked respondents to note areas that are distinct dialect regions and then asked them to indicate whether or not they had visited these regions (for responses to the perceptual dialectology mapping exercise see section 9.3). Not surprisingly, over three-quarters of the Midwestern respondents (47 of total n=59) noted part or all of Pennsylvania as distinct, and the majority of these had visited Pennsylvania rarely, only once, or never. Only twelve speakers traveled to Pennsylvania on a regular (i.e. annual) basis—none more than twice a year—and the duration of their longest stay was in every case less than a week. The pattern was the same for the Pennsylvania respondents: only three of twelve had visited Midwestern Deitsch settlements on an annual basis. Since the purpose of the questionnaire was to measure how familiar persons were with dialect regions different from their own, it does not provide helpful information for how often Midwesterners travel to other Midwestern settlements.

In both written responses and in oral interviews there appear to be significant individual differences in (short-term) travel patterns. A typical response was “we don’t travel much.” One reason for limited travel is that it is expensive for a family to rent a van and driver (at 60-70 cents/mile plus room and board). Many thus wait for special occasions
such as weddings or funerals. Even then a typical trip may last only three days, with two days spent driving and only one full day at the destination.

Not all Amish schedule their out-of-state travel only around weddings and funerals of relatives. Young single Amish may travel more often for the purpose of meeting other young Amish (i.e., potential spouses) and finding work. In particular, single Amish persons who are employed in businesses have disposable income and some spend it on travel to other Amish communities.\footnote{This is true only for single Amish who are considered independent adults. Up until age twenty-one, most Amish live at home and their work earnings are used to support the entire household (Hostetler 1993:158).} Finally, there is yet another trend: travel not to visit other Amish communities, but for pleasure. As a 34-year-old single, Old Order Amish woman employed as a secretary in Holmes County noted, “we often take vacations to see the beauty of God’s creation.” In just one year she had traveled to New York, Vermont, Georgia, Florida, Tennessee, Kentucky, and West Virginia among other states.

Some travel for pleasure and for the purpose of finding a warmer climate in the retirement years takes Midwestern Amish and Lancaster Amish to the same destination: Florida. Pinecroft, Florida near Sarasota is a winter meeting place for many older retired Amish couples from both regions. Yet, even in this “neutral” settlement, Amish from each from each region are distinguishable by their speech and behavior. A Holmes
County businessman notes of Lancaster Amish in Sarasota: "they’re out in the street more...like they own the place."  

The above changes notwithstanding, in general Midwestern Amish continue to travel regularly to other Midwestern Amish communities. The trips are often on the occasion of weddings and funerals and are short in duration, but are far more significant than any contacts with Pennsylvania Amish. These patterns are corroborated by the observations of an academic from the Lancaster County, Pennsylvania area following a two-week tour of Midwestern Amish settlements. He notes, "Midwestern Amish seem to visit more with Midwestern Amish than with Eastern Amish. This may be partially due to distance to travel, but also as one of my Iowa hosts joked, ‘For me, the end of the world stops at the end of the Ohio border [with Pennsylvania].’" (Stevick 1995)

7.7 Summary
In this chapter I have reviewed evidence that suggests that the Amish continue to fashion and sustain portable community into the 21st century. While the patterns of travel and migration by Iowa and Ohio Amish reveal a relatively small number of intimate direct connections between the two settlements, they do demonstrate that the "strawberry runners" of kinship and friendship linking them to other Midwestern Amish settlements, (notably Elkhart and Lagrange Counties, Indiana) are still strong. There are also indications that, as the Amish population in the Midwest surges toward 200,000,

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108 There may be some literal truth to the statement since Lancaster Amish are generally more wealthy than their Midwestern counterparts.
migration patterns have shifted from concentrated movements between a dozen or so established settlements to disparate ventures to hundreds of new settlements. This may be setting the stage for eventual dialect divergence within the region. Even so, Midwestern Amish still feel their communities are connected to a common "vine," and they have a keen sense for where its runners end: at the Pennsylvania state line.
CHAPTER 8

A LINGUISTIC INNOVATION SHARED ACROSS SPEECH ISLANDS:
THE MONOPHONGIZATION OF /at/ IN MIDWESTERN DEITSCH

The preceding chapters have described the founding of Deitsch speech islands in the Midwest by Amish settlers and the nature of the ongoing interactions between these speech islands. Although separated from each other by significant geographical distances, the highly mobile Amish of the 19th and early 20th centuries managed to create and maintain a loose network of communication between these communities. If the level of interaction between speakers across this “archipelago” has been sufficiently intense, we would expect this interaction to have linguistic reflexes. It does.

In this chapter I present evidence for a sound change in progress in the vowel system of Midwestern Deitsch: the monophthongization and fronting/raising of the diphthong /at/ in nearly all phonetic environments. For all but the oldest speakers in the Midwest this phoneme is realized as a monophthongal front vowel, most often [æ:] or [ɛ:], though some speakers retain a centralized off-glide, e.g., [ɛə]. This sound change has advanced rapidly in all Deitsch-speaking communities that have ties to the 19th century Amish settlements in the Midwest, a total of over 150 settlements from
upstate New York to the northwest corner of Montana. All of these settlements are speech islands, geographically isolated from each other by a linguistically different majority culture. In Pennsylvania, evidence for a similar, possibly related sound change is found in the variable realization of monophthongal /ai/ before liquids. The Pennsylvania change, however, is restricted to this single phonetic environment and shows no signs of becoming more general in terms of phonetic conditioning and general usage.

Variation in the phonetic production of this phoneme is socially significant in the Midwest. The use of the (older) variant [æi] in a word such as [dæitʃ], ‘German,’ is described as non-Midwestern, stereotypically Pennsylvanian, and also typical of second-language learners. In addition, a subset of speakers in one Midwestern community produces variants of /ai/ that overlap the vowel space of the Deitsch phoneme /ɛː/, and preliminary perceptual testing indicates that phonemic merger is underway.

I begin with a review of the previous research on this phenomenon. In the second section I provide a brief synchronic description of the Deitsch vowel space, and then I delineate the word set containing /ai/ in the Kalona and Holmes County dialects. I also present data on the production of /ai/ from earlier time periods to establish the diachronic basis for the sound change. Then I review the methods I used in data collection, coding, and analysis. Finally, I introduce my synchronic data and investigate the linguistic and social

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109 Settlements founded by Lancaster (Pennsylvania) Amish in the Midwest since 1970 (e.g., Parke County, Indiana), follow Lancaster in having the sound change in a very restricted phonetic environment (see section 8.1 below).
conditioning of this sound change. These data show the monophthongization of /aɪ/ to be following very similar paths in Ohio and Iowa. I then investigate the possible leading role of Holmes County speakers in the spread of this innovation, describing a phonemic merger underway for several speakers and testing its salience with others.

8.1 Previous Research on monophthongization of /aɪ/

To date, only two researchers have mentioned the vowel system developments in question here. In Schlabach's 1980 thesis on the phonology of Holmes County Deitsch, he comments: "...some speakers (as I have observed) regularly substitute the long vowel /æː/ for the diphthong /aɪ/ in all words in Ohio Pennsylvania German" (39). He goes on to note the following examples, including some which nasalize the vowel producing minimal pairs with an oral v. nasal vowel contrast (e.g., 'pigs' v. 'his').
<table>
<thead>
<tr>
<th>normative form</th>
<th>innovative form</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/hæt/</td>
<td>/hæ:t/</td>
<td>'today'</td>
</tr>
<tr>
<td>/dæt/</td>
<td>/dæt/</td>
<td>'your' (sg.)</td>
</tr>
<tr>
<td>/sæt/</td>
<td>/sæt/</td>
<td>'pigs'</td>
</tr>
<tr>
<td>/sæt/</td>
<td>/sæt/</td>
<td>'his'</td>
</tr>
<tr>
<td>/æt/</td>
<td>/æt/</td>
<td>'new'</td>
</tr>
<tr>
<td>/æt/</td>
<td>/æt/</td>
<td>'in'</td>
</tr>
<tr>
<td>/æt/</td>
<td>/æt/</td>
<td>'nine'</td>
</tr>
</tbody>
</table>

Table 16. Examples of words with innovative monophthong listed in Schlabach 1980

Schlabach appears to restrict this variation to speakers of the Madison County dialect (1980:5, 42). However, some of Schlabach’s data suggest that the innovative variant may be more widespread than that. For example, Schlabach lists monophthongs as normative for Ohio Deitsch in the words /væ:l/ ‘because’ and the suffix in /fæl:ht/ ‘laziness’ (1980:35,49). A recent translation of the Bible in Deitsch by Ohio speakers retains diphthongs in both of these items, e.g., /væl/, /vaɪʃant/ ‘wisdom’ (affix /-halt/).

Louden (1997:81) is the first to give an account of this change in dialects outside of Ohio. He describes the monophthongization of /æt/ to /ɛt/ as a system-internal balancing of front and back long vowels and notes that this change in progress is farther advanced in
Midwestern\textsuperscript{110} Deitsch than in Lancaster County, Pennsylvania (see Figure 6 in section 2.3.2 reproduced as Figure 17 below).

Lancaster rule: Monophthongize only before liquids

\[ /\text{æ}l/ > [\text{ɛ}:]/\text{__} [\text{a}, \text{t}] \quad \text{e.g., [mi\text{æ} \text{he}:\text{t}] 'we marry'} \]

\[ [\text{æ}] \text{ elsewhere} \quad \text{e.g., [da:t\text{ʃ}] 'German'} \]

Midwestern rule: Retain diphthong only before unstressed central vowels.

\[ /\text{æ}l/ > [\text{æ}] /\text{__} [\text{a}, \text{u}] \quad \text{e.g., [mi\text{æ} \text{hAr category}] 'we marry'} \]

\[ [\text{ɛ}:] \text{ elsewhere} \quad \text{e.g., [de:t\text{ʃ}] 'German'} \]

Figure 17. Phonetic environments for the monophthongization of /æl/ (Louden 1997)

Louden's account rests crucially on a characterization of the Deitsch vocalic system with reference to quantitative (long/short) rather than qualitative (tense/lax) differences and also on the notion of symmetry as an organizing principle for vocalic systems. I will give some consideration to the quantitative vs. qualitative nature of the Deitsch vocalic system in the following section.

\textsuperscript{110} Louden 1997 does not define what he means by "Midwestern", but since he uses the term most often in reference to "Midwestern Amish," it is probable that he has in mind the same region that I have defined in section 2.3.2.
8.2 Synchronic description of Deitsch vowels


<table>
<thead>
<tr>
<th>short</th>
<th>long</th>
<th>diphthongs</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>fis</td>
<td>'feet'</td>
</tr>
<tr>
<td>e</td>
<td>hesl</td>
<td>'hateful'</td>
</tr>
<tr>
<td>æ</td>
<td>daet</td>
<td>'dad'</td>
</tr>
<tr>
<td>a</td>
<td>has</td>
<td>'hate'</td>
</tr>
<tr>
<td>o</td>
<td>hoso</td>
<td>'pants'\textsuperscript{113}</td>
</tr>
<tr>
<td>u</td>
<td>bude</td>
<td>'butter'</td>
</tr>
</tbody>
</table>

Table 17. Deitsch vowels

\textsuperscript{111} There is also [\textipa{œ}], a vocalic allophone of /i/ in coda position (e.g., Ohr, [œ], 'ear,' Ohre, [œœ], 'ears').

\textsuperscript{112} The phonetic realization of the long, low back vowel /a/ is described in an early source as central [æ] (Buffington and Barba 1954), but is more accurately assessed as [\textipa{œ}], back round [œ], or [æ] (Van Ness 1994:423, Louden 1997:81) with some allophonic (complementary) distribution of these backed variants.

\textsuperscript{113} The phonetic nature of the short mid back/central vowel /a/ is often realized as a stressed centralized vowel [æ] though it is sometimes described as [œ] (Schlabach 1980) as well as [œ] (Van Ness 1994, 423).
Deitsch researchers have generally kept with German tradition, describing the Deitsch vowel system as having an opposition based on quantity: a series of long and a series of short vowels. Only Van Ness (1994, 422) suggests that vowel quality is a better descriptor. However, the development of the former diphthong /aʊ/ to present-day /aː/ provides a reasonable argument in favor of a quantitative opposition, at least for low vowels. Currently long /aː/ is in opposition to short /a/ producing minimal pairs such as /has/ ‘hate’ and /hats/ ‘house’ which differ only in length.¹¹⁴

The phonetic quality of the diphthong /aʊ/ is more precisely rendered not as [aɪ] but as [æ] since the offglide of the diphthong does not reach the acoustic space occupied by the.

¹¹⁴ Some references, e.g. Beam 1994, posit a length contrast for the low front vowel /æ/ such that the vowels in (the English borrowings) gas (long /æ/) and match (short /æ/) contrast. This claim has not been clearly supported either with phonetic or phonological evidence (i.e., minimal pairs).
high front vowels (see section 8.6).\textsuperscript{115} However, in keeping with standard practice and in order to make the correspondence between the phonetic transcriptions and the orthography (and thus the previous stages in the history of German) more transparent, I use the notation /at/ to refer to generally to this phoneme and word class and I use the notation [at] for the conservative variants of this phoneme.

8.3 Defining the /at/ word class in Deitsch

The Deitsch diphthong /at/ is generally the reflex of Middle High German (MHG) long, high monophthongs /iː/ and /yː/, e.g., Deitsch /mat/ < MHG /mīn/ ‘my’ and Deitsch /naːt/ < MHG /nyːwe/ ‘new’.\textsuperscript{116}

I verified the status of the /at/ word class in the lexicon of Holmes County Deitsch by consulting two current texts: the New Testament Bible in Deitsch, \textit{Es Nei Teshtament} (ENT) completed by SIL translators in Holmes County in the mid 1990s, and \textit{Vella Laysa} (VL), a collection of Bible stories written in 1997 by Holmes County New Order Amish with some initial assistance from SIL translators. Given that the Deitsch speakers who served as consultants for ENT were all older men (i.e., mostly of retirement age), and that

\textsuperscript{115}This is also true for the diphthong /ot/ which is closer to [æ] than it is to [ɔ]. Shoemaker 1940 uses the notation [ae] and [æ] for these diphthongs in his description of Arthur, Illinois Deitsch

\textsuperscript{116}These vowels reflect the inventory of the classical period of MHG, defined as 1170-1250 AD by Russ (1982, 60). In fact, diphthongization only affected /iː/, since the round vowel /yː/ unrounded to merge with /iː/ in the Palatinate dialects (the primary input dialects to Deitsch) as early as the end of the 13th century. Diphthongization of /iː/ to /at/ was complete before the 16th century (Reed 471). Unlike the dialects upon which Standard New High German is based, the Deitsch source dialects did not collapse reflexes of /iː/, with reflexes of the MHG diphthong /εə/. In Deitsch, as in parts of the Palatinate, MHG /εə/ yields the monophthong /εə/, e.g., Deitsch /fεət/ < MHG /fitem/ ‘stone’ (Reed 1972, 472).
it is considered a sacred text, we can assume that ENT reflects somewhat conservative norms (at least mid-20th century usage or earlier) for the community.\footnote{One example of this is the use of $ <au >$ to represent the diphthong $ /au /$ in spite of current norms of usage which realize this phoneme as monophthongal $ /au /$, e.g., $ <$haus$ >$ for $ /$hars$ /$ 'house', $ <$naus$ >$ for $ /$hars$ /$ 'out.' A second example is the use of dative morphology in ENT in spite of the fact that dative forms are currently found only in the Deitsch of speakers over the age of 70.}

In both ENT and VL, the orthographic symbol for $ /al/ $ is $ <ei> $. Several examples are noted in Table 18 below.

<table>
<thead>
<tr>
<th>from MHG $ /ui/ $</th>
<th>from MHG $ /iy/ $</th>
<th>from loss of $ /ri/ $ or $ /g/ $ in $ /Vri/ $ and $ /Vgi/ $</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>veisa</strong> 'show' 13*</td>
<td><strong>greitz</strong> 'cross' 5</td>
<td><strong>deich</strong> 'through' 4</td>
</tr>
<tr>
<td><strong>shmeisa</strong> 'hit' 25</td>
<td><strong>leit</strong> 'people' 7</td>
<td><strong>reiyahra</strong> 'to rain' 13</td>
</tr>
<tr>
<td><strong>zeit</strong> 'time' 7</td>
<td><strong>frei</strong> 'free' 7</td>
<td><strong>keiyaht</strong> 'married' 18</td>
</tr>
<tr>
<td><strong>shreives</strong> 'writings' 7</td>
<td><strong>eiyah</strong> 'your' pl. 7</td>
<td><strong>leisht</strong> 'lie (2SG)' 23</td>
</tr>
<tr>
<td></td>
<td><strong>heit</strong> 'today' 7</td>
<td><strong>meiyet</strong> 'morning' 26</td>
</tr>
<tr>
<td></td>
<td><strong>Deitsch</strong> 'German' 7</td>
<td><strong>shtieikah</strong> 'strong' 44</td>
</tr>
</tbody>
</table>

*numbers indicate page in *Vella Laysa*

Table 18. Example words with $ <ei> $ ($ /ai/ $) listed according to MHG source*

I checked these words against the lexical entries in two Deitsch-English dictionaries, Stine 1990 and Beam 1991. All words spelled $ <ei> $ in Stine and Beam are also spelled
<ei> in the Ohio sources, and the same diphthongal pronunciation /au/ is given in all sources, e.g., in the Deitsch word leicht ‘light (weight)’ which approximates the vowel in the English word pine (Beam 1994:ix). Working from this comparison, it is reasonable to assume that lexical entries with <ei> in Stine and Beam also belong to the /au/ word class in the Holmes County dialect. These dictionaries allow for the easy development of a larger corpus of /au/ words for further analysis. Even so, as I tested the expanded corpus in the field, I found that some words were problematic and did not always yield a token of /au/ as expected, often because the English equivalent was substituted (e.g., for Sei, ‘pigs,’ Eil, ‘owl,’ Leib, ‘body/belly’ Freind, ‘friend’) or because another Deitsch term was used (e.g., for ‘pigs,’ Wutz(lin) and for ‘ripe’ zeidich (a token of /au/, but not the expected reif which has a different phonetic environment)) or because of irregular morphology (e.g., plural of ‘mouth’ realized as both Mal and Meiler).

8.4 Real-time evidence for a sound change in progress

The establishment of the /au/ word class also helps us verify that the monophthongization of /au/ is a sound change in progress and not simply stable variation, since we have records of earlier stages of Deitsch in which there was no monophthongal variant for the

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118 Approximately twenty words spelled <ei> in ENT and VL are *not* spelled so in Stine and Beam. All but one of these twenty words belong to a set of relatively recent additions to the /au/ word class which are the result of a sound change which occurs only in the Midwest: intervocalic weakening and eventual loss of /l/ or /g/. As a result <schlarick> ‘strong’ in Stine and in Beam is written as <shtieig> in ENT. Thus, the /au/ word class in Holmes County and the Midwest in general is larger than the one developed from Stine or Beam (and larger, too, than the one in Pennsylvania), because of the addition of words such as <shtieig>. For other examples, see the third column in Table 18.

119 Some words which were originally included in the /au/ word class had to be eventually removed because of irregular, variable morphological forms. One example is /maid/ ‘mouths’ the ablaut plural form of /maid/ ‘mouth’. For many speakers in my data, this form was realized as a zero-plural, i.e., /maid/, and these were not counted as tokens of /au/.

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vowel in these words. In addition to ENT and VL, earlier descriptions of varieties of Midwestern Deitsch also assume a diphthongal variant to be normative.

Bender’s 1929 thesis of the Johnson County (i.e., Kalona) Iowa dialect is only suggestive, since it does not contain phonetic transcriptions and lacks a guide to pronunciation. However, her manuscript was edited by C.R. Beam and follows the modified German orthography of Beam’s 1994 dictionary. In Bender’s word list (as in Beam 1994, ENT, and VL) the /at/ word class is indicated throughout with <ei>. This suggests that the diphthongal variant was normative in the usage of the Kalona, Iowa Amish settlement in the early 20th century.

Shoemaker’s 1940 study of Arthur, Illinois gives clear indications of usage in that community in the first half of the 20th century. Shoemaker uses orthographic <ae> for phonetic [ae], which he notes is pronounced with a diphthong like Standard New High German <ei> as in heiss, ‘hot’ (1940:15). Example words with this vowel in Shoemaker 1940 match the /at/ word class in the other sources (e.g., dsaet, ‘time,’ hae, ‘today,’ daech, ‘through’), showing that the diphthong was normative in Arthur usage in the early 1900s. The absence of any commentary on monophthongal variants of /at/ is telling, because Shoemaker in many instances provides details about the distribution across speakers of variant productions of this and other vowels. For example, he is the first researcher to observe the realization of /at/ in words such as <darich>, where intervocalic weakening and loss of /r/ yields <daech>/daix/ ‘through.’ Shoemaker adds that he heard this innovation—now characteristic of all Midwestern Deitsch—in all but ‘about a dozen
speakers’ (1940:2). Given Shoemaker’s ear for detail, if a monophthongal variant of /aɪ/ had been in use in Arthur during the time of his data collection, we can expect that he would have noted it.

Schlabach’s master’s thesis, written in 1980 when the author was about forty years old, can be assumed to reflect norms of usage for Holmes County, Ohio in the mid-20th century. As noted in section 8.1, Schlabach is the first to describe a monophthongal variant of /aɪ/. However, he assumes its distribution to be geographically limited to the settlement in Madison County, Ohio and not normative for the larger Holmes County settlement. Even so, Schlabach’s transcription of a monophthong in an /aɪ/-class word (/æːɪ/ ‘because,’ 1980:35) is evidence for the incipient spread of the monophthongal variant to Holmes County by mid-century.

All of these sources indicate that up until the middle of the 20th century, the /aɪ/ word class had only diphthongal realizations in all Midwestern Amish communities, with the possible exception of Madison County, Ohio.

8.5 Data collection methods and sample size/description.

Language data for this study were collected during fieldwork in Kalona, Iowa in 1995, 1996, and 2001, in Holmes County, Ohio in 1998, and in Lancaster, Bucks, and Montgomery Counties, Pennsylvania in 2000. I interviewed a total of one hundred seventy persons in these communities. The interviews were modeled after the format of a standard sociolinguistic interview (Labov 1972) including introductory background
questions, an oral translation task, and, as time and occasion permitted, conversation. In addition, a number of conversations took place outside the context of the interview in settings where I was a participant-observer listening in on and occasionally taking part in the conversation with others. For additional details on the interview format, the translation tasks, and conversations recorded, as well as discussion of the strengths and limitations of my methodology, see section 4.2.4 and the appendix.

The 1995-96 translation task in Kalona yielded approximately five tokens of /at/ per speaker, while the 2001 translation task yielded approximately thirty tokens per speaker. The translation task in Holmes County yielded approximately fifteen tokens per speaker. The majority of the tokens occur in positions in the word and/or sentence that are stressed. Some tokens, in particular some occurring in possessive pronouns, were unstressed, and these were somewhat less easy to code using the guidelines described below in section 8.6. The total amount of data from interviews and conversations was large and much of it remains unanalyzed. For the purposes of this study I consider a subset of the data which comprised all but a few of the translations tasks and as much conversational data as I could muster. See section 4.2.3 for discussion about criteria that guided inclusion. From these recordings I coded a total of 1836 tokens of words in the /at/ word class from ninety-seven speakers in Holmes County and in Kalona.

For the sake of comparison, I interviewed an additional twenty-nine persons in July 2000 in two Deitsch dialect areas in Pennsylvania: Bucks/Montgomery Counties and Lancaster County. The translation task section of this interview yielded approximately twenty-two
tokens per speaker. I also drew tokens from excerpts of conversations with some of the interviewees. A total of 352 tokens from Pennsylvania speakers were included for analysis. Thus, a grand total of 2188 tokens are entered into the analyses.

8.6 Scales for coding variants of /aɪ/

Thus far I have been referring to innovative realizations in the vowel quality of tokens of /aɪ/ as “monophthongization.” In fact, this sound change is complex and involves more than simply the loss of the offglide. As the data in the following section show, tokens of monophthongal [aː] (i.e., [aɪ] with loss of the second element) are rare and vastly outnumbered by monophthongal tokens for which the nucleus is low front [æː] or mid front [ɛː]. Thus, the position of the nucleus in the vowel space is inextricably linked to the loss of the offglide as a salient characteristic of “monophthongization.”120 What is more, even as the nucleus of the vowel moves far up the front of the vowel space, it may develop a new, ingliding diphthong. In short, though I will continue to use term “monophthongization of /aɪ/” to refer to this sound change, the change rarely involves only monophthongization, and the change does, in some advanced tokens, result in (re-)diphthongization.

Given then that the salient characteristics distinguishing the variants of /aɪ/ from each other are the frontness/height of their nuclei as well as their status as (upgliding or ingliding) diphthongs or monophthongs, I developed a scale by which to identify the

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120 I will not attempt here to establish a chronology for these subchanges (i.e., monophthongization first, then fronting of the nucleus, or vice versa), but simply acknowledge that they happen in tandem.
degree of change along each of these axes. First, I listened to approximately 50 tokens of /aɪ/ produced by five different speakers and attempted a narrow transcription of each which I compared against measurements of F1 and F2 in a spectrogram of the utterance.\textsuperscript{121} I employed a four-point scale for vowel height which mirrors the low and front areas of the Deitsch vowel space: /a, æ, e, e/. For diphthongal status I developed a three-point scale which can be further broken down into two parts: first monophthong vs. diphthong, and second, within the category diphthong, upgliding vs. ingliding, e.g., [æɪ] vs. [æɛ].

Each token received two ratings: one for height and one for di-/monophthongal quality. The higher the vowel, the more “advanced” the token in terms of change away from a low central nucleus for the diphthong. Both the monophthongs and the ingliding diphthongs can be considered “advanced” tokens in comparison with upgliding diphthongs, and some speakers produce a very salient inglide—almost a syllabic element—that may represent the most advanced tokens.

Sample spectrograms of particular tokens ratings are shown in the figures below.

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\textsuperscript{121} Spectrograms and plots of the vowel space for several individuals indicate that with respect to measures of tenseness (peripherality in the vowel space), the nucleus of all of the tokens were relatively tense.
Figure 19. [ai] in /dair]/ ‘German’, 30 yr old, Holmes County, Old Order Amish male

Figure 20. [æː] in /datt]/ ‘German’, 29 yr old, Holmes County. Old Order Amish male
Figure 21. [e:] in /datt/ ‘German’, 18 yr old, Holmes County, Old Order Amish male

Figure 22. [eə] in /datt/ ‘German’, 32 yr old, Holmes County, New Order Amish female

The phonetic coding scales of four vowel heights and three types of offglides yield a total of twelve possible combinations in which tokens could be classified. These scales were used in the first analyses of the data. As it will be seen in the next section, however, the
chumping of the tokens into just a few of these combinations suggests that we might
devise a simpler means of classification that both matches more closely native speaker
intuitions about what phonetic contrasts are significant and allows for more
straightforward analyses of the linguistic and social conditioning of the sound change.

8.7 General patterns of variation in the realization of /aɪ/

Table 19 gives the distribution of the tokens as they were coded into twelve different
token types by vowel height and diphthongal status.

<table>
<thead>
<tr>
<th>vowel height</th>
<th>[a]</th>
<th>[æ]</th>
<th>[e]</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>monophthong</td>
<td>88</td>
<td>525</td>
<td>532</td>
<td>36</td>
</tr>
<tr>
<td>upglide</td>
<td>733</td>
<td>60</td>
<td>32</td>
<td>10</td>
</tr>
<tr>
<td>inglide</td>
<td>5</td>
<td>49</td>
<td>86</td>
<td>32</td>
</tr>
<tr>
<td>TOTAL</td>
<td>826</td>
<td>634</td>
<td>650</td>
<td>78</td>
</tr>
</tbody>
</table>

Table 19. Crosstabulation of diphthongal status vs. vowel height, token counts for all data
Of the twelve possible combinations of the two variables, the three token types in bold print in Table 19 occur far more frequently than the others: the conservative diphthongal variant [aɪ], monophthongal [æː], and monophthongal [ɛː]. Together these three token types comprise 82% of the tokens, and they will provide the basis for a simpler classification of the data in section 8.8.

These data also clearly show the link between changes in the frontness/height of the vowel nucleus and the changes in the vowel’s diphthongal status. There is an inverse relationship between vowel height and upgliding diphthongization. The higher the vowel nucleus, the less likely it is to have an upgliding diphthong, so 89% (733/826) of the tokens with nucleus [a] are upgliding diphthongs as opposed to only 5% (32/650) of tokens with nucleus [ɛ]. The highest vowel height [ɛ], does not have the highest percentage of monophthongal tokens, because it is subject to a positive correlation between vowel height and the ingliding diphthong. Thus, ingliding tokens with an [a] nucleus number less than 1% (5/826) while the number of ingliding [ɛ] tokens (32/78=41%) is almost equal to the number of monophthongal [ɛ] tokens.

When we organize the data from Pennsylvania, Holmes County, and Kalona into separate tables, we see a markedly different pattern in Pennsylvania vis-à-vis the Midwest communities.
Table 20. Diphthongal status vs. vowel height, token counts for Pennsylvania data

<table>
<thead>
<tr>
<th></th>
<th>[a]</th>
<th>[æ]</th>
<th>[e]</th>
<th>[e]</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>monophthong</td>
<td>8</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>upglide</td>
<td>337</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>337</td>
</tr>
<tr>
<td>inglide</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>345</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>352</td>
</tr>
</tbody>
</table>

Table 21. Diphthongal status vs. vowel height for Holmes County data

<table>
<thead>
<tr>
<th></th>
<th>[a]</th>
<th>[æ]</th>
<th>[e]</th>
<th>[e]</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>monophthong</td>
<td>29</td>
<td>219</td>
<td>301</td>
<td>27</td>
<td>576</td>
</tr>
<tr>
<td>upglide</td>
<td>198</td>
<td>29</td>
<td>21</td>
<td>8</td>
<td>256</td>
</tr>
<tr>
<td>inglide</td>
<td>4</td>
<td>37</td>
<td>69</td>
<td>31</td>
<td>141</td>
</tr>
<tr>
<td>TOTAL</td>
<td>231</td>
<td>285</td>
<td>391</td>
<td>66</td>
<td>973</td>
</tr>
</tbody>
</table>
Pennsylvania speakers are almost categorical in their production of the conservative diphthongal variant [ai] (337/352=96%) as Table 20 clearly shows. Only 2% of Pennsylvania tokens are fronted or raised monophthongs [ɛː] or [æː].

Midwestern speakers by contrast (Table 21 and Table 22) produce a wide variety of token types. The canonical token type—an upgliding diphthong with a low vowel nucleus—has by no means disappeared in Holmes County or Kalona, but speakers in both communities are much more likely to produce a fronted and raised monophthong in its place. This is not the only aspect in which Holmes County and Kalona pattern similarly. Also, the negative correlation between vowel height and upgliding diphthongs, and the positive correlation between vowel height and ingliding diphthongs hold true in both communities. In many ways the distribution of tokens across token types in the two Midwestern settlements appears to be essentially the same.
But at least one significant difference between Holmes County and Kalona also emerges. Kalona speakers produce fewer tokens of vowels with high nuclei [e] or [ɛ], and consequently produce fewer tokens with ingliding diphthongs. This difference will be studied more closely in section 8.12.

8.8 Recoding variants of /æi/ on basis of sociolinguistic salience

As noted earlier, although the two coding scales (vowel height and diphthongal status) allow for the identification of twelve different variants of /æi/, the majority of tokens in Table 19 are placed in one of only three categories: the canonical upgliding diphthong of [æi] or one of the two monophthongal fronted and raised variants [ɛː] or [æː]. Tokens from the remaining nine categories are rare, with overall rates of occurrence in the data varying between 0.2% and 4.0%. This pattern in the data suggests that the phonetic detail apparent to the (non-native speaker) linguist is not utilized by speakers in their production and perception of categories. This finding is no great surprise (see Ohala 1993:247) and should only lead us to look for a simpler categorization for the data—one that aligns more closely with the categories that have sociolinguistic salience for native speakers.

I explored recategorization schemes in two ways. First, I had a 37 year-old native speaker from Holmes County listen to and classify the vowel in words clipped out of translation tasks and conversations with Holmes County. Although the token types included both upgliding and ingliding diphthongs and four different vowel heights, the
speaker utilized only two categories: diphthongal [aɪ] and monophthongal [æː]. This suggests that the distinctions in vowel height are not as salient to speakers as is the loss of the upglide and concomitant fronting of the nucleus to [æ]. Also, the speaker noted, though only once, the presence of an ingliding diphthong. This suggests that the distinction between monophthongal and ingliding tokens, though not consistently contrastive, may be useful in identifying advanced tokens of this change. In a second round of tests at a later date, I had the same speaker, his wife (a native speaker from Kansas), and a third native speaker from Madison County, Ohio listen to the same set of Holmes County data as well as a new set of words from Pennsylvania speakers and make a binary classification: “that’s how I’d pronounce it” vs. “that’s not how I would pronounce it.” The results mirrored those of the first test. Speakers agreed strongly that there are two main types of tokens: the old variant [aɪ] which they do not use, and all other variants which they perceive as fronted monophthongs typical of their own usage. Speakers found no significant difference between the two most frequently occurring token types in the Midwestern data, [æː] and [eː]. Perceptions of the token types [aɪ] and [æː] were not consistent within and across speakers as one might imagine since the former is monophthongal but not fronted while the latter is fronted but retains an upglide.

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122 The speaker was not completely linguistically naïve having completed an introductory course in linguistics. He listened to nineteen Deitsch words and was asked to categorize the vowel in each word as sounding like the vowel in the one of three English words: “hide” [aɪ], “had” [æː], or “head” [eː], or if it sounded like something else altogether. I had previously coded each of the nineteen words as one of seven different token types of /aʊ/ (i.e., [aɪ], [æː], [eː], [æʊ], [æʊ], [eʊ], [aʊ]). Also included on the list were two words which were not /aʊ/ words, but rather were tokens of the phoneme /æ/. These were included to see if they would be distinguished from the advanced tokens of /aʊ/. (They were: the speaker classified them as sounding like English “hate”).

123 Two speaker-raters were attuned to upglides as indicators of non-native (non-Midwestern) variants.
As a result of these native speaker evaluations, I collapsed the data into two basic categories: “conservative” and “innovative.” The conservative category includes tokens which are generally perceived as diphthongal [aɪ], that is tokens formerly coded as [aɪ], [æɔ], [aː], and [æə]. I include the latter two ambiguous token types ([aː] and [æə]) in order to not overstate the case for innovative forms. The innovative category includes token types that are generally perceived as fronted monophthongs, that is, all the other categories. See Table 23 below.

<table>
<thead>
<tr>
<th>category</th>
<th>token types included in category</th>
</tr>
</thead>
<tbody>
<tr>
<td>conservative/“diphthongal”</td>
<td>[aɪ], [æɔ], [aː], [æə]</td>
</tr>
<tr>
<td>innovative/“monophthongal”</td>
<td>[æː], [æe], [eː], [eʊ], [eɪ], [eː], [eʊ], [eɪ]</td>
</tr>
</tbody>
</table>

Table 23. Binary recategorization of token types based on native speakers’ evaluation of sociolinguistic significance

In the second test speaker-raters also commented on the advanced tokens from some Holmes County speakers (i.e., tokens with high nucleus [eː]). Sometimes it was the length of the token (i.e., the presence of an inglide) that drew comment and at least once
the height of the token was such that the listener confused it for a token of the phoneme /\epsilon/. These advanced tokens are relatively few in number and will remain collapsed with the rest of the “innovative/monophthongal” tokens for most of the following analyses. I will later, however, tease apart these most advanced tokens for separate analysis in section 8.12.

8.9 Patterns of variation: the Midwest v. Pennsylvania

In this section I utilize the binary categorization of variants to briefly explore the patterns in the variable realization of /\textit{at}/ which differentiate Pennsylvania speakers from those in the Midwest. Figure 23 displays again the very limited degree to which monophthongal /\textit{at}/ occurs in the Pennsylvania data (English borrowings are excluded from these data).
Figure 23. Percentage of innovative “monophthongal” /at/ tokens in Pennsylvania and in Midwestern communities.\textsuperscript{124}

Some of the difference between Pennsylvania and the Midwestern communities can be accounted for by the fact that many Pennsylvania speakers are over the age of seventy.\textsuperscript{125} The speaker pool from the Amish community in Lancaster County, Pennsylvania is more

\textsuperscript{124} English borrowings are not included in these data. The total number of tokens in each category from which percentages were calculated is: all Pennsylvania n=352, Pennsylvania Lancaster Amish only n=118, Kalona n=824, Holmes County n=906.

\textsuperscript{125} Most of the Pennsylvania speakers are Mennonites whose communities have no direct relationship with the Amish (unlike many Mennonites in the Midwest as chapter 6 points out). Unless they are Old Order Mennonites, these Pennsylvania Mennonite speakers are the last in their communities to speak Deitsch natively.
balanced for age since nearly half of the Amish speakers (3 of 7) are younger than forty. Yet even when the data from Amish speakers in Lancaster County are separated from the rest of Pennsylvania, the percentage of monophthongal tokens rises only slightly to 6% (7 out of 118).

A closer look at the Pennsylvania data corroborates Louden’s description of the sound change (see Figure 17, section 8.1), that is, in Pennsylvania, monophthongal tokens can occur only before liquids [l] and [ɾ], as in the following examples.

(4) \[\text{mæ gæ:t}\]  
‘my horses’

(35 year old, Old Order Amish woman, translation task)

(5) ‘\text{S sin very few fun Amishi as...[hæ:ɾ] daede}’  
‘There are very few Amish that...would marry’

(53 year old, Beachy Amish woman, conversation)

The limited phonetic environments favoring monophthongization help explain why so few tokens occur in the Pennsylvania data. Moreover, even in these favoring environments the change is not categorical, and there is variation between diphthongal and monophthongal realizations. Thus we have also canonical diphthongal tokens in [mæl ɡaːɾ] ‘my horses,’ from a 31-year-old Old Order Amish man, and in [læɾ ʰaːɾ] ‘people marry’ from a 73-year-old Old Order Amish man.
Midwestern speakers would pattern with Pennsylvania Amish usage of monophthongal /aɪ/ in ‘horses’ in example (4), but not with respect to diphthongal /aɪ/ in ‘my’ in the same example nor with respect to monophthongal /aɪ/ in ‘marry’ in example (5). The fact that only Pennsylvania speakers can monophthongize tokens such as ‘marry’ may be a result of the outcome of a separate sound change in which tappèd [r] has changed to (American-English-like) approximant [ɪ] in all phonetic environments. This change occurs only in Pennsylvania. The change to an approximant [ɪ] then impacts adjacent unstressed vowels which are weakened to the point of deletion, e.g., [hæɹə] > [hæɹə] > [hæɪ] > [hæɪ] ‘(to) marry.’ One sound change feeds into another.

The other conditioning environment for monophthongization in Pennsylvania is also affected by a sound change: Pennsylvania speakers realize the lateral /l/ in syllable coda position as (American-English-like) velarized ‘dark’ [ɬ]. Although it may not increase the rate of monophthongization by Pennsylvania speakers, this sound change allows Midwesterners to distinguish Pennsylvania speech from their own, because of contrasts such as [gæːl] ‘horses’ (Pennsylvania) v. [ɡæːl] ‘horses’ (Midwest).

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126 In the Midwest, the approximant [ɪ] may occur in syllable initial position, but tapped [r] is retained in intervocalic position. The special status of /r/ in this sound change in Pennsylvania brings to mind other sound changes in Germanic in which /r/ has played a prominent role. For example, in the changes that took place from Proto-Indo-European to Proto-Germanic, short i and u lowered only before h and r (Labov 1994:130). Too, Old English breaking (ironically, a diphthongization process) affected Pre-Old English *i, *e, and *e before *r and *x. Findings from German dialectology reveal diphthongizations before /r/ similar to breaking (Howell 1991). Also, in English dialectology the introduction of /r/ into r-less dialects changes the realization of preceding vowels, often resulting in merger (Labov 1994:78). Liquids in general seem to play a prominent role in vowel mergers, such as the merger of /u/ and /ou/ before /l/ (e.g. fool and fold) in some US dialects (Labov 2001:14, 1994:359).

127 This is true also for another sound change occurring only in the Midwest. The weakening and loss of /t/ and /g/ in the environment /a_ɪ/ has produced more words in the /aɪ/ word class in the Midwest, e.g., [latvaŋk] > [latvaŋk] > [latve:k] ‘apple butter.’ Pennsylvania speakers say [latvaŋk]. See also footnote 118 in section 8.3.
It is clear that with respect to the monophthongization of /at/ as well as to two related sound changes, Pennsylvania speakers as a group pattern very differently from speakers in the Midwestern communities. These linguistic reflexes of the relative social isolation of Pennsylvania Amish from Midwestern Amish should not surprise us (see chapter 7 above). In the following section, however, I will examine the extent to which the monophthongization of /at/ in Deitsch speech islands in the Midwest not only differentiates Midwestern speakers from Pennsylvania speakers, but also displays similarities in the details of its linguistic and social conditioning in Holmes County, Ohio and Kalona, Iowa—details which serve to further demonstrate the sociohistorical ties between these distant speech islands.

8.10 Patterns of variation within the Midwest: Kalona, Iowa v. Holmes County, Ohio

The data in Table 21, Table 22, and Figure 23 have already demonstrated the overall similarity in the frequency distribution of tokens across variants of /at/ by speakers in Kalona and in Holmes County. In this section I show that the same linguistic and social factors condition the monophthongization of /at/ in Holmes County and in Kalona. For a discussion of the coding of the independent variables see section 4.2.2 and Table 7. First, I will note a difference between the two communities with respect to how borrowed English words with /at/ also undergo monophthongization. Then, analyzing only the native Deitsch tokens, I enter the relevant independent variables, both linguistic and social, into a logistic regression analysis. The results show that only a subset of the independent variables—most importantly the age of the speaker—are incorporated into a
model for predicting when monophthongization will occur. Most important is the fact that the independent social variable “place,” i.e., whether the speaker lives in Holmes County or in Kalona, is not selected as a significant variable in the model. I then analyze in more detail the frequency distribution of selected independent variables across both communities in order to further demonstrate that we can confidently talk about a single sound change progressing along similar paths in both of these speech islands. I also note significant points of divergence and set the stage for demonstrating that a subset of Holmes County speakers at the leading edge of the sound change.

8.10.1 Community differences in the phonological incorporation of English borrowings

All of the recorded tokens occurred in the context of translation tasks or conversations with Deitsch as the matrix language. Since Deitsch borrows heavily from American English, each lexical item was coded as either Deitsch or English. In general, English words are infrequently incorporated into native Deitsch phonology (e.g., buggy realized as [bɔɡɪ] as opposed to phonologically unincorporated [bɔɡi]), though there is some variation between communities. One study has shown that Holmes County speakers are more likely to “nativize” borrowings, doing so at a rate of 22%, than Kalona speakers.

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128 The distinction native vs. non-native vocabulary is very problematic in intense language contact situations such as those in all Deitsch-speaking communities. Here I use the presence or absence of a dictionary entry as a simple, but methodologically necessary, criterion for counting tokens as loans. If a word is listed in Beam’s 1994 [1991] Pennsylvania German Dictionary or Stine’s 1990 Pennsylvania German to English Dictionary, then it counts as a native Deitsch word; if not, then it was a loanword. Thus, some long-term borrowings are considered part of the Deitsch lexicon, e.g., the noun pie and the verb quilt. Too, some recent borrowings that some (especially younger) speakers consider to be part of the native lexicon end up being labeled as English. Words with English inflectional affixes (e.g., plural –s) are also included as native Deitsch, while those with English derivational affixes (e.g. nominalizing –ing, in the gerund pricing) are not.
who nativize only 10% of borrowings (Keiser 2001c). In either settlement, however, we predict that English borrowings with /ai/ rarely yield monophthongized variants.

Figure 24. Percent monophthongal tokens by language of lexical item in Holmes County and Kalona.

This prediction is borne out by the results in Figure 24 which show that in both communities borrowed English words (light columns) are much less likely than Deitsch words (dark columns) to be monophthongized. However, while Holmes County speakers “Dutchify” slightly less than half of English borrowings—producing monophthongs in
43% of English tokens (29 out of total n=67)—Kalona speakers nativize /at/ in far fewer borrowings: only 5% (2 out of total n=39). This supports the finding of the previous study showing Holmes County speakers to be more likely than other Midwesterners to incorporate borrowings into Deitsch phonology. Because of the significant effect of the language of the lexical item (i.e., borrowed vs. native vocabulary) on the rate of monophthongization across and between the two communities, English lexical items are excluded from the following analyses. The analyses of linguistic and social conditioning of the monophthongization of /at/ will be done on the 1730 tokens found in Deitsch words.

8.10.2 The exclusion of the variable “place/community” in a statistical model for predicting the occurrence of monophthongal /at/ in the Midwest

In order to identify the independent variables that are useful in predicting the occurrence of monophthongal realizations /at/, I utilized a binary logistic regression analysis in the SPSS for Windows 10.1.0 software package. The dependent variable in all of the runs was the occurrence or non-occurrence of monophthongal /at/. Nine independent variables were entered: following phonetic environment (this is actually three variables: voicing, place of articulation, and manner of articulation), age of speaker (in four generational cohorts), speaker’s gender, speaker’s home community (Holmes County or Kalona), speaker’s religious affiliation, speaker’s occupation, and speech style (translation task v. conversation). See section 4.2 for more on the selection and coding of variables. The variables were entered in the model using forward and backward stepwise selection with the criterion for inclusion/exclusion in the model being the likelihood ratio.
change in log likelihood). In the forward stepwise method, the model contains only a constant at the outset, and at each step selects the variable which most improves the power of the model to predict the occurrence of the dependent variable. This variable is then entered into the model. At the next step all the remaining variables are run again and a second variable is selected for inclusion. This continues through additional steps until no further variables meet the criterion for entry (Norušis 1994:15). At this end point in the analysis the independent variables not included in the model are those which do not significantly improve its ability to predict the occurrence of the dependent variable. The backward stepwise method is similar except that the model begins with all of the variables included and then at each step it removes the variable which least improves the model. It continues cycling through steps until no further variables can be removed without significantly affecting the model’s predictive power.

---

129 The variable which most improves the predictive power of the model is that with the smallest significance level (below a cutoff of .05) for the test statistic (here, the change in log likelihood). The test statistic gives the significance of the probability that the null hypothesis should be accepted. In this case, the null hypothesis is that the regression coefficient of the independent variable is 0, that is, that the independent variable has no predictive value relative to the dependent variable.
<table>
<thead>
<tr>
<th>Step</th>
<th>Variable</th>
<th>Model Log Likelihood</th>
<th>Change in -2Log Likelihood</th>
<th>df</th>
<th>Sig. of the Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>Age</td>
<td>-1007.942</td>
<td>277.951</td>
<td>3</td>
<td>.000</td>
</tr>
<tr>
<td>Step 2</td>
<td>Age</td>
<td>-881.097</td>
<td>334.858</td>
<td>3</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Following place of articulation</td>
<td>-868.967</td>
<td>310.598</td>
<td>6</td>
<td>.000</td>
</tr>
<tr>
<td>Step 3</td>
<td>Gender</td>
<td>-713.668</td>
<td>50.917</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>-866.478</td>
<td>356.538</td>
<td>3</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Following place of articulation</td>
<td>-847.073</td>
<td>317.729</td>
<td>6</td>
<td>.000</td>
</tr>
<tr>
<td>Step 4</td>
<td>Gender</td>
<td>-695.083</td>
<td>50.218</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>(Final)</td>
<td>Age</td>
<td>-849.944</td>
<td>359.941</td>
<td>3</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Following place of articulation</td>
<td>-834.909</td>
<td>329.870</td>
<td>6</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Following manner of articulation</td>
<td>-688.209</td>
<td>36.470</td>
<td>5</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 24. Variables included in each step of the forward regression and the goodness-of-fit of the model if the variable is removed.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Change in $-2\text{Log Likelihood}$</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community</td>
<td>1.130</td>
<td>1</td>
<td>.288</td>
</tr>
<tr>
<td>Religious Affiliation</td>
<td>8.304</td>
<td>4</td>
<td>.081</td>
</tr>
<tr>
<td>Style</td>
<td>.373</td>
<td>1</td>
<td>.541</td>
</tr>
<tr>
<td>Following voicing</td>
<td>.045</td>
<td>1</td>
<td>.832</td>
</tr>
</tbody>
</table>

Table 25. Variables not included in the model after the 5th (final) step of the backward regression

The independent variables selected for inclusion in the forward run are: age cohort, following place of articulation, gender, and following manner of articulation. In the following sections I will consider each of these significant independent variables in more detail. The independent variables excluded from the model in the backward run are: community, religious affiliation, style, and voicing of following segment.\footnote{The more conservative backward regression does not exclude occupation.}

The crucial finding of the logistic regression analysis is that it does not include the home community of the speaker as a significant predictor for monophthongal tokens. As Table 25 above shows, in the final step of the regression the change in $-2\text{Log Likelihood}$ for “community” is 1.130, and at one degree of freedom, this improvement in the goodness of fit of the model has a significance level of .288 which is far above the cutoff of .05. This finding is evidence that, when a range of other important variables are taken into
account—specifically age and the following phonetic environment—speakers from Holmes County and speakers from Kalona are not significantly different from each other with respect to the production of monophthongal variants of /aɪ/.

The exclusion of any effect of place on the distribution of monophthongal /aɪ/ is surprising—until we take into account the historic links and cross-migrations between Midwestern Amish communities (see chapters 6 above and 7 above). The interaction between Amish settlements in the Midwest through the first half of the twentieth century appears to have set the stage for the rapid and simultaneous spread of this sound change throughout all of these speech islands.

8.10.3 Following phonetic environment

The predictive strength of the independent variables following place of articulation and following manner of articulation in the logistic regression is due in part to the fact that an inhibiting environment—vowel hiatus—is coded as a variant in both of these variables. The inhibiting effect of a following (unstressed) vowel on the change corroborates Louden’s description of the change (see section 8.1, Figure 17).
Figure 25. Percent monophthongal tokens by following place of articulation and community\textsuperscript{131}

Figure 25 shows that Kalona and Holmes County pattern very similarly with respect to the conditioning of the sound change by following place of articulation. In both communities following vowels do not favor monophthongal realizations of /au/. When /au/ precedes a vowel, as in the word Scheier, /ʃaʊ/ ‘barn,’ Midwestern Deitsch speakers

\textsuperscript{131} The total number of tokens from which the percentages were calculated are, for Holmes County: labial n=4, coronal n=353, palatal n=65, velar n=151, glottal n=4, word boundary n=271, hiatus n=58. For Kalona: labial n= 53, coronal n=289, palatal n=24, velar n=127, glottal n=26, word boundary n=238, hiatus n=67.
produce a conservative “diphthongal” form—the actual realization of which, more often than not, lacks any off-glide resulting in [əː] rather than [æː] (both are perceived and as coded as “diphthongal,” see section 8.8). Also in both communities following coronals favor monophthongs at a rate slightly greater than the overall average (that is, about 70-80%, see Figure 23, section 8.9). In Kalona, a following glottal segment (i.e., /h/) disfavors innovative tokens. For all other environments monophthongal tokens are produced at rates of around 70-80%. Since this is roughly the overall rate of monophthongization in these communities, these other environments appear to be neutral with respect to the sound change.

That a following glottal segment may pattern with vowels is not surprising since the glottal fricative /h/ (the only phone with this place of articulation in Deitsch) is somewhat vowel-like in articulation (Ladefoged and Maddieson 1996:137,325), and it is not uncommon for /h/ to weaken to yield a glide, a vowel, or zero (Hock 1991:83). All of the tokens with /h/, in fact, occur in words with velar fricatives which are weakening, e.g., /haɪɔː/ > /hɑː/ ‘listen/obey’ and /paɪɜː/ > /paɪə/ ‘second floor.’ It is the latter word, /paɪɜː/ ‘second floor,’—a word included for elicitation at a late stage in the Kalona data only—which is responsible for the lower percentage of monophthongal tokens for this place of articulation in that community as 13 out of 14 Kalona speakers retained a diphthongal vowel or a low monophthong [[paɪə]] (much like [ʃaː] ‘barn’). This does not mean that Holmes County patterns differently with respect to this phonetic environment or this lexical item—in fact, the only token of this word from Holmes County also retains a diphthong—but it does mean that we need more data to be sure.
The previous paragraph has raised the question of confounding lexical effects in the data, that is, whether lexical items occurring with high frequency in the data set might make it difficult to separate out their influence from that of the more general phonetic environment. The singular possessive pronouns, _mai, dai_, and _sai_, for example, together account for nearly one-quarter of the entire data set and three-quarters of the tokens occurring at a word boundary. An extreme example is that of the (understandably) very frequent word _Deitsch_ which accounts for eighty-two of eighty-nine tokens with a following palatal place of articulation and eighty-two of ninety-one tokens of following affricates. Given the high proportion of tokens of these phonetic variants that are accounted for by a single lexical item, we would be wise not to overstate the case for phonetic conditioning. Still, with the exception of _/paɪən/ ‘second floor’ noted above_ and the lexical item/discourse marker _/laɪnt/ ‘maybe’ which speakers also realize with a relatively low percentage of the innovative monophthongal variant (13/37=35%), the frequently occurring words such as _Deitsch_ and the personal pronouns pattern like other words of low or moderate frequency: 70-80% are monophthongized.

For the sake of comparison with following place of articulation in Figure 25 I include below a graph of the other phonetic variable selected as significant by the logistic regression analysis: the following manner of articulation.

---

132 In addition, in Kalona some speakers retained diphthongal [ait] in the first person singular possessive _mai_. This is somewhat problematic, because the form is homophonous with the English form with nearly identical meaning and so might be considered an example of borrowing or code-switching.
Figure 26. Percent monophthongal tokens by following manner of articulation and community\textsuperscript{133}

\textsuperscript{133} The total number of tokens in each category from which the percentages were calculated are, for Holmes Co.: liquid (i.e., laterals) n=46, nasal n=59, fricative n=231, affricate n=65, stop n=176, word boundary n=271, vowel n=58. For Kalona: liquid (laterals and 2 rhotic approximants) n=58, nasal n=29, fricative n= 204, affricate n=22, stop n=206, word boundary n=238, vowel n=67
Again, Holmes County and Kalona pattern very similarly, and following vowels are the only strongly disfavoring environment for the sound change in both communities. Stops and liquids appear to have a slight favoring effect. So the most favorable following phonetic environments appear to be the coronal stops /t/ or /d/ and the (coronal) lateral /l/.

The fact that the voiced or voiceless nature of the following segment does not significantly affect the sound change is to be expected given that the contrast is neutralized for the oral stops, thus making voicing largely redundant with manner of articulation.134

The data in this section suggest that variation in the production of /aɪ/ is subject to a certain amount of predictable linguistic conditioning, typical of a regular sound change in progress. It also raises the possibility that phonemic split might eventually occur in Midwestern Deitsch between fronted and raised monophthongs and those tokens in prevocalic position which remain diphthongs. Do speakers perceive the vowels in, e.g., *Scheier*, [aɪ] ‘barn,’ *deier*, [dɐɪ] ‘expensive’ to be the same or different from those in, e.g., *Scheiss*, [ɛ:ɪs] ‘manure’ or *Deitsch*, [dɛɪʃ] ‘German’? What about words in inflectional paradigms that supply both favoring and disfavoring environments? For example, the strong and mixed adjectival paradigms supply inflections beginning with an unstressed vowel for all but the neuter singular which has zero inflection (favoring monophthongization), e.g., for *nei*, ‘new,’ *nei-er*, /nai/ (m.sg.), *nei-i*, /nai/ (f.sg.), *nei-e*.

134 The significance of voicing can only be tested via morphological alternations such as /ʃtaŋ/ ~ /ʃtaŋ/ (*fast* (m.sg.) ~ ‘fast’ (n.sg.)) and this was not done in this study.
Presumably, the phonetic realization of the vowel changes depending upon the inflection: monophthongal [naː] in the neuter singular, and [naː-] elsewhere. The paradigm also supplies speakers with readily available semantically and phonologically related forms which they can exploit to reduce the phonetic variability in the paradigm by choosing one invariant form with which to level the paradigm. There are two possible outcomes of such paradigm leveling. One is to make the sound change appear unconditioned (by extending monophthongization to environments preceding vowels). The other is to appear to undo the phonetic conditioning of the sound change by restoring diphthongs in words where the conditioning environment exists. The possibility of (conditioned) phonemic split is an area ripe for future research.\footnote{The weak declension (following determiners) contrasts a zero form in the singular with -e in the plural, e.g., der nei-∅ Bu, haːt ‘the new boy’ (sg.) vs. die nei-e Buwe, haːt ‘the new boys’ (pl.).}

8.10.4 Age

The strong negative correlation between the age of the speaker and the likelihood that the speaker will produce monophthongal tokens of /aː/ is supported by a linear regression analysis with rate of monophthongization (i.e., the percentage of monophthongal tokens) for each speaker as the dependent variable and the age (in years) of the speaker as the independent variable. In this treatment of the data, age and percent monophthongization are both continuous scalar variables. The regression yields a scatterplot with the predictive variable, age, on the x-axis, and the dependent variable, percent monophthongal tokens on the y-axis. It also plots a regression curve, a line which best

\footnote{Thanks to Rich Janda for suggesting and discussing the exploration of phonemic split.}
fits the data and which is described by the Pearson correlation coefficient (R statistic) the square of which ($R^2$) can be considered the amount of variance on the y axis that is accounted for by variation on the x axis.

![Graph showing age vs. percentage of monophthongal tokens for individual speakers in Holmes County, Ohio and Kalona, Iowa (with approximation of regression curve).](image)

Figure 27. Age v. percentage of monophthongal tokens for individual speakers in Holmes County, Ohio and Kalona, Iowa (with approximation of regression curve)
For the data in Figure 27, $R^2 = .521$, meaning that over half of the variation in the rate of monophthongization between persons can be accounted for by the differences in their age. This is a very strong correlation. For Holmes County separately $R^2 = .435$, while for Kalona separately $R^2 = .571$.\textsuperscript{137}

The frequency distribution of monophthongal /au/ across age cohorts in both communities further demonstrates the strength of the correlation in both Holmes County and Kalona.

\textsuperscript{137} We should remember, of course, that in this graphic representation individual tokens produced by each speaker are collapsed into a single figure thus masking the possibly unequal effects of phonetic and lexical conditioning in the sample of tokens from each speaker (since the samples are not identical).
Figure 28. Percentage of monophthongal tokens by age cohort and community.\textsuperscript{138}

If we compare the same age cohort across both communities we see again that the sound change is proceeding across social space and apparent time in the same way in the two communities. The Pearson chi-square statistic for three of the four age cohorts does not reach the .05 cutoff level of significance that would allow us to confidently reject the null hypothesis, that is, the hypothesis that the samples from Kalona and Holmes County have

\textsuperscript{138} The total number of tokens in each age cohort from which percentages were calculated is: for Holmes County 0-25 yrs. n=172, 26-50 yrs. n=473, 51-75 yrs. n=185, 76+ yrs. n=76; for Kalona 0-25 yrs. n=138, 26-50 yrs. n=340, 51-75 yrs. n=305, 76+ yrs. n=41.
been drawn from the same population. Only the 26-50 year old age cohort patterns significantly differently in the two communities—this Holmes County cohort has the highest percentage of monophthongal realizations of any age group.

We can also see in Figure 28 the age-distributed nature of the sound change. For speakers under age 50 (i.e., in the youngest two age cohorts) the monophthongal variant is clearly the default variant since it occurs in over 80% of the tokens. For speakers between the ages of 50 and 75 the monophthongal variant is still realized the majority of the time, but the canonical diphthong is more noticeably present, too. For those in the oldest age group, we see the norms reversed: the diphthongal variant is by far the most frequent (86%) with only occasional use of monophthongal forms. This is strong apparent time evidence for placing the spread of this sound change within the lifetimes of the oldest speakers, that is, within the twentieth century.

8.10.5 Gender

The logistic regression analysis in 8.10.1 selected gender as a significant predictive variable for the occurrence of monophthongal /aɪ/. Specifically females are more likely to produce the innovative variant. This difference holds true within both communities.

\^139 For the 0-25 yr cohort the Pearson Chi-Square value=2.235, df=1, Asymp. Sig. (2-sided)=.135. For the 26-50 yr cohort the Pearson Chi-Square=9.757, df=1, sig.=.002. For the 51-75 yr cohort the Pearson Chi-Square=4.02, df=1, sig.=.526. For the 76+ yr cohort the Pearson Chi-Square=0.49, df=1, sig.=.825. For a cautionary note on the use of the Chi-square statistic for this type of linguistic data see footnote 67 in section 4.2.5.
<table>
<thead>
<tr>
<th></th>
<th>Monophthong</th>
<th>Total</th>
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<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>females</td>
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</tr>
<tr>
<td>Holmes</td>
<td>51</td>
<td>271</td>
</tr>
<tr>
<td></td>
<td>15.8%</td>
<td>84.2%</td>
</tr>
<tr>
<td>Kalona</td>
<td>82</td>
<td>265</td>
</tr>
<tr>
<td></td>
<td>23.6%</td>
<td>76.4%</td>
</tr>
<tr>
<td>Total</td>
<td>133</td>
<td>536</td>
</tr>
<tr>
<td></td>
<td>19.9%</td>
<td>80.1%</td>
</tr>
<tr>
<td>males</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holmes</td>
<td>171</td>
<td>413</td>
</tr>
<tr>
<td></td>
<td>29.3%</td>
<td>70.7%</td>
</tr>
<tr>
<td>Kalona</td>
<td>162</td>
<td>315</td>
</tr>
<tr>
<td></td>
<td>34.0%</td>
<td>66.0%</td>
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<td>728</td>
</tr>
<tr>
<td></td>
<td>31.4%</td>
<td>68.6%</td>
</tr>
</tbody>
</table>

Pearson chi-square for females across settlements = 6.367, sig..012, at df=1
Pearson chi-square for males across settlements = 2.672, sig..102, at df=1
Pearson chi-square for gender in Holmes County = 20.274, sig..000, at df=1
Pearson chi-square for gender in Kalona = 10.286, sig..001, at df=1

Table 26. Crosstabulation of sex and place by vowel

A comparison of gender-related patterns across the two communities further demonstrates that the men in both Holmes County and Kalona pattern together (chi-square=2.672, sig..102, beyond the .05 cutoff for significance, but barely beyond a less stringent .10 cutoff\(^{140}\)) while women do not (see Table 26). The women in Holmes

\(^{140}\) For a cautionary note on the use of the Chi-square statistic for this type of linguistic data see footnote 67 in section 4.2.5.
County produce significantly more of the innovative monophthongal variant than women in Kalona, Iowa. The leading role of women in the sound change in Holmes County will be explored in more detail in the following sections.
Figure 29. Percent monophthongal tokens by gender and age cohort\textsuperscript{141}

Figure 29, which adds gender to the age cohort patterns in Figure 28, shows that the gender-correlated difference is strongest in the 51-75-year-old age cohort. The women in this group produce monophthongal variants at nearly the same frequency as the younger two age cohorts (around 80%), while the 51-75 year old men lag significantly behind producing monophthongal tokens at a rate of around 50%.

\textsuperscript{141} Total number of tokens in each category from which percentages were calculated is: for Holmes County 0-25 yrs. female n=37, male n=135, 26-50 yrs. female n=212, male n=261, 51-75 yrs. female n=51, male n=134, 76+ yrs. female n=22, male n=54; for Kalona 0-25 yrs. female n=57, male n=81, 26-50 yrs. female n=99, male n=241, 51-75 yrs. female n=168, male n=137, 76+ yrs. female n=23, male n=18.
Another level of gender-differentiated usage can be uncovered if we retrieve some of the phonetic detail that was lost when we adopted the binary coding of the dependent variable in section 8.8. Recall that native speaker evaluations of significant differences in the production of /ai/ included, in addition to the basic binary classification, sporadic comments on certain “advanced” variants with high nucleus [e:] and often an inglide [e:].

These advanced variants are not evenly distributed across speakers in the data. First, they do not occur often in the speech of Kalona residents—there are only twelve tokens of vowels with the nucleus [e] from Kalona (only 1% of the total 824 tokens). Second, within Holmes County, they are heavily concentrated in the speech of younger women. Table 27 provides the token counts for age and gender cohorts in Holmes County when we introduce this third category of token types: variants with high nucleus [e:].
vowel as three-way distinction

<table>
<thead>
<tr>
<th></th>
<th>&quot;diphthong&quot; nucleus [a]</th>
<th>&quot;monophthong&quot; nucleus [æ], [e]</th>
<th>&quot;advanced&quot; nucleus [ɛ]</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>females</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-25 yrs</td>
<td>4</td>
<td>26</td>
<td>7</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>10.8%</td>
<td>70.3%</td>
<td>18.9%</td>
<td>100.0%</td>
</tr>
<tr>
<td>26-50 yrs</td>
<td>23</td>
<td>163</td>
<td>26</td>
<td>212</td>
</tr>
<tr>
<td></td>
<td>10.8%</td>
<td>76.9%</td>
<td>12.3%</td>
<td>100.0%</td>
</tr>
<tr>
<td>51-75 yrs</td>
<td>6</td>
<td>43</td>
<td>2</td>
<td>51</td>
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<td>11.8%</td>
<td>84.3%</td>
<td>3.9%</td>
<td>100.0%</td>
</tr>
<tr>
<td>76+ yrs</td>
<td>18</td>
<td>4</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>81.8%</td>
<td>18.2%</td>
<td>0%</td>
<td>100.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>51</td>
<td>236</td>
<td>35</td>
<td>322</td>
</tr>
<tr>
<td></td>
<td>15.8%</td>
<td>73.3%</td>
<td>10.9%</td>
<td>100.0%</td>
</tr>
<tr>
<td><strong>males</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-25 yrs</td>
<td>21</td>
<td>102</td>
<td>12</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>15.6%</td>
<td>75.6%</td>
<td>8.9%</td>
<td>100.0%</td>
</tr>
<tr>
<td>26-50 yrs</td>
<td>36</td>
<td>207</td>
<td>18</td>
<td>261</td>
</tr>
<tr>
<td></td>
<td>13.8%</td>
<td>79.3%</td>
<td>6.9%</td>
<td>100.0%</td>
</tr>
<tr>
<td>51-75 yrs</td>
<td>66</td>
<td>68</td>
<td>0</td>
<td>134</td>
</tr>
<tr>
<td></td>
<td>49.3%</td>
<td>50.7%</td>
<td>0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>76+ yrs</td>
<td>48</td>
<td>6</td>
<td>0</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>88.9%</td>
<td>11.1%</td>
<td>0%</td>
<td>100.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>171</td>
<td>383</td>
<td>30</td>
<td>584</td>
</tr>
<tr>
<td></td>
<td>29.3%</td>
<td>65.6%</td>
<td>5.1%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 27. Crosstabulation of age and sex cohorts in Holmes County with three-way categorization of vowel.

This category also includes tokens with nucleus [æ] that have upglides, i.e., [æː]. See section 8.8.
The two youngest female cohorts in Holmes County have exceptionally high percentages of the advanced tokens: 19% and 12%. By contrast the same age cohorts for the males produce 9% and 7% tokens with nucleus [e].

Five of the young women who produce advanced tokens work in the same office at the woodworking plant where I was employed during my fieldwork in the summer of 1998. The office worker network consists of about fifteen persons total working in two offices with considerable English customer contact. There are a several male managers, but the majority of the office workers are single, New Order Amish women between the ages of 20 and 50. The five office network women included in this study yielded 46% (16 of 35) of the advanced tokens by women. The comments of a male former worker in the factory gave reason to expect a possible geographical network correlation for this pattern. Noting the advanced ingliding tokens [ɛə] and [ɛə] he said, "[It's] almost like they put an extra vowel in there" and he identified the use of these advance variants with a particular group of young women in the section of the factory who, he speculated, mostly came from the same area in the Holmes County. However, following up on the place of residence for these women did not show such a correlation. These women participate in another linguistic innovation in Holmes County: the morphological marking of human female referents as neuter/masculine (see section 2.3.2). It seems probable, as Van Ness 1995 suggests, that these young women are utilizing language as a means for distinguishing themselves within the Amish community. This seems all the more possible when we consider the multiple ways in which they are marginalized in Amish society. In a culture centered on the family and children, these women are single well
past the typical marrying age of the early twenties. Not only are they working outside the home, they are employed in positions that require considerable clerical and managerial skills as well as computer literacy—and they make good money at it. Their work also entails interaction with English customers to a much greater degree than the average worker. These women are unusual in many respects and they appear to be leading the way in introducing further innovation in the sound change involving /ai/. They will be the subject of the following investigation into incipient phonemic merger in Holmes County Deitsch.

8.11 Summary of Variation

The Midwestern Deitsch speech islands of Holmes County, Ohio and Kalona, Iowa show remarkably similar patterns in the variable realization of the Deitsch phoneme /ai/ across linguistic and social variables. Although variation in the production of /ai/ has linguistic correlates, the strength of the effect of the social variable “age of speaker” overwhelms these correlations as well as other social correlates. Regardless of phonetic environment, the younger the speaker, the less likely it is that the conservative [ai] variant will be produced. The tokens of the most advanced variants with nucleus [e] are concentrated in the production of younger women in Holmes County and may mark incipient divergence of Holmes County Deitsch from that of other Midwestern speech islands. These advanced tokens parallel developments in some dialects of English in which vowels with tense nuclei develop inglides as they reach mid or high position in the vowel space (Labov 1994:162,175). In the following section I will analyze the potential for advanced tokens such as [eə] to effect phonemic change.
8.12 Evidence for Holmes County as sound change leader: the production and perception of incipient phonemic merger

To evaluate the possibility of phonemic merger, we must first consider how the variation in /au/ may produce tokens which overlap the vowel space of other Deitsch phonemes. Although in terms of quality both short /e:/ and short /e/ would appear to show some overlap with /au/, the length difference of /au/ is salient enough to avoid mergers with these two vowels. The most likely candidate is the long vowel /e:/, Evidence to support this comes from the (mis)perceptions of a native speaker listening to a recording I had made of a young woman from Holmes County. The listener misheard /hoxi lant/ ([hohi lαnt]), ‘high/proud people’ as /hoxi me:d/, ‘high/proud girls,’ a confusion made possible because the diphthong in /lant/ ‘people’ was raised so far up the front of the vowel space that it overlapped with the vowel space of /e:/ in the word /me:d/ ‘girls.’

8.12.1 Commutation test

To test a potential merger of the phonemes /au/ and /e:/, I created a commutation test (Labov 1994, 356). The corpus for the commutation test was fashioned by selecting the minimal pair /ga:l/ ‘horses’ and /ge:l/ ‘yellow’ and randomizing twelve occurrences of each word in a single list. This produced a single list of twenty-four words which a native speaker then recorded for me. Since few Deitsch speakers read Deitsch, I used pictures to elicit the words. Finally, twenty words from the list of minimal pairs were played back to the person who recorded them (beginning on the third token and ending on the twenty-second token to help ensure that the listener did not memorize the order of
recording) and the person was asked to identify which word she or he had said (i.e., either ‘horses’ or ‘yellow’) for each token. If the person is unable to do so above the level of chance (50%), then we have convincing evidence of (near) merger phenomena. Evidence from commutation tests is particularly compelling, since speakers rate their own speech from a highly focused task in which the fact that minimal pairs are being elicited is obvious.

A second commutation test was created in the same way but using the minimal pair /sat/ ‘pigs’ and /scə/ ‘sea.’ Both of these commutation tests were administered to five Holmes County Deitsch speakers. I selected speakers under the age of 40, since my earlier quantitative data showed them to be most likely to produce advanced /at/ variants. The results are given below in Table 28.
<table>
<thead>
<tr>
<th>speaker/listener</th>
<th>/gæt/ ‘horses’ vs. /gæt/ ‘yellow’</th>
<th>/sæt/ ‘pigs’ vs. /sæt/ ‘sea.’</th>
<th>TOTAL % correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 30, male, New Order Amish</td>
<td>20/20 100%</td>
<td>20/20 100%</td>
<td>40/40 100%</td>
</tr>
<tr>
<td>2. 31, female, New Order Amish</td>
<td>20/20 100%</td>
<td>20/20 100%</td>
<td>40/40 100%</td>
</tr>
<tr>
<td>3. 32, female, Beachy Amish</td>
<td>20/20 100%</td>
<td>20/20 100%</td>
<td>40/40 100%</td>
</tr>
<tr>
<td>4. 32, female, New Order Amish</td>
<td>19/20 95%</td>
<td>15/20 75%</td>
<td>34/40 85%</td>
</tr>
<tr>
<td>5. 16, male, Old Order Amish</td>
<td>20/20 100%</td>
<td>20/20 100%</td>
<td>40/40 100%</td>
</tr>
</tbody>
</table>

Table 28. Percent correct on commutation tests

Four of the speakers correctly identified all forty of their utterances. Of interest here is the one speaker who did not: speaker #4. This 32-year-old New Order Amish woman works in the office of a woodworking factory and earlier conversations with her had given me the impression that she is among the most advanced in her production of /æt/.

The results of the commutation test show that clearly there is significant overlap in the phonetic space comprising the phonemes /æt/ and /ɛt/ for speaker #4.

In the /gæt/ vs. /gæt/ test she misidentified one word, but for the /sæt/ vs. /sæt/ test she incorrectly identified five words. Given that random guessing should yield a 50% correct score, her score of 75% is strong indication that for her these phonemes are nearly
merged. Her mistakes, however, were not completely random. In each of her errors she
misidentified an /ai/ token as /e:/.

8.12.2 Cross-checking and extending the results of the commutation test

8.12.2.1 Commutation test cross-check

In order to verify that speaker #4 did not simply have perceptual difficulties, I had five
other speakers listen to speaker #4’s commutation test tokens.

<table>
<thead>
<tr>
<th>listener</th>
<th>/gai/ ‘horses’ vs.</th>
<th>/ge:/ ‘yellow’</th>
<th>/saI/ ‘pigs’ vs.</th>
<th>/se:/ ‘sea.’</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>37, male, Beachy Amish</td>
<td>17/19 89%</td>
<td>13/19 68%</td>
<td>30/38 79%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31, male, Beachy Amish</td>
<td>19/20 95%</td>
<td>18/20 90%</td>
<td>37/40 93%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>64, female, Beachy Amish</td>
<td>18/20 90%</td>
<td>18/20 90%</td>
<td>36/40 90%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>= Speaker #2 (see Table 28)</td>
<td>19/20 95%</td>
<td>20/20 100%</td>
<td>95/100 95%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>65, female, New Order Amish</td>
<td>17/20 85%</td>
<td>17/19 89%</td>
<td>34/39 87%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL other listeners</td>
<td>90/99 91%</td>
<td>86/98 88%</td>
<td>176/197 89%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL including Speaker #4</td>
<td>109/119 92%</td>
<td>101/118 86%</td>
<td>210/237 89%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 29. Cross-check: Speaker #4 commutation test with other listeners
The results in Table 29 confirm a (near) merger of these vowels in the production of Speaker #4. Listeners are good—but not perfect—at distinguishing Speaker #4’s /aɪ/ vs. /eɪ/. A roughly equal number of /aɪ/ and /eɪ/ tokens were misidentified and errors were scattered across 9 of 20 tokens for /gail/ vs. /geɪl/ and across 13 of 20 tokens for /saɪ/ vs. /seɪ/.

As a control, four listeners (B, C, D, and E) also listened to Speaker #2’s commutation test. This check yielded only one error: 159/160 (99%) correct.\textsuperscript{143}

At least one listener, Listener A, commented that it was very difficult to distinguish /aɪ/ from /eɪ/ in speaker #4’s speech and he seemed surprised by the difficulty. He maintained that most speakers would not overlap the two phonemes in this manner.

8.12.3 Minimal pair test

I also had listeners listen to fifteen tokens of minimal pairs taken from sentences spoken by speaker #4 and speaker #2. The sentences had been elicited in an earlier translation task.

\textsuperscript{143} Listener A listened only to several tokens from the commutation test of speaker #5 and had “no problem” correctly identifying the tokens.
<table>
<thead>
<tr>
<th>/at/ word class</th>
<th>/e:/ word class</th>
</tr>
</thead>
<tbody>
<tr>
<td>mail</td>
<td>more miles</td>
</tr>
<tr>
<td>vais</td>
<td>'white'</td>
</tr>
<tr>
<td>main</td>
<td>'mine'</td>
</tr>
<tr>
<td>sat vase</td>
<td>'his water'</td>
</tr>
<tr>
<td>[ix] bats</td>
<td>'[I] bite'</td>
</tr>
<tr>
<td>drat</td>
<td>'three'</td>
</tr>
<tr>
<td>mc</td>
<td>more flour</td>
</tr>
<tr>
<td>[ix] ve:s</td>
<td>'[I] know'</td>
</tr>
<tr>
<td>[ix] me:n</td>
<td>'[I] mean'</td>
</tr>
<tr>
<td>se: vase</td>
<td>'sea water'</td>
</tr>
<tr>
<td>[ix bim] be:s</td>
<td>'[I’m] angry'</td>
</tr>
<tr>
<td>dre:</td>
<td>'curve'</td>
</tr>
</tbody>
</table>

Table 30. Minimal pairs extracted from translation tasks of Speaker #2 and Speaker #4.

For each of these fifteen tokens listeners were asked to indicate which word from the minimal pair they heard, e.g., “Did you hear more miles or more flour or something else?”
<table>
<thead>
<tr>
<th>Listener</th>
<th>Speaker #2</th>
<th>Speaker #4</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. 37, male, Beachy Amish</td>
<td>4/6</td>
<td>8/9</td>
<td>12/15</td>
</tr>
<tr>
<td>B. 31, male, Beachy Amish</td>
<td>6/6</td>
<td>6/9</td>
<td>12/15</td>
</tr>
<tr>
<td>C. 64, female, Beachy Amish</td>
<td>6/6</td>
<td>4/9</td>
<td>10/15</td>
</tr>
<tr>
<td>D. = Speaker #2 (see Table 28)</td>
<td>6/6</td>
<td>6/9</td>
<td>12/15</td>
</tr>
<tr>
<td>E. 65, fem., New Order Amish</td>
<td>1/2</td>
<td>2/2</td>
<td>3/4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>23/26</td>
<td>26/38</td>
<td>49/64</td>
</tr>
</tbody>
</table>

Table 31. Minimal pairs test results: number correct/total

Again listeners have difficulty distinguishing tokens produced by Speaker #4. Listeners do better—but are not perfect—at distinguishing tokens produced by Speaker #2. There was a pattern to listeners’ errors: 10 of 15 mistakes are /e:/ misidentified as /æt/. Three words were misidentified three times each: /væs/ ‘[I] know’, /be:s/ ‘mean’, and /me:n/ ‘[I] mean.’

8.12.4 Production of nearly merged sounds: acoustic measures.

In near-merger phenomena two different vowels are produced in a manner that causes them to be perceptually identical or nearly so. Yet acoustically significant differences may remain. Faber and Di Paolo 1995 suggest first testing for significant differences across several acoustic dimensions, then, if necessary, considering all of these dimensions simultaneously.
For the tokens in the commutation tests of speakers #2 and #4, formant measures were taken at early, mid, and late points in the vowel (roughly at 20%, 50%, and 80% through the duration of the vowel). The acoustic dimensions tested were duration of the entire vowel, F1, F2, and change in F1 and in F2 from midpoint to late point in vowel. The average formant tracks for both speakers are given in Figure 30 and Figure 31.

![Figure 30. Average formant tracks for speaker #2](image-url)
An ANOVA revealed a significantly higher F1 for /e:/ as opposed to /aI/ at all points in the vowel for both speakers. Measures of F1 of the same vowel across different words (i.e., /ge:l/ vs. /se:/) reveal no significant differences. (See Table 32 below in which only those differences which are not significant at <.05 are in **bold**).
<table>
<thead>
<tr>
<th>minimal pair</th>
<th>measure</th>
<th>Speaker #2</th>
<th>Speaker #4</th>
</tr>
</thead>
<tbody>
<tr>
<td>/gæɪl/ vs. /gæ:ɪl/</td>
<td>F1 early</td>
<td>&lt;.001</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>mid</td>
<td>&lt;.001</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>late</td>
<td>&lt;.001</td>
<td>.026</td>
</tr>
<tr>
<td></td>
<td>F2 early</td>
<td>.130</td>
<td>.117</td>
</tr>
<tr>
<td></td>
<td>mid</td>
<td>.042</td>
<td>.469</td>
</tr>
<tr>
<td></td>
<td>late</td>
<td>.355</td>
<td>.735</td>
</tr>
<tr>
<td></td>
<td>Δ F1</td>
<td>1.000</td>
<td>.012</td>
</tr>
<tr>
<td></td>
<td>Δ F2</td>
<td>.845</td>
<td>.320</td>
</tr>
<tr>
<td></td>
<td>duration</td>
<td>&lt;.001</td>
<td>.332</td>
</tr>
<tr>
<td>/sæɪ/ vs. /sæːɪ/</td>
<td>F1 early</td>
<td>&lt;.001</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>mid</td>
<td>&lt;.001</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>late</td>
<td>.001</td>
<td>.007</td>
</tr>
<tr>
<td></td>
<td>F2 early</td>
<td>&lt;.001</td>
<td>.521</td>
</tr>
<tr>
<td></td>
<td>mid</td>
<td>&lt;.001</td>
<td>.985</td>
</tr>
<tr>
<td></td>
<td>late</td>
<td>.002</td>
<td>.991</td>
</tr>
<tr>
<td></td>
<td>Δ F1</td>
<td>.008</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Δ F2</td>
<td>.441</td>
<td>.995</td>
</tr>
<tr>
<td></td>
<td>duration</td>
<td>.024</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Table 32. Tukey HSD post-hoc comparisons of ANOVA of commutation test

Thus, for both speakers we have a clearly measurable difference in production (F1) despite the fact that other acoustic measures—most notably F2—do not differ significantly between /eː/ and /æː/ for both speakers. This runs counter to the observation that vowels in near-mergers commonly differ along F2 not F1 (Labov 1994:359).

There is no consistent measure that distinguishes the production of near-merged vowels by Speaker #4 from the relatively clearer production of Speaker #2. For the /gæɪl/ vs.
/geːl/ pair, the longer duration of the vowel in /gaɪl/ may play a role. Duration is not significant for the /səʊl/ vs. /seːl/ pair, however for this pair Speaker #4 does not produce a significant difference in F2 measures at all points across the vowel.

The same basic pattern holds for the minimal pair test data: there are significant differences in F1 for /eːl/ and /aʊl/ for both speakers at all points in the vowels. But duration and F2 do not differ significantly between /eːl/ and /aʊl/ for both speakers. There is no clear acoustic cue to which we can attribute listeners’ confusion on the minimal pair test.

8.12.5 Is phonemic merger underway?

A “near-merger” is defined as a contrast which speakers reliably produce but which they cannot reliably perceive (Labov 1994, 349-70). It is perception then, or rather the limits of perception, which drives the near merger process and the potential for complete phonemic change. The results described in sections 8.12.1 and 8.12.2 clearly show that at least one speaker has partially merged the phonemes /aʊl/ and /eːl/. Furthermore, native speaker-listeners were unable to consistently distinguish these phonemes in the speech of at least two Holmes County speakers. If we accept the relatively safe assumption that these two speakers are not unique in Holmes County, then we must also accept that continued spread of the advanced variants of /aʊl/ could lead to phonemic merger with /eːl/.144

144 The phonetic conditioning of the (near) merger was not explored. Impressionistically, tokens preceding /l/ seemed closest to merger. This would follow previous studies of mergers which show that liquids in
Too, there is no evidence for phonemic merger in Kalona. If Holmes County speakers continue to innovate in this way, it will lead to a clear dialect distinction between the two Midwestern communities.

Language contact may play a role in the retention or re-establishment of this phonemic contrast. English borrowings with /at/ are resistant to monophthongization and raising, and are thus a constant source of renewal for the phoneme.

8.13 Summary

In this chapter I have demonstrated that the monophthongization of /at/ is a robust sound change in progress in two Midwestern Amish speech islands. A similar sound change, though with a different and extremely limited favoring phonetic environment is occurring in Pennsylvania Amish communities. Furthermore, the major linguistic and social factors that condition the sound change—in particular its distribution across age and gender cohorts—pattern in similar ways in both the Holmes County, Ohio and Kalona, Iowa settlements. These patterns uniting Midwestern Amish communities are more than just chance occurrences, but reflect enduring patterns of interaction between these settlements since their founding in the early 19th century. These interactions have led to a common

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general seem to play a prominent role in vowel mergers, such as the merger cf /u/ and /i/ before /l/ (e.g. fool and full) in some US dialects (Labov 2001:14, 1994:359). However, neither the patterns in listeners errors on commutation tests nor the limited acoustic analysis of /gal/~/gel/ v. /sal/~/sed/ can confirm these impressions.
regional identity anchored in a common language variety. The nascent differences emerging between Kalona and Holmes County Deitsch suggest that the latter is the leader in the propagation of this sound change.
CHAPTER 9

THE PRODUCTION AND PERCEPTION OF MIDWESTERN DEITSCH

The preceding chapter analyzed in detail the production of monophthongal variants of /aɪ/ in the Midwestern Amish settlements of Holmes County, Ohio and Kalona, Iowa. In spite of the distance separating them, speakers in these Deitsch speech islands have a long history of intercommunity contact, which has its linguistic reflex in the simultaneous spread of this sound change to near completion in both communities and across other Amish settlements in the Midwest. The Amish of Lancaster, Pennsylvania, on the other hand, have a long history of relative insularity. The limited spread of monophthongal /aɪ/ in that community is but one indication of the linguistic divergence of these emerging regional varieties of Deitsch.\(^{145}\)

In this chapter I briefly review the other linguistic features that contribute to the production and perception of a distinct Midwestern dialect of Deitsch. Then I survey innovations at the level of the local community that may signal the genesis of subregional dialects within Midwestern Deitsch. Finally there are the opinions of speakers

\(^{145}\) We might question whether or not the “same” sound change is at work in both regions. It has yet to be clearly established that the changes in the Midwest and those in Pennsylvania have a common origin or conversely that they emerged independently.
themselves, and their mental maps of the Deitsch-speaking world demonstrate the psychological reality of a homogeneous Midwestern dialect.

9.1 Other linguistic features contributing to the divergence of Midwestern Deitsch from Pennsylvania Deitsch

The features which distinguish Midwestern Deitsch vis-à-vis Pennsylvania include the retention of tapped (non-approximant) /r/, retention of clear (non-velarized) /l/ in coda position, native lexical differences, and differences in rate of lexical borrowing from English.

9.1.1 Retention of non-approximant /r/ in Midwest

Earlier Deitsch had tapped alveolar /r/ in syllable initial and intervocalic positions and vocalic allophones in syllable coda position (Van Ness 1995).

(6) *drietb* [drib] ‘overcast’

(7) *Ohre* [orɔ] ‘ears’

(8) *Wurzcht* [vaצt] or [vafs] ‘sausage’

Contact with English speakers has led Pennsylvania speakers to adopt the American English approximant [ɹ] in environments where the alveolar tap occurred.146 This affects

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146 Raith 1992 has proposed that American approximant /ɹ/ entered Deitsch because the Amish become literate in English and then must transfer their English reading skills to the reading aloud of the German Bible and songbook during worship services. This explanation does not account for the maintenance of the alveolar tap in the Midwest, nor does it account for the adoption of approximant /ɹ/ by other Deitsch speakers of non-Amish and nonplain background in southeast Pennsylvania.
the first two of the above examples yielding [dʒɪb] and [oʊə] ([væɾt] remains unchanged). This change in manner of articulation is, in the ear of the Midwesterner, the most salient feature of Pennsylvania Deitsch, and the first to draw overt commentary when the subject of dialect differences comes up in conversation.

The adoption of the American /r/ has done more than simply alter the consonantal inventory of the Pennsylvania variety of Deitsch; it has also impacted its morphology. For some speakers, unstressed vowels adjacent to [ɪ] have weakened and elided. So, to use example (7) again, Ohre [orə] > [oʊə] > [oɪ]. The singular form of this lexical item is Ohr [or]. As result of these sound changes, the singular/plural distinction is no longer [or] v. [orə], but rather is marked with an alternation between a (native German) vocalized realization of /r/ and a (borrowed American) approximant realization of /ɾ/. These changes impact the class of words that have word-final /r/ in the singular and that add schwa to form the plural, such as Daer ‘door’ [dər], the plural of which has changed as follows: [dɛrə] > [dɛɾə] > [dɛɾə]. In addition, verbal inflections for the infinitive and present tense plural forms are similarly marked not with schwa, but with the approximant /ɾ/, e.g., [kɛɾə] > [kɛɾə] > [kɛɾə] ‘to sweep’. Also affected are other functional morphemes such as the third person feminine singular and third person plural possessive pronoun [ɪɾə], e.g., ‘her girls’ is not [ɪɾə meːd] but [ɪɾ meːd].

Too, in the Midwest the weakening and loss of alveolar /ɾ/ (as well as /g/) in the environment /a_ɪə/ has produced more words in the /at/ word class in the Midwest, and these have subsequently undergone monophthongization, e.g., [latvarik] > [latvark] >
‘apple butter.’ In Pennsylvania, the approximant /r/ has prevented this change from happening, so in Lancaster they spread their bread with [latvə:nk].

All of these features related to the adoption of approximant /r/ in Pennsylvania occur frequently in the course of natural conversation and they combine to give the impression of a distinct dialect difference. As one 33 year old, New Order Amish woman from Holmes County, Ohio said of acquaintances from Lancaster County, “Their Dutch is hard to understand. It’s so ‘r’-y.”

9.1.2 Retention of clear /l/ in syllable coda position

The Pennsylvania change of [l] > [ɹ] in syllable coda position draws less overt commentary from Midwesterners, but is diagnostic, nonetheless, of Pennsylvania varieties. An Ohio speaker listening to a recording of a Pennsylvanian saying [mat ɡæʃl] ‘my horses’ commented that the vowel [æʃl] (a token of /at/ which in Pennsylvania can be monophthongized only preceding liquids) sounded okay to him, but that the following “dark” /l/ ([ɹ]) betrayed the speaker’s eastern origins.

9.1.3 Lexical differences: native and borrowed

Native speaker perceptions tend to exaggerate the lexical differences between the Midwest and Pennsylvania. The reality is that when compared to the lexical differences between the (now obsolescent) regional nonplain varieties within the southeast Pennsylvania homeland of Deitsch, the native lexicons of the Midwest Amish and the

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Pennsylvania Amish are remarkably similar. These commonalities are discussed in section 2.3, and I will not repeat them here, but instead will list in Table 33 a few of the lexical differences between the two regions.

<table>
<thead>
<tr>
<th></th>
<th>Pennsylvania</th>
<th>Midwest</th>
</tr>
</thead>
<tbody>
<tr>
<td>'the bucket'</td>
<td><em>der Kiwwel</em></td>
<td><em>der Eemer</em></td>
</tr>
<tr>
<td>'the autumn'</td>
<td><em>der Harebscht</em></td>
<td>'<em>s Schpohtyaar</em></td>
</tr>
<tr>
<td>'the meadow'</td>
<td><em>die Wiss</em></td>
<td><em>der Baschsdert</em></td>
</tr>
<tr>
<td>'the fly'</td>
<td><em>die Mik</em></td>
<td><em>die Muk</em></td>
</tr>
<tr>
<td>'the car'</td>
<td><em>die Machine</em></td>
<td><em>die Kaer</em></td>
</tr>
<tr>
<td>'the lawn'</td>
<td>'<em>s Hefti</em></td>
<td><em>der Hoch/Hof</em></td>
</tr>
<tr>
<td>'through'</td>
<td><em>darich</em>[^147]</td>
<td><em>deich</em></td>
</tr>
<tr>
<td>Composition of the lexicon</td>
<td>fewer English borrowings</td>
<td>more English borrowings</td>
</tr>
</tbody>
</table>

Table 33. Selected lexical differences between regional Amish varieties of Deitsch

The occurrence of most of these lexical items is not categorical in either region. For example, in Lancaster County *die Kaer* appears alongside the more common *die Machine* for 'the car.' Also, the earliest studies of Deitsch in the Midwest from the early 20th

[^147]: Darich represents, in fact, a whole class of words in which Pennsylvania preserves the (now approximant) /r/, while the Midwest deletes /r/ and monophthongizes the resulting /ai/ sequence. Examples include [latvaŋ] v. [latvek] 'apple butter' noted in the previous section, [[farŋ] v. [[fəŋ] 'fast,' and [hadŋ] v. [hedŋ] 'obey.' See also Table 18 in section 8.3.
century (Bender 1929 and Shoemaker 1940) indicate that for some of these lexical items, both variants were in use at the time (e.g., [muk]–[mk] ‘fly,’ and [krv]– [emr] ‘bucket,’ see also section 2.3.2). For these words it may be that only in recent decades have dominant regional variants emerged.

The combination of these few lexical differences with the phonetic and morphological changes related to the adoption of approximant /r/ in Pennsylvania can lead to rare problems in comprehension. An Ohio speaker, for example, listening to a recording of a Pennsylvania speaker saying the phrase in (9) below, simply shrugged and stated, “I didn’t understand a word he said.” His rendition of the same sentence would match that of the speaker in (10).

(9) laut din ɔfəm hæu im harbf't (50 yr old, Beachy Amish male, in Lancaster County, Pennsylvania)
    ‘people often marry in autumn’
(10) læst dun ɔft hæːrə in ʃpotʃə (35 yr old Beachy Amish male, in Holmes County, Ohio)

Such a misunderstanding between speakers from different regions is rare and in this case was aided by the lack of conversational context. But it illustrates both the reality and the perception of the regional dialect differences.

Another salient difference between Pennsylvania and Midwestern lexicons is the greater number of English borrowings in the latter variety. Because of the significant amount of borrowed English words in all varieties of Deitsch, it is difficult to quantify this
difference, and speakers again tend to exaggerate, as for example the Pennsylvania Mennonite who said, “In Ohio it’s a joke. All that’s left is the syntax; the words are English.” Clear counterexamples can also be found such as the common use in Lancaster, Pennsylvania of English ‘let’s’ in place of the native [vələ] as seen in a phrase from an oral translation task below.

(11) let's blairvə do mit si (73-yr-old Old Order Amish male, in Lancaster County, Pennsylvania)
    ‘Let’s stay with her’

(12) vələ do blairvə mit es (33 year old, New Order Amish female, Holmes County, Ohio)

Midwestern speakers in the same oral translation task use almost without exception native [vələ]. The examples in (11) and (12) also illustrate variation in word order ([blairvə do] v. [do blairvə]), semantics of prepositions (selection of [mit] v. [bar]) dative case marking ([mit si] v. [mit i]], and grammatical gender ([si] v. [es]). Only the last of these is regionally marked. The other changes are all examples of the influence of English on all varieties of Deitsch, sometimes working in concert with changes internal to the language.

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148 For discussions of changes in word order and semantics see Louden 1997, Costello 1997, and Fuller 1997.
9.2 An emergent marker of a local variety? Non-feminine morphological marking of human female referents in Holmes County, Ohio

The use of non-feminine morphology when referring to a woman or girl, as in the use of the third person neuter pronoun [es] for ‘her’ in example (12) above, is an innovation in Holmes County, Ohio. These structures were briefly noted in section 2.3.2 as part of Van Ness’ (1995) groundbreaking research, and example (13) below is a repeat of example (1) from that section.

(13) non-feminine possessive for feminine possessor: Mei Schwester sei haus
POSS/1sg. sister POSS/3sg.m/n. house
‘My sister’s house’

(14) canonical fem. form for feminine possessor: Linda ihre haus
Linda POSS/3.sg.f. house
‘Linda’s house’

Van Ness sees the construction in (13) as resulting from young speakers’ early acquisition of English (with its two-class system of natural gender). These young speakers try to resolve the mismatch between the gender systems of Deitsch and English by adopting a two-class system and selecting the “most personal category” to mark it: es meedel ‘the girl’ which happens to be neuter (1995:77). The neuter is then extended to other lexical items with natural feminine gender. This generalized (masculine/neuter) possessor may become increasingly more grammaticalized yielding, as it has in Afrikaans, a fixed marker of possession, se, which may, if encliticized, eventually become completely congruent with the English form –’s.
Given that the social conditions in most Amish communities, as in Holmes County, favor early acquisition of English—many if not most children develop some fluency in English even before attending school—we might wonder if similar changes are not occurring independently in other Amish settlements. Moreover, given the historic and current interconnectedness of Midwestern Amish settlements, it is necessary to explore whether this innovation has spread to other settlements in much the same way that monophthongal /au/ has. Anecdotal reports suggest that the change has some currency in Ontario among the Old Order Amish, though not among Old Order Mennonites (Burridge 1992:234), but evidence for widespread diffusion is lacking. An oral translation task involving a possessive construction like that in example (13) above yielded, in addition to the forms in (13) and (14), responses with the English possessive clitic -'s, a combination of the English and Deitsch possessive, and a null form as in the examples below.¹⁴⁹ The frequency distributions of these forms are given Table 34.

(15) English clitic: Mei Schwester-s haus
    POSS/1sg sister-POSS house
    ‘My sister’s house’

¹⁴⁹ The stimuli sentence in the Kalona 1995-96 data was #21 “Let’s go to my sister’s house.” In the Holmes County data it was #37 “I turned on the light in Linda’s house” (see appendix). These are not identical stimuli, but Van Ness’s findings suggest that personal names are only slightly more favorable to use of this construction than the lexical item Schwester ‘sister’ (1995:73). Additional data on the construction in a wider range of contexts have since been collected in Kalona in 2001, and though they have yet to be analyzed, initial subjective impressions are that they match those presented here.
(16) English & Deutsch: *Mei Schwester-s ihre haus*
    POSS/1sg sister-POSS POSS/3sg.f. house
    'My sister’s house'

(17) null possessive: *Mei Scäwester haus*
    POSS/1sg sister-Ø house
    'My sister’s house'

<table>
<thead>
<tr>
<th></th>
<th><em>ihre</em></th>
<th><em>sei</em></th>
<th>-<em>s</em></th>
<th>other(^{150})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holmes Co.</td>
<td>n = 68</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>44%</td>
<td>53%</td>
<td>3%</td>
<td>--</td>
</tr>
<tr>
<td>Kalona</td>
<td>n=53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>43%</td>
<td>9%</td>
<td>32%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Table 34. Possessive forms for female human possessors in Holmes County and Kalona

The conservative *ihre* is retained by nearly half of the speakers in each community. But Kalona speakers use a greater variety of forms for this construction, including two (the null possessive and the double-marked English and Deutsch possessive) which do not occur at all in Holmes County. Significantly, the form that is in competition with *ihre* is not the same in both communities. Among speakers who do not use the conservative

\(^{150}\) "Other" includes both the null form (with no possessive marking) and forms that are double-marked with both English and Deutsch possessives.
form, those in Holmes County overwhelmingly use the non-feminine possessive adjective *sei*, while in Kalona the English form *'-s* is used.

Change in Kalona and Holmes County is proceeding in different directions. Kalona speakers are converging directly toward an English norm, while in Holmes County speakers are utilizing the resources available in the Deitsch possessive paradigm. The overall result is that the two varieties are, at present, diverging. I say “at present” because it is plausible that the *sei* forms, as noted above, being prosodically weak, could lose their syllabic status and encliticize to the preceding noun resulting in a form identical to the English *'-s*.

This, could lead to (re-)convergence of Holmes County and Kalona usage. Too, given the interconnectedness of Amish settlements in the Midwest it is possible that this change will eventually spread to other communities. Time will tell. So far, however, it appears that the slowing of migration between major Amish settlements in the Midwest in the last decades of the 20th century (see section 7.5) is preventing this linguistic change from diffusing across the archipelago of Midwestern Amish settlements.

A look at this construction with respect to social variables in Holmes County reveals one remarkable finding: among Holmes County Old Order Amish the use of *sei* is almost categorical (91%, total n=22). Clearly Van Ness’ observations among New Order Amish were just the tip of the iceberg. This change is taking hold much more rapidly across all

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151 A process similar to this was involved in the development of the Modern English possessive clitic (see Janda 1979).
age groups among the Old Order Amish than any of the other religious communities in Holmes County. A comparison with the Kalona Old Order Amish, where use of sei is only 15% (total n=33), accentuates this construction as a point of divergence between these two Midwestern Deitsch varieties. And the difference is just beginning to draw commentary, as an Iowa speaker questioned in 2001 noted that she wouldn’t use such a construction, but that Ohio speakers do.

Consideration of data from Pennsylvania reveals that the non-feminine constructions do not occur at all among Lancaster County Amish and Mennonites, and only rarely (I have found three tokens) does it appear in the speech of Mennonites in the eastern counties of Montgomery and Bucks.\footnote{Data were collected in the Pennsylvania 2000 oral translation task which tested the occurrence of non-feminine marking in a variety of sentence contexts (see appendix).}

9.3 Speaker perceptions of dialect differences: caricatures and maps

In the previous section and in section 8.12 I have documented two recent innovations (non-feminine morphology for female referents and phonemic (near) merger of /ar/ and /c:/) in the Deitsch of subsets of Holmes County speakers. These changes may serve as a starting point for dialect divergence within the Midwest, but in the minds of native speakers they are not yet prominent markers of dialect differences.

The dialect features which already differentiate the Midwest from Pennsylvania, on the other hand, have been institutionalized to the point of caricature. Among speakers from
both Ohio and Iowa, the salience of a Pennsylvania dialect has inspired a stock phrase to illustrate the phonetic difference in the production of intervocalic /hl/: Ich hap mei Ohre verfrore am fahre, “I froze my ears driving.” Another stock phrase illustrates the Pennsylvania vs. Midwest differences for the diphthong /au/: Drei veisi Weibsleit, “Three white women.” The compact form of these illustrative phrases, and the manner in which they may be called upon to make jest of dialect differences is reminiscent of similar stock phrases in American English such as the ‘Pahk ya cah in Hahvad Yahd’ caricature of the Boston dialect.

Too, when Midwesterners were asked to indicate different Deitsch dialect regions on maps, Pennsylvania along with the “Swiss” Amish communities in Indiana was the most often identified.153 These maps were drawn as part of a survey on perceptual dialectology in the year 2000 (see the appendix for a sample of the questionnaire).

The maps respondents drew varied widely, or at least much more than has been reported in previous studies of American dialectology (Preston 1989). One reason for this may be the layout of the map itself. The map was designed to reflect the fact that Deitsch is spoken in scores of speech islands concentrated in the Middle Atlantic and Midwestern states. Speech islands are, by definition, geographically and often socially non-contiguous. It is not the case then that between any two communities identified as

153 For speakers in both Iowa and Ohio, the distinctiveness of the so-called “Swiss” dialect of Adams, Allen Counties in Indiana is apparent. As noted in section 2.3 footnote 17, the Swiss dialects are not a branch in the Deitsch family tree and will not be considered further. However, Daviess County, Indiana and Hicksville, Ohio are two Deitsch-speaking communities where the influence of Alemannic dialects has been considerable. These settlements require further study.

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different there lies a transition zone in which respondents may “draw lines” at different places. The area between any two Deitsch speaking communities often contains no Deitsch speakers at all. So identifying perceived dialect distinctions in Deitsch means identifying specific communities. For this reason, the map has marked on it in addition to state labels, thirty-three specific communities in which Deitsch is spoken. These include seven counties in the cradle of the Deitsch language in southeast Pennsylvania, ten of the largest Amish communities in North America, plus a dozen additional Amish communities as “filler”. Respondents thus had many specific options to choose from, and the placement of their circles varied a great deal. Some maps (9 out of a total 68 responses) were returned unmarked with respondents claiming ignorance. A typical map is hard to find. Still, some generalizations can be made.

In the following composite maps different types of lines are used to indicate the degree of agreement on whether the Deitsch spoken in a given community or group of communities is different from that of the respondents’ home community. A thin dashed line indicates 2 respondents made this distinction, a thin line indicates 3-4 did so, a thick dashed line 5-6, and a thick line 7 or more. Distinctions made by only 1 speaker are not noted (except for the subdivisions in southeast PA for Iowa respondents). There were thirty-six responses from Ohio speakers and twenty-three from Iowa speakers.
Figure 32. Map of Ohio responses to perceptions of Deitsch dialects (n=36)
Figure 33. Map of Iowa responses to perceptions of Deitsch dialects (n=23)
Ohio respondents drew maps that differed in several respects from Iowans. First, the northern Indiana communities of Elkhart/Lagrange Counties form a distinct dialect region, which is not the case in the Iowa maps. Second, within Ohio, speakers clearly differentiate Geauga and Madison Counties from Wayne/Holmes. Iowans either ignore these differences or lump them all together. Thirdly, various groupings of Ontario communities are noted as different by six Ohioans. Finally, Ohio respondents had virtually no indications about Iowa, while a few of the Iowa respondents disagreed with each other over whether the Amish communities in the state form a unified region or not.

Region marked as speaking Deitsch "different than I do"

<table>
<thead>
<tr>
<th>Home of respondent</th>
<th>Pennsylvania</th>
<th>Both Pennsylvania AND Indiana “Swiss”</th>
<th>Pennsylvania AND Indiana “Swiss” AND other region(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iowa (n=23)</td>
<td>83%</td>
<td>74%</td>
<td>48%</td>
</tr>
<tr>
<td>Ohio (n=36)</td>
<td>78%</td>
<td>53%</td>
<td>31%</td>
</tr>
</tbody>
</table>

Table 35. Percentage of Midwestern respondents marking major Deitsch-speaking regions as “different”
Iowans and Ohioans agree on the distinctiveness of Pennsylvania and the "Swiss" Amish (see Table 35). Over three-quarters of the respondents in both settlements at least identified Pennsylvania, and many of these also included the Indiana "Schweizer" Amish as a second distinctive dialect region. Over a third identified some other region in addition to Pennsylvania and the "Schweizer" settlements. The most easily identifiable feature on these maps is Lancaster County, Pennsylvania. Speakers in the Midwest consistently identify Lancaster either individually or as part of a group of Pennsylvania communities which forms a different dialect region.

Belleville in central Pennsylvania forms a nearby division not as distinct as that of Lancaster. For every person who specifically identifies Lancaster alone as distinct, there is one who groups Lancaster together with either Belleville or all of southeastern Pennsylvania or all of Pennsylvania (including the northwestern community of Crawford County—an overgeneralization since this settlement is founded by Amish from Geauga County, Ohio).

Taken together then, these maps offer clear evidence for the perception in the Midwest of a significant difference between Midwestern Deitsch and Pennsylvania Deitsch. It appears that an Amish person from Iowa was speaking for all Midwesterners when he said to a visitor, "For me, the end of the world stops at the end of the Ohio border" (Sievick 1995). Pennsylvania speakers, for their part, see the Deitsch speaking world beyond their border as an undivided whole. As one Lancaster Amish speaker said of the Midwest: "It's all the same."
9.4 Heterogeneity in local varieties of Deitsch

I have mustered considerable evidence for the production and perception of a homogeneous variety of Deitsch in Midwestern Amish speech islands. However, variation does exist between individuals and groups at the level of the local community. Moreover, speakers notice this variability, though not surprisingly they assign it little social significance. For example, within the Kalona, Iowa settlement several speakers noted variation in the vowels of a small set of words [paːfiŋ] v. [paɛfiŋ] ‘peach’, [kaːʃə] v. [kæʃə] ‘cherries’, [faːts] v. [faːts] ‘apron’. These variants, it was hypothesized, might be distributed along family lines. Equally significant is the variation that speakers do not comment on. In Kalona, the high frequency lexical and auxiliary verb [du] ‘to do’ varies between [dun(ə)] and [din(ə)] in the present tense forms for first, second, and third person plural. The variation does not appear to have a consistent pattern across generations or geography within the community, and it escapes any overt commentary.

Native speakers’ indifference to heterogeneity in local varieties has been noted in other studies of speech islands. In East Sutherland Gaelic differences exist at every level of the language between speakers located even in the same dense tight-knit social networks (Dorian 1994). The differences are salient to the speakers, but devoid of linguistic or social significance. A study of a Danish dialect island notes the existence of speakers whose production is exceptional, yet who are still perceived as valid “locals” socially and

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154 The presence of intracommunity variation between families was a comment heard in every community in which I did fieldwork, though when further pressed, speakers were rarely able to offer concrete examples.
linguistically (Lane 1998:258). Lane’s citation of Sturtevant’s definition of a dialect bears repeating here:

a dialect is a body of speech which does not contain within itself any differences that are commonly perceived as such by its users. The unity of a dialect is a unity, not of sounds produced, but of sounds perceived; it is subjective rather than objective. The only sure way, then, to determine whether or not two men use the same dialect is to appeal to the men themselves and to their neighbors. It follows that a dialect is a concrete fact. Each utterance of each speaker of the dialect is, as far as it goes, identical with the dialect itself; for by the definition the various utterances of the several speakers are not perceptibly different. (Sturtevant 1917:146-47)

9.5 Summary

This chapter has reviewed the linguistic features which contribute to the production and perception of dialect divergence between Amish in the Midwest and Amish in Pennsylvania. The features are not many—the retention of non-approximant /r/, the retention of non-velarized /l/, a few native and borrowed lexical differences, and of course the monophthongization of /æt/ explored in depth in chapter 8—but they occur with sufficient frequency to serve as shibboleths marking, in the minds of speakers, the most important dialect division in Deitsch today: that of the Midwestern Amish v. Pennsylvania Amish.

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CHAPTER 10

THE EMERGENCE AND MAINTENANCE OF A MIDWESTERN DIALECT OF DEITSCH

Having demonstrated the psychological reality of Midwestern Deitsch in the minds of its speakers, we now return to the focus of this study: fashioning an account for the spread of a sound change (the monophthongization of /au/) across the widely-separated Amish speech islands of Holmes County, Ohio and Kalona, Iowa. First I will consider and reject accounts based on (immigrant continental German) dialect contact and language contact. Then I will review the combined findings of this study which suggest that the monophthongization of /au/ to [ɛ:] is a cross-linguistically common sound change whose spread across geographically distant Amish speech islands in the Midwest has been aided by intense cross-migration patterns, especially in the 19th and early 20th centuries, thus linking the settlements together in a kind of speech archipelago. I conclude the dissertation with a discussion of Amish regional identity and directions for future research.

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10.1 External accounts: dialect contact or language contact

Dialects often differ in the phonetic details of a common phonemic inventory. When this is the case and speakers of the dialects are in contact with each other, it is possible that a particular dialectal variant will come to mark a particular sociolinguistic identity in a community and thus serve as a basis for change. Labov’s study of variation in production of the American English diphthong /au/ in Martha’s Vineyard is a classic example.

There is some evidence to suggest that dialect borrowing/variation, at least at the lexical level, is already present in Deitsch. The list of eight words in Table 36 are entered in Stine’s 1990 dictionary as doublets having both /au/ and /ɛː/ as possible pronunciations.

| STINE listing | definition(s)            | Modern German cognate |  |
|---------------|--------------------------|-----------------------|  |
| farə / fɛːrə | to separate             | scheiden              |  |
| hailing / heːling | cave (hollow)         | Höhl-ung               |  |
| lard / leːd   | suffering (sorrow, mourning) | Leid               |  |
| laːft / leːft | molding, slat          | Leiste                |  |
| maiglix / meːxlix | probably              | möglich               |  |
| rais / reːs   | journey                 | Reise                 |  |
| jvai / jveːɡə | sister in law (brother in law) | Schwägerin (Schwager) |  |
| saine / seːnə | sift (strain)           | sehnen                |  |

Table 36. Doublet entries in Deitsch dictionary with /au/ and /ɛː/ alternates
All of the words in the above table reflect Middle High German (MHG) vowels /eɪ/ and /ɛ/ which yield /ɛ:/. This then is not an example of the precise kind of dialect borrowing that we are looking for to describe the variation in /aɪ/\(^{155}\), but it is evidence of dialect borrowing contributing to variation in Deitsch.

In order to explore the possibility that dialect contact within Deitsch might account for the current change in the vowel system, we must trace the development of Deitsch /aɪ/ back to its MHG origins. Then we must examine the reflexes of these MHG vowels in the source dialects. It may be that several different reflexes of MHG vowels—reflecting the varied source dialect inputs to Deitsch—have continued to co-exist in Deitsch and thus have provided a model or target for the change of /aɪ/ to /æ:/ or /ɛ:/ or something else. The basis for such a model could simply be phonetic differences in production of the phoneme represented by /aɪ/.

10.1.1 Dialect contact: development of Deitsch /aɪ/ word class from Middle High German and corresponding reflexes in Deitsch source dialects.

The source dialects selected for comparison with Deitsch in this study are: the Palatine dialect (Pfälzisch) which is generally considered the most influential dialect in the genesis of Deitsch\(^\text{156}\), and two other dialects whose speakers are fairly well-represented among the early Anabaptist settlers in Pennsylvania and eventually Holmes County: Alsatian and Swiss, i.e. Low and High Alemannic.

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\(^{155}\) The type of doublet that would be of most interest here is one involving MHG /i/ having reflexes of both /aɪ/ and /ɛ/.  
\(^{156}\) See sections 5.2 and 5.3 and also, e.g., Raith 1992, Reed 1972, Van Ness (1994:421).
Middle High German (approximately 13th century) provides the starting point for the
development of these modern German dialects. Since the formative period for Deitsch
was approximately five hundred years later in colonial America (1683-1776), the relevant
changes from MHG are those which took place up through the mid-18th century.¹⁵⁷ In
most of the source dialects, the phonemic distinctions during this time period are fairly
well understood, and have not changed considerably since that time period. Of course,
the same cannot be said for the phonetic details¹⁵⁸, but we must make do with the
imperfect and partial data that we have.

As noted in section 8.3 above, the Deitsch /au/ word-class comes primarily from
diphthongization of the MHG long, high vowels /iu/ and /yu/. This change reflects similar
changes in the Palatinate dialects. In the Alemannic dialects these MHG vowels remain
monophthongs. The developments of MHG vowels in the source dialects and Deitsch are
summarized in Figure 34 below.

¹⁵⁷ German immigration to America resumed in the 19th century and a number of Amish and Mennonites
came to America during that time. It is generally assumed that these later arrivals had little or no impact on
the structure of Deitsch. This may, in fact, be true for larger, older communities such as Holmes County.
But in some of the smaller, newer communities, (e.g. Alsatians in Fulton County, NW Ohio and certainly
the Swiss in Adams County, IN, see Thompson 1994) it may be that 19th century arrivals did leave some
mark on the language, since they would have made up a sizeable minority or even majority in these
settlements. The question of the impact of 19th century immigration is not addressed here.
¹⁵⁸ Russ (1982, 162) notes that the quality of the diphthong /au/ can vary in current dialects from [ae] to [ei]
and [ei].
<table>
<thead>
<tr>
<th>Middle High German</th>
<th>/iː/ (includes merged /yː/)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alsatian</td>
<td>/iː/, also /eːj/ in hiatus</td>
</tr>
<tr>
<td>Swiss: Berne</td>
<td>/iː/ and /yː/ (no merger); also /eː/ in hiatus</td>
</tr>
<tr>
<td>Deitsch and Palatinate</td>
<td>/aː/ (and /eː/ in Midwest Deitsch); also /oː/ in hiatus</td>
</tr>
</tbody>
</table>

Figure 34. Development of MHG vowel /iː/ in non-Palatinate dialects and Deitsch\textsuperscript{159}

Both Alsatian and Bernese Swiss retain the MHG monophthong, /iː/, and there is no direct model for Midwestern Deitsch [æː] in either Alsatian or Bernese Swiss. Also, the range of variation within Midwestern Deitsch includes monophthongal [æː] as well as diphthongal [aː] and [eː], but no speakers produce [iː]. Finally, although the Alemannic dialects both have diphthongal variants in hiatus position (defined by Keller as preceding a pause or a glide), this is precisely the position where Deitsch also has undergone a different sound change the outcome of which (/oː/) does not figure into the discussion of /aː/. Lacking any further details of the phonetics of 18\textsuperscript{th} century Alemannic and Deitsch, it appears unlikely that Alsatian or Swiss dialectal influence has played a role in this change.

10.1.2 Contact with English

Holmes County Deitsch speakers are in increasingly intense contact with English speakers some of whom speak a midland variety of American English in which the

\textsuperscript{159} The data on Alsatian and Bernese Swiss are taken from Keller 1961:125 and 92 respectively.
diphthong /aɪ/ is often monophthongized to [ə], e.g., ‘side’ pronounced as /sæd/. However, the sound change in these English varieties does not usually occur before voiceless consonants, a conditioning factor which does not play a role in the Deitsch sound change (Thomas 2001:37, see also section 8.10.3). Furthermore, speakers in Kalona, Iowa are in contact with speakers of varieties of American English who retain the diphthong. Finally, Deitsch speakers overwhelmingly produce English words with diphthongal [əɪ] (see section 8.10.1), so contact with English, can be safely ruled out as a catalyst for monophthongization in Deitsch.

10.2 The role of internal factors

I have suggested that internal constraints which refer to universal properties of linguistic structure are of necessity general in their formulation and of limited help in accounting for the remarkable parallels in the spread of a sound change in Kalona, Iowa and Holmes County, Ohio. An account for the monophthongization of /aɪ/ based on structural symmetry has already been discussed and rejected as epiphenomenal (see section 3.1.1). Still, some cross-linguistically robust tendencies in vowel changes which may have some basis in the physiology of the human articulatory apparatus might provide a phonetically “natural” point of origin for the sound change.

The sound change [əɪ] to [ɛː] can be conceived as consisting of two steps. First an upgliding diphthong with a low nucleus is fronted and monophthongized. Second, the resulting long, low monophthong is raised. These two processes are cross-linguistically common (see Table 37).
<table>
<thead>
<tr>
<th>language</th>
<th>example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin</td>
<td><em>caelum</em> ‘sky’ ([kailum]) &gt; Vulgar Latin /kəlɔ/</td>
</tr>
<tr>
<td>French</td>
<td>Latin <em>lacte</em> ‘milk’ &gt; [lait] (10th century) &gt; [leɪ] (11th century)</td>
</tr>
<tr>
<td></td>
<td>(see also Spanish <em>leche</em>)</td>
</tr>
<tr>
<td>Sanskrit</td>
<td>pre-Sanskrit *ai &gt; e:</td>
</tr>
<tr>
<td>Slavic</td>
<td>pre-Slavic *ay &gt; later Slavic ě (thought to be phonetically [æː])</td>
</tr>
<tr>
<td>Old Japanese</td>
<td>pre-Old Japanese *Cai &gt; Ce(y)</td>
</tr>
<tr>
<td>dialectal Japanese</td>
<td>Tokyo vernacular: <em>zya naï &gt; zya ne(e)</em> ‘is not’</td>
</tr>
<tr>
<td></td>
<td>Nagano region: <em>hai &gt; hee</em> ‘ash’</td>
</tr>
<tr>
<td>Old English</td>
<td>proto-Germanic *ai &gt; ǣ (e.g., <em>stainaz &gt; stān</em> ‘stone’)</td>
</tr>
<tr>
<td>dialectal Am. Eng.</td>
<td>/au/ &gt; [aː]</td>
</tr>
</tbody>
</table>

Table 37. Cross-linguistic examples of monophthongization of /au/  

Though in current southern varieties of American English the change of /au/ to [aː] is nearly identical to the monophthongization in proto-Germanic that yielded /au/ in Old English, there is clearly no justification in positing these two instances of monophthongization as part of the “drift” of English.\(^{160}\) This sound change is simply common in the world’s languages. Although there is no evidence yet to suggest that there is a chain shift underway in Deitsch, the change in question is compatible with Labov’s Principle I of vowel shifting: long (tense) vowels rise (1994:116, 176, 262).

\(^{160}\) In addition, both the Middle High German vowel shift and the Great Vowel Shift in Early Modern English involved the fronting and/or raising of long vowels (Labov 1994:124, 145).
This strong cross-linguistic tendency may have its basis in human physiology, specifically articulatory overshoot—the longer the duration of an articulation the more likely the speaker is to exceed the target, in this case further raising the tongue and thus raising the vowel (Labov 1994:221, 261 which follows after Sievers 1850).

Supporting evidence for the phonetic naturalness of this sound change can also be found in studies of vowel coalescence. Cross-linguistic patterns of coalescence, the resolution of two adjacent vowels into a single vowel containing properties of both input vowels, demonstrate that sequences of low vowel + high front vowel (often across morpheme boundaries) are reflected in surface forms by the lowest front vowel in the language’s inventory (Parkinson 1996:93-95). In Deitsch this lowest front vowel could be either [æ] (a phoneme found primarily in English borrowings) or [ɛ]. These two vowels are the most frequently occurring monophthongal variants of /at/ in Deitsch.

These data suggest that the monophthongization (and subsequent raising) of /at/ is cross-linguistically common and perhaps also, in some sense, phonetically natural since mid front [ɛ] can be seen as a sort of articulatory compromise between the low nucleus /a/ and the high front off-glide /t/. Even so, the role of purely phonetic factors is limited to only the point of origin of a sound change in the “Big Bang” theory of sound change that we have adopted. Thereafter, external, social factors play central roles in the spread of the sound change. Moreover this sound change is not occurring in all Deitsch speech islands. The diphthongal variant is vibrant in Ontario (Kate Burridge, p.c.) as well as in the cradle of the Deitsch language, Lancaster, Pennsylvania (Louden 1997). The apparent limits of
universal phonetic explanation lead us to search for clues to its and spread in the settlement histories and interactions of these communities.

10.3 The role of social factors

Crucial to an understanding of Amish speech islands in North America is that they are not all equally isolated. Discontinuities in migration and communication networks separate Lancaster County and its daughter settlements in Pennsylvania from the Midwestern settlements. These discontinuities, in place now for nearly two hundred years, have produced the most salient regional dialect division in Deitsch today. In contrast to this, Amish in the Midwestern settlements—despite being more numerous and geographically far-flung—have maintained significant patterns of inter-settlement interaction from the time they first established communities in Ohio and Iowa in the early 19th century up through the 20th century.

Macro-level study of the settlement histories of most major Midwestern Amish settlements (chapter 6) show them to be alike in that early arrivals hailed from the frontier community of Somerset County in central Pennsylvania and, as time went on, also from other settlements across the Midwest. In Kalona, Iowa half of the individuals arriving in the first fifteen years of the settlement’s existence had previously lived in at least one other Amish settlement in Ohio or Indiana. During the same time period 20% of the families in Kalona moved on to other settlements. The remarkable mobility of Midwestern Amish families in the 19th century and early 20th centuries is exemplified by the individual stories of families such as the Wertz’s, the Keim’s, and the Troyer’s (see
section 6.3). These frequent movements were the “strawberry runners” that established living, enduring ties of kinship, friendship, and church relationships between Amish settlements from Ohio to Kansas.

Frequent migration may have been typical of 19th century settlers in the Midwest in general. For the Amish, however, the exceptional freedom of movement between both established and new settlements confirms that migration is part of their “repertoire of community...essential to what it means to be Amish” (Reschly 2000:182). This continues to be true today. As the number of Amish and the number of new settlements grows exponentially, the cross-migrations directly linking the older settlements (e.g., Holmes County, Ohio and Kalona, Iowa) have become relatively few, but the indirect links through the Indiana settlements and the newer settlements in Missouri and Wisconsin are thriving (see chapter 7). As a natural consequence, travel by Midwestern Amish families and individuals to other communities is, except for rare instances, limited to the Midwest.

The sum of all this evidence is that Amish speech islands in the American Midwest are not as isolated from each other as geographic distance and lack of ready access to transportation and communication technologies would suggest. Rather they form a loose and growing affiliation of communities connected to each other like chain of islands—a speech archipelago.
The speaker-to-speaker interactions across this archipelago have allowed for the common
diffusion of the sound change /æɪ/ to [ɛː], one of the primary features distinguishing the
Midwestern dialect of Deitsch from that of Pennsylvania. Both apparent time evidence
and real time evidence indicate that the spread of the sound change occurred during the
lifetimes of the oldest living speakers. Monophthongal /æɪ/ has an age-distributed
pattern: speakers over the age of 75 retain diphthongal /æɪ/ while speakers under the age
of 50 are robust users of the monophthongal variant (see section 8.10.4). Descriptions of
Deitsch in the Midwest from the early 20th century indicate that the diphthongal variant
was normative at that time (see section 8.4). Thus the spread of monophthongal variants
across the Midwest—made possible by over a century of cross-migration between
settlements and by the continuing interactions along the resultant family and church
networks spread across the archipelago—must have begun in the early 1900s and
reached completion around 1960, just prior to the rapid expansion in the number of
Amish settlements in the last decades of the 20th century.

Interactions between Amish speakers across Midwestern speech islands have also
supported the maintenance of several other features that distinguish Midwestern Deitsch
from the Pennsylvania variety (see section 9.1). Whether current and future innovations
in Midwestern Deitsch (e.g., see sections 8.12 and 9.2) will also spread across all of the
Midwestern speech archipelago is dependent upon the vitality of speaker interactions
within and between the scores of new, secondary settlements which indirectly link
speakers remaining in the old, well-established settlements such as Kalona and Holmes
County.
10.4 Midwestern Deitsch and Amish regional identity

The emergence of a regional dialect of Deitsch across Midwestern Amish communities solidifies for these Amish a social identity that is distinctively American Midwestern. Monophthongal /a/ indexes a speaker as “from around here”—even if around here stretches from Ohio to Kansas—and as a potential fellow church member if not family member or friend.

Not only does Midwestern Deitsch index some degree of social relatedness, it also is correlated with a slower-paced, more casual attitude towards life. A respected sociological account of Amish culture states that the Lancaster Amish, “it is recognized, are more aggressive and work with greater rigor than Midwestern Amish” (Hostetler 1992:102).161 This perception of the vigorous Pennsylvania Amish is alive and well among the Amish in the Midwest. One Holmes County Amish businessman said, “Pennsylvania Amish are more aggressive in business. When they decide to do something they really get into it, the whole nine yards.” Another added, “Out here [in the Midwest] we’re more laid back.”162 The image of the aggressive Easterner and the laidback Midwesterner is of course, an enduring stereotype in American culture.

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161 Hostetler notes as an example that horses of the Lancaster Amish are better bred and trained. He suggests that this may be due to small farms needing to be highly productive and leading to, among other things, laxer rules on farm innovations.
162 p.c., 3.15.00. The speaker also noted of Lancaster Amish in the Amish vacation spot of Sarasota, Florida “they’re out in the street more...like they own the place.” It was suggested that the reason for this attitude might be that the Pennsylvania Amish are more wealthy.
So the Amish settlements outside of Pennsylvania, stretching from the western foothills of the Appalachians to the Great Plains share a common linguistic and cultural identity apart from their eastern brethren and schwestern. In many ways this is similar to the American sensibility of “Midwest” vs. “east coast” culture—which also has its linguistic reflexes in, e.g., lexical items such as *soda* (East) v. *pop* (Midwest) and phonetic variation such as *carrot* pronounced as /kærət/ (East) v. /kærət/ (Midwest).

The linguistic features that differentiate the Midwest from the East are a relatively small number of lexical and phonetic contrasts which nonetheless carry significant weight as social evaluation criteria. This, too, is true of both English and Deitsch. There are other differences in cultural practice and beliefs that tie together midwestern Amish with their English neighbors such as the shared perception of “laidback” Midwesterners and “aggressive” Easterners.

Thus, the emergence of Midwestern Deitsch is tied into the geography, patterns of settlement and patterns of intraregional communication that have shaped the regional identity of the Midwest as a whole.

10.5 Implications: keeping the speaker central and the prospect of measuring contact

In the previous sections of this chapter I have synthesized various linguistic and sociohistorical findings to fashion an account for the emergence of a homogeneous Midwestern variety of Deitsch (in opposition to Pennsylvania varieties) across widely separated speech islands. In so doing I have responded to one of the basic questions of
this study: “how does linguistic change spread between distant speech communities?”
The answer is “through speaker contact”—an answer that should surprise no one except,
perhaps, proponents of accounts based on “drift” (see section 3.1.2).

Contact between speakers is central to all theories of language change whether internal to
a speech community (e.g., Milroy and Milroy 1985, Labov 2001) or between speech
communities (e.g., Weinreich 1953, Chambers 1995). But small, geographically isolated
speech islands provide unique challenges to well-known explanations such as the wave
model, the gravity model, and network theory with their respective assumptions of
contiguity, size, and strictly local, frequent interactions (see sections 3.2.2, 3.2.4, and
3.2.6). In tackling these challenges, I have adopted an approach that keeps actual
speakers and their patterns of interaction (and not abstract linguistic or social structures),
at the center of language change (Joseph 1992). This focus on real speaker contact has
led me to combine detailed reconstructions of settlement histories with personal accounts
of migration, travel, and perceptions of other language varieties and their speakers in
order to better understand how geographic isolation both inhibits and is neutralized by
social contact.

Amish speech islands are by almost every measure, profoundly isolated. Consider
Wolfram’s list of sociohistorical circumstances contributing to isolated speech
communities (repeated here from section 3.2.3): geographic remoteness, small
population, economic autonomy, passage of time, historical continuity of the population,
relatively little in-migration, social subordination to a dominant regional or national
variety, strong positive group identity, and a strong focus on local linguistic norms. Midwestern Amish settlements fulfill all of these criteria but one: lack of in-migration. Far from being a stereotypically static rural society, the Amish have been moving back and forth between settlements—and establishing new ones—for nearly two centuries, carrying a pioneer mentality and a common dialect into the 21st century.

There is another question, or rather set of questions, raised in the course of this study, the solution to which has been rather more elusive, namely, “what is the minimum level of contact necessary to allow for the diffusion of linguistic change between speech communities?” and conversely, “at what point does isolation necessarily bring about linguistic divergence?” The form of these questions suggests an answer in the form of a specific quantity: $X$ amount of contact allows for linguistic change of type $Y$ to diffuse between two speech communities. But the search for absolute values to insert into such an equation of contact runs into some knotty problems.

One problem is identifying a meaningful metric for “amount of contact.” In this study I have employed some macro-measures such as amount of immigration and amount of travel (see sections 3.2.5 and 6.3 and chapter 7). But imagine what an equation using these measures might look like: If 20% of the members of speech island A have immigrated from speech island B, and/or 30% of the members of A spend at least one week per year visiting B or hosting visitors from B, then regular sound changes can diffuse between A and B—but only barely. Such imagined formulations serve only to highlight the fact that these macro-measures do not give us insight into the nature of
actual interactions between speakers. Even if they did, the internal complexity of these interactions, including, e.g., the saliency and learnability of linguistic innovations (Trudgill 1986), and the fluidity of individual variation in the indexing of social identity with linguistic variation across communities of practice (Eckert 2000), is not amenable to specific predictions with respect to outcomes.

Given these difficulties, we must, at least for the time being, be satisfied with tautologous formulations: a particular level of contact between speech islands is “sufficient” for the diffusion of linguistic change when we can link it to the spread of a particular linguistic change across them. But the prospect of measuring isolation and minimal speaker contact is not so dim as it might seem. What is needed are more and detailed descriptions of speaker contact in other speech island settings. As we catalog specific examples of limited but sufficient (for the spread of linguistic change) inter-island contact, some general principles may emerge which allow us to develop a typology of linguistic change in settings of minimal contact. The development of a large empirical base upon which we may build theories is time-consuming work, but there is no substitute. This study is one step toward achieving that goal.

Current fieldwork in a number of other language varieties can also further this effort: linguistic minorities in the US that continue patterns of cross-migration to and from their homeland (e.g., Puerto Rican Spanish in Lorain, Ohio (Ramos-Pelliccia, in progress), Belizean and other Caribbean and Central American varieties); also investigations in Southern Hemisphere English (Trudgill et. al. 2000, Horvath and Horvath 2001, Schreier
2001 on Tristan da Cunha); and finally dialect island studies, such as comparative investigations of African American Vernacular English in northern US cities.

10.6 Directions for future research

This dissertation has raised as many questions as it has answered and there remain a number of issues that future study in Deitsch dialectology might tackle. Some of these deal with particular aspects of the monophthongization of /ai/ such as the exploration of imminent phonemic split raised in section 8.10.3 and the morphophonemic alternations that might undo such a split. Also there is a need for more acoustic measures of the vowel change which would make possible a finer-grained, objective analyses. The explosion of new Amish settlements since 1970 makes necessary more multilocality studies such as this one and that of Horvath and Horvath (2001b) to test the possibility of dialect divergence within the Midwest (see section 9.2). Of particular interest are communities where considerable mixing of Midwestern and Pennsylvania Amish may occur such as in Aylmer, Ontario; Pinecroft, Florida; and possibly some of the Wisconsin and Kentucky settlements (see footnote 100, section 7.3). A great deal of the extensive lexical and phonetic variation in Lancaster County, Pennsylvania remains underexplored, particularly with respect to the divergence of linguistic norms between plain groups such as the Old Order Mennonites and the Amish. The establishment of Amish settlements in the southern United States raises the possibility of divergent effects of regional American English on the English and Deitsch of Amish speakers. Too, there is the intracommunity variation that has not been accounted for, such as the distribution of [dunə] ~ [dina] ‘to do’ and the possible emergence of northern raising (i.e., /at/ realized as /ait/) in Kalona.
Searching records from the 17th-19th century Palatinate might yield the earliest evidence for the emergence of a leveled dialect predecessor to Deitsch on the European continent. Finally, Amish communities might serve as a control or comparative group in a study of the role of media technologies in the spread of linguistic change.

The field of Deitsch studies is wide open for linguistic research of all kinds. It is my hope that other scholars will extend the preliminary work begun here.
APPENDIX

FIELDWORK SUMMARIES: INTERVIEW QUESTIONNAIRES, TRANSLATION TASKS, AND SAMPLE RESPONSES

Study title: Pennsylvania German Language Maintenance Study\textsuperscript{163}
Date: August 27, 1995 and December 22, 1995, September 1-7, 1996
Place: Kalona, Iowa
Manner: oral interview and twenty-one sentence translation task (see below)\textsuperscript{164}
Population: 70 individuals. 36 Old Order Amish, 2 New Order Amish, 1 Beachy Amish, 16 Conservative Mennonites, and 15 Mennonites.\textsuperscript{165}
Linguistic foci: morphological marking of dative case
Social foci: attitudes toward and usage of Deitsch and English (modeled after Trudgill and Tsavaras 1977)

\textsuperscript{163} For the results of this study and a complete description of the methods and informant pool, see Keiser 1999b.
\textsuperscript{164} A written survey only was completed by eight persons in August 1995. Six of these were later interviewed in person and completed the translation task. Two persons in the preliminary stage completed only the first ten sentences of the translation task.
\textsuperscript{165} Two of the Mennonites were Kalona natives living elsewhere at the time of the interview.
Questionnaire
Pennsylvania German Language Maintenance Study, Kalona, Iowa 1995-96
Department of Linguistics, The Ohio State University

**Personal Data**
Name:
Date of Birth:
Place of Birth:
Current Address:
Years lived in present community:
Other communities lived in and length of time:
Occupation (current and/or former):
Church:

**Language Data**
When did you learn to speak Pennsylvania German (Pennsylvania Dutch)?

When did you learn to speak English?

Is/Was Pennsylvania German (Pennsylvania Dutch) the language used in your home?  □ Yes □ No.
If "Yes" during what time period/years?

How often do you speak Pennsylvania German (Pennsylvania Dutch) now?
□ throughout the day every day
□ once every day
□ several times a week
□ once a week
□ once a month
□ only on certain occasions such as ____________________________

With whom do you speak Pennsylvania German (Pennsylvania Dutch)?

*(Name Age Relationship Occupation)*

In what situations do you speak Pennsylvania German (Pennsylvania Dutch)?

Do you ever avoid using Pennsylvania German (Pennsylvania Dutch)? □ Yes □ No
When?

Do you like to speak Pennsylvania German (Pennsylvania Dutch)?
Why or why not? □ Yes □ No

Is speaking Pennsylvania German (Pennsylvania Dutch) a good thing
to do? □ Yes □ No Why or why not?
Is it an advantage to you to be a Pennsylvania German (Pennsylvania Dutch) speaker? ☐ Yes ☑ No Why or why not?

Do/Did you want your children to learn to speak Pennsylvania German (Pennsylvania Dutch)? ☐ Yes ☑ No Why or why not?

Has being a speaker of Pennsylvania German (Pennsylvania Dutch) caused problems for you? ☐ Yes ☑ No ☐ with your parents? ☐ in school? ☐ in work? ☐ with your children? ☐ during the wars? ☐ now? ☐ with non-Mennonite or non-Amish friends? Please explain.

Are there any obvious disadvantages to being a speaker of Pennsylvania German (Pennsylvania Dutch)? ☐ Yes ☑ No Why or why not?

Do you consider yourself "Pennsylvania Dutch" or "Dutch" or "Dutchy"? ☐ Yes ☑ No

Is it necessary for someone to speak Pennsylvania German (Pennsylvania Dutch) in order to be "Dutch," "Dutchy," etc.? ☐ Yes ☑ No

Is it necessary to live or have grown up on a farm to be "Pennsylvania Dutch"? ☐ Yes ☑ No

THANK YOU! Please return to: Pennsylvania German Language Maintenance Study, attn: Steve Hartman Keiser, Department of Linguistics, The Ohio State University, 1712 Neil Avenue, Columbus, OH 43210-1298.

**English stimuli**
(potential /au/ words in italics)

1. I helped them yesterday.
2. It doesn't belong to you.
3. His daddy often gives me money.
4. The little girl throws the ball to him.
5. The teacher gave her a book.
6. I will help you fix the door.
7. Grandfather told them a story.
8. I still want to make myself a dress.*
9. It’s hard for her to walk fast.*
10. Who’s sitting beside him?
11. He gave me the man’s hat.
12. I’ll lend you my book.
13. We gave him the letter.
14. I give the wagon to the boy.*
15. The father gave the grandfather the key.*
16. To whom did you give the letter?
17. Whose letter is that?
18. Mother helped me cook supper.
19. The boy gave the mother a shoe.*
20. The girl told you a story.
21. Let’s go to my sister’s house.*

**Sample response in Deitsch**

ix hap si kofe gebe
es hett net tsu dix
sae: deedi gebe mi xelt geelt
es gle medli fmaest da balu tsu in
du tifsa hot si en bux gebe
ix tsel dix kofe di dew fikse
grosboho hot si an storu fotselt
ix vil mix nox an rok maxo
sis hat fo si fo jieg lafo
vaen is nevin in an hoko
çe hot mix da man sat hot gebe
ix folen dix mac bux
miin hen in da brif gebe
ix geb da neva tsu da bu
du dodi hot da grosboho en fisi gebe
tsu nas hofl du da brif gebe
vem sat brif is sel
maxem hot mix sapo kofe maxo
de bu hot di maxem an fu gebe
es med hot dix an jtori fotselt
vela tsu maer jvete ira has ge

* these sentences (#8, 9, 14, 15, 19, 21) are not used in the translation task for Holmes County 1998. #14 is very similar to Holmes County #38 with the only change being present tense > future I give. vs. I’ll give.
Study title: Holmes County interview data
Date: August-September 1998
Place: Holmes County, Ohio
Manner: oral interview and forty sentence translation task
Population: 72 individuals. 23 Old Order Amish, 20 New Order Amish, 20 Beachy Amish, 9 Mennonite.
Linguistic foci: morphological marking of dative case and of gender for human females, monophthongization of /at/
Social foci: background on family, work, language use and attitudes based loosely on Kalona 1995-96 survey (see above)

166 The translation task was a revision and extension of the one utilized in Kalona in 1995-96. #1-15 are from the Kalona questionnaire. #16-40 are NOT used in Kalona (although # 38 is very similar to Kalona question #14: the only difference is a change in tense: I'll give vs. I give.)

English stimuli
(potential /ət/ words in italics)
1. I helped them yesterday.
2. It doesn’t belong to you.
3. His daddy often gives me money.
4. The little girl throws the ball to him.
5. The teacher gave her a book.
6. I will help you fix the door.
7. Grandfather told them a story.
8. Who’s sitting beside him?
9. He gave me the man’s hat.
10. I’ll lend you my book.
11. To whom did you give the letter?
12. We gave him the letter.
13. Whose letter is that?
14. Mother helped me cook supper.
15. The girl told you a story.
16. Who did you obey?
17. You should obey him.
18. Did you obey her too?
19. Did you send them a letter?
20. Those are the children’s horses.
21. She got a nice letter from him.
22. Are you going with me to town?
23. Go ahead, I’ll come after you.
24. I’d rather go with them.
25. Throw it to me!
26. Lydia sent nine letters to her.
27. Have you heard from her recently?
28. Don’t worry, we’re not talking about you.
29. Today I spoke to them in Dutch about her
30. Sarah sat between them.
31. Behind you is your new friend.
32. Above me, the bird sat.
33. In front of her lay the sick dog.
34. The ice cream was in your bowl but now it’s in you.
35. I put the blame on them.
36. We didn’t get a word out of him.
37. I turned on the light in Linda’s house.
38. I’ll give the wagon to the boy.
39. Give her a little more time.
40. Give him a lot more time.

Sample Deitsch responses
ix hap si kolf gepte
es herf net tsu dix
es daedi gepte mix oft gept
es gle medli jmaest da bald tsu in
de titʃa hot si on bux gept
ix tsel dix holfɔ di de ʃiksɔ
grosdɔi hot si on ston fɔtselt
vem is nevix in an hɔkɔ
aer hot mix da man si hut gept
ix lein dix mæ: bux
tsu vee hɔft du da brif gept
mix hen in da brif gept
vem sa brif is sel
maem hot mix sa: kolfɔ maxɔ
es med hot dix an jtori fɔtselt
vev hɔft du kext
du setʃt in he:ho
hɔft du si a kext
hoft du si an brif kʃikt
sli sin di kma ira gepl
si hot an jem brif fun in grikt
gest du mit mix in di jfat
gle a mol ix
ix ded libr mut si ge
jmaest s tsu mix
s hdi hot nem brif kʃikt tsu si
hoft keft fun si katslix
we ni net miæ sin net an jwetsɔ veix dix
hæct haʃix jwetsɔ tsu si in detsʃ veix si
seca hot tsvifis si koŋt
hinix dix is de: nam faend
ovix mix hot s bɔdi koŋt
fanix si legs grank hond
s aikrum war in dae: hol aʃe na: sis in dix
ix hæb s blem of si gudu
mib hen ken vat ais in grikt
ix hæb s lixt ogodret in s linda se: haıs
ix geb s vawɔ tsu da bu
geb si an bisi me tse’t
geb in an lat me tse’t

<table>
<thead>
<tr>
<th><strong>Study title:</strong></th>
<th><strong>Pennsylvania German Language Maintenance Study:</strong> Holmes County Area 1998&lt;sup&gt;167&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date:</strong></td>
<td>October 1998</td>
</tr>
<tr>
<td><strong>Place:</strong></td>
<td>Holmes County, Ohio</td>
</tr>
<tr>
<td><strong>Manner:</strong></td>
<td>written questionnaire: personal information and twenty four questions</td>
</tr>
<tr>
<td><strong>Population:</strong></td>
<td>70 returned out of 340 mailed to Amish and Beachy Amish&lt;sup&gt;168&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Linguistic foci:</strong></td>
<td>none</td>
</tr>
<tr>
<td><strong>Social foci:</strong></td>
<td>Details of family, work, language use and attitudes based loosely on Kalona survey</td>
</tr>
</tbody>
</table>

<sup>167</sup> Some results of this study are given in Keiser 2001b.

<sup>168</sup> The questionnaire was sent to all 180 employees in the factory where I was employed during my fieldwork in August and September 1998. It was also mailed to 160 other persons listed in the 1996 Ohio (Holmes County) Amish Directory. These persons were selected quasi-randomly so as to have a sample with reasonable representation of the community with respect to factors such as age, sex, occupation, and geographic location.
Part A. Background Information.
Name (of person completing form) ____________________________________________
Address ____________________________________________ Phone ________________________
Date of Birth __/__/____ Place of Birth __________________________
Church denomination ____________________________ (please specify, e.g., Old Order Amish, New Order Amish, Beachy, Consrv. Mennonite, Mennonite, etc.)
Church (or church district) ____________________________________________________
Denomination you were born into ______________________________________________
Denomination parents born into: Mother __________________ Father __________________
Current occupation(s) _________________________________________________________
Place of employment __________________________________________________________
Denomination of employer __________________________________ If part-time, how many hr/wk? 
Previous occupations (and years) ______________________________________________
Occupation(s) of parents _______________________________________________________
Do you live on a working farm? ☐ Yes ☐ No

Part B. Language
1. How much of your conversation at home is in Pennsylvania German (PG)?
   ☐ 100% ☐ 75-99% ☐ 50-74% ☐ 25-50% ☐ 1-25% ☐ None

2. If you work or go to school, how much of your conversation there is in PG?
   ☐ 100% ☐ 75-99% ☐ 50-74% ☐ 25-50% ☐ 1-25% ☐ None

3. In which of these situations do you speak PG? Check all that apply.
   ☐ grandparents  ☐ Amish neighbors
   ☐ parents  ☐ non-Amish neighbors who can understand PG
   ☐ spouse  ☐ persons who don’t know English
   ☐ children  ☐ Amish co-workers
   ☐ grandchildren  ☐ non-Amish co-workers who can understand PG
   ☐ God (private prayer)  ☐ Amish customers
   ☐ friends socializing  ☐ non-Amish customers who can understand PG
   ☐ shopping  ☐ with Amish friends at “English” wedding
   ☐ singing in church  ☐ being introduced to Amish person at “English” wedding
   ☐ singing at home  ☐ pets/animals
   ☐ telling jokes  ☐ other ________________________________
   ☐ quarreling

4. In which of these situations do you speak English? Check all that apply.
<table>
<thead>
<tr>
<th>Item</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>grandparents</td>
<td>☐ Amish neighbors</td>
</tr>
<tr>
<td>parents</td>
<td>☐ non-Amish neighbors who can understand PG</td>
</tr>
<tr>
<td>spouse</td>
<td>☐ persons who don’t know English</td>
</tr>
<tr>
<td>children</td>
<td>☐ Amish co-workers</td>
</tr>
<tr>
<td>grandchildren</td>
<td>☐ non-Amish co-workers who can understand PG</td>
</tr>
<tr>
<td>God (private prayer)</td>
<td>☐ Amish customers</td>
</tr>
<tr>
<td>friends socializing</td>
<td>☐ non-Amish customers who can understand PG</td>
</tr>
<tr>
<td>shopping</td>
<td>☐ with Amish friends at “English” wedding</td>
</tr>
<tr>
<td>singing in church</td>
<td>☐ being introduced to Amish person at “English” wedding</td>
</tr>
<tr>
<td>singing at home</td>
<td>☐ pets/animals</td>
</tr>
<tr>
<td>telling jokes</td>
<td>☐ other  __________________________________________________________________</td>
</tr>
<tr>
<td>quarreling</td>
<td></td>
</tr>
</tbody>
</table>

5. Do you like speaking PG? Why (not)?
   ☐ Yes ☐ No

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

6. Do you ever avoid using PG? When?
   ☐ Yes ☐ No

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

7. Is it an advantage to you to be a PG speaker? Why (not)?
   ☐ Yes ☐ No

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

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8. Are there persons or groups in the Holmes County area (including yourself) who speak PG in a way that you (or people you know) consider to be “different” (or “better” or worse”)?
   ☐ Yes ☐ No
   If “yes,” who? _____________________________________________
   List specific examples of differences in pronunciation, words, sentence structure, or otherwise _____________________________________________
   _____________________________________________
   _____________________________________________
   _____________________________________________

9. Do you mix PG and English when you speak? Why (not)?
   ☐ Yes ☐ No
   _____________________________________________
   _____________________________________________
   _____________________________________________
   _____________________________________________

10. What is your reaction when other people mix PG and English in a conversation?
    _____________________________________________
    _____________________________________________
    _____________________________________________
    _____________________________________________

11. Do young people in your community want to speak PG? Explain.
    ☐ Yes ☐ No
    _____________________________________________
    _____________________________________________
    _____________________________________________
    _____________________________________________
12. If you have children, what is their language ability? (If some children differ from others, note them separately with ages.)

Pennsylvania German
☐ speak and understand very well
☐ speak well; understand very well
☐ speak limited; understand well
☐ do not speak; understand limited
☐ do not speak or understand

English
☐ speak and understand very well
☐ speak well; understand very well
☐ speak limited; understand well
☐ do not speak; understand limited
☐ do not speak or understand

13. Do/did you want your children to learn to speak PG? ☐ Yes ☐ No

Explain. How do/did you encourage or discourage this?

14. Do/did you want your children to learn to speak English? ☐ Yes ☐ No

Explain. How do/did you encourage or discourage this?

15. Do all of your children speak and understand PG as much as you’d like them to?
☐ Yes ☐ No

Explain.

16. Do all of you children speak and understand English as much as you’d like them to?
☐ Yes ☐ No

Explain.
17. What do you predict will be the primary language of your extended family 3 generations after you (i.e. great-grandchildren, great-grandnieces/nephews)? Explain your response.
☐ Pennsylvania German  ☐ English

18. In your opinion, is it necessary to speak PG in order to be Amish? ☐ Yes  ☐ No
Explain your response. Do you have reason to believe this might change in the future?

19. When you read, do you ever read material in PG? ☐ Yes  ☐ No
If “yes,” what and how often? If “no,” why not?

20. When you read, do you ever read material in Standard (High) German?
☐ Yes  ☐ No
If “yes,” what and how often? If “no,” why not?

21. When you read English, what specific books, magazines, authors, etc. do you usually read?
22. Should PG be used less or more in the following settings? Explain why you think so.

<table>
<thead>
<tr>
<th></th>
<th>less</th>
<th>same</th>
<th>more</th>
<th>explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. schools</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. church</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. your workplace</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. other (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

23. What other comments would you add on attitudes (positive or negative) people have toward PG and/or English? Comments on people’s use of PG and/or English?

_________________________________________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________

24. Would you like to receive a summary of my findings?
   ☐ Yes, sounds interesting.
   ☐ No, thank you, save your postage.

Thank you! Your participation is much appreciated!

Please return to above address by FRIDAY, OCTOBER 30.
Study title: Merger of /aɪ/ and /e/
Date: April 8, 1999
Place: Holmes County, Ohio
Manner: commutation tests (see section 8.12)
Population: 5 speakers
Linguistic foci: production and perception of near merger between /aɪ/ and /e: /
Social foci: none

Study title: Deitsch dialectology questionnaire
Date: April 22, July, September 2000
Place: Bucks Co. and Montgomery Co. Pennsylvania (15 speakers)
Lancaster Co., Pennsylvania (13 speakers)
Kalona, Iowa (4 speakers, via telephone, not recorded)
Holmes County, Ohio (5 speakers)
Kansas (1 speaker, now living in Columbus, Ohio)
Manner: oral interview with fifty item translation task169
Population: Old Order Amish, New Order Amish, Old Order Mennonite,
Conservative Mennonite, Mennonite, and Brethren.
Linguistic foci: regional lexical and morphological variants, morphological
marking of gender for human females, monophthongization of
/aɪ/
Social foci: background on family, work, language use and attitudes based
loosely on Kalona survey

169 Many items were culled from Reed and Seifert 1954. Other items were revised and expanded from
Deitsch dialect geography questionnaire: Pennsylvania and Midwest
The Ohio State University. April-September 2000.

Instructions (read to informant): “Provide the Deitsch equivalent of the following words and phrases. I’ll read in English and you respond in Deitsch.”

<table>
<thead>
<tr>
<th>English oral stimuli</th>
<th>Sample Deitsch response (31-yr-old, Old Order Amish male, Lancaster Co., PA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(potential /ai/ words are in italics)</td>
<td></td>
</tr>
<tr>
<td>1. the door(s)</td>
<td>di deň (di de:n)</td>
</tr>
<tr>
<td>2. the [lawn] mower</td>
<td>de me:</td>
</tr>
<tr>
<td>3. the garden(s)</td>
<td>di gaarden (di gaarden)</td>
</tr>
<tr>
<td>4. that’s her bucket</td>
<td>sel is iz krıl</td>
</tr>
<tr>
<td>5. the buggy(s)</td>
<td>di bəgi (bəgi:z)</td>
</tr>
<tr>
<td>6. those are Amy’s beans</td>
<td>sel sin di emi iz bonə</td>
</tr>
<tr>
<td>7. a good broom</td>
<td>an gudə bess</td>
</tr>
<tr>
<td>8. short nails</td>
<td>kadəs negl</td>
</tr>
<tr>
<td>9. a short nail.</td>
<td>an kadəs nayl</td>
</tr>
<tr>
<td>10. the lantern</td>
<td>es lixt</td>
</tr>
<tr>
<td>11. the meadow</td>
<td>di vis</td>
</tr>
<tr>
<td>12. three white sheep</td>
<td>daar wansə ʃəplin</td>
</tr>
<tr>
<td>13. I like mashed potatoes</td>
<td>ix glàx ʃtamdi ʃamər</td>
</tr>
<tr>
<td>14. ripe strawberries</td>
<td>tsəndɪki æpərə</td>
</tr>
<tr>
<td>15. the noon meal</td>
<td>s mɪndək eʃe</td>
</tr>
<tr>
<td>16. lard</td>
<td>fet</td>
</tr>
<tr>
<td>17. I like my aunt’s apple butter</td>
<td>ix glàx mər ænt iz æpləbatə</td>
</tr>
<tr>
<td>18. the squirrel</td>
<td>di ʃkwali</td>
</tr>
<tr>
<td>19. the fly(s)</td>
<td>di mɪk (mikə)</td>
</tr>
<tr>
<td>20. maybe that girl’s dress is yellow.</td>
<td>fləraxt iz sel medl iz æk gel</td>
</tr>
<tr>
<td>21. I know those dresses are yellow.</td>
<td>ix vərs es seli æk gel sin</td>
</tr>
<tr>
<td>22. bareheaded</td>
<td>blutkəpɪx</td>
</tr>
<tr>
<td>23. cemetery</td>
<td>ʃtəbəx</td>
</tr>
<tr>
<td>24. my sister and her daughters</td>
<td>mər ʃvestə æn iz med</td>
</tr>
<tr>
<td>25. brothers and sisters [siblings]</td>
<td>tʃwɪftet</td>
</tr>
<tr>
<td>26. the little child is grouchy/fussy</td>
<td>s gələ kənd iz fæst</td>
</tr>
<tr>
<td>27. a year ago</td>
<td>æn jər ʃək</td>
</tr>
<tr>
<td>28. five houses</td>
<td>fɪmə hərəs</td>
</tr>
<tr>
<td>29. people often marry in autumn</td>
<td>laut her ət in haʃf</td>
</tr>
<tr>
<td>30. sit down</td>
<td>hək anə</td>
</tr>
<tr>
<td>31. let’s stay here with her</td>
<td>lɛts blərəvə do mət si</td>
</tr>
<tr>
<td>32. the shovel(s)</td>
<td>fælˈ (fæl)</td>
</tr>
<tr>
<td>33. the cradle</td>
<td>(did not know; others gave bedli, vəg, [əkl])</td>
</tr>
<tr>
<td>34. the orchard</td>
<td>(no response; others gave de barməgədə)</td>
</tr>
<tr>
<td>35. look out! [for the cars]</td>
<td>vətʃ dɪx</td>
</tr>
<tr>
<td>36. I see nine pigs.</td>
<td>ix sən mən wʊtsə</td>
</tr>
<tr>
<td>37. Do you see their mouths?</td>
<td>smɪʃt du iz maʃə</td>
</tr>
</tbody>
</table>

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38. Mary and her husband snored.
39. they ought to sweep [the floor]
40. If I were you, I'd listen to those women.
41. whenever it starts to rain, he lies in bed.
42. we mowed my sister's lawn today.
43. I'll throw the paper to you all.
44. both of you need a new car.
45. You all can stay, if you want.
46. Linda's dog is barking at her.
47. we do all the work.
48. It's hard to walk one mile fast.
49. My horses don't bite when I speak Dutch
50. I've never heard so many questions!

Personal Information

Name

Date of birth

Address

Phone

When/how learn Deitsch?

When/how learn English?

Currently use Deitsch how often and with whom?
Many of the translation exercises in the Deitsch Dialectology Questionnaire are a revised subset of those on the questionnaire utilized by Reed and Seifert (see Reed 1949 for complete questionnaire) in their seminal study. Others have been added for this study (esp. words with /ə/ and feminine possessive constructions). Below are listed actual phrases taken from Reed and Seifert 1941. Number indicates page and question.

3.6. The kitchen is on the ground floor.
5.1. he’s lying in bed
6.5. the door(s)
8.2. he’s cutting the lawn
10.3 the vegetable garden(s)
11.2 the barn floor
14.5. the water bucket(s), 15.1. the swill bucket(s)
16.4. the buggy(s)
17.2. a new broom, new brooms
17.3. you ought to sweep [the floor every morning]
18.4. short nails, a short nail.
18.7. the lantern
20.4. the mower(s) [machine], I mow the meadow(s), I mowed the meadow(s)
20.6. the first crop of hay, the second crop of hay.
22.4. lie down! [to dog]
26.1. a white sheep, white sheep.
29.2. large potatoes, a large potato
30.2. ripe strawberries, a ripe strawberry
31.3. what do you two eat for the midday meal?
34.2. lard
36.4. apple butter
38.1. mashed potatoes
42.1. the squirrel(s)
44.8. the flies [are bad in hot weather]
45.4. he sees [a light]
47.1. in the meadow, the meadows [are green]
47.5 [he lives] on that street
48.1. a country road, the country roads [are bad]
54.2. the hair
55.1. this tooth [hurts me], the teeth
59.1. the dress(es) [woman’s]
60.4. bareheaded
60.5. barefoot
61.6. he snored
62.1. I wish they'd get up.
64.6. in the cemetery(s), [there are a lot of graves] in that cemetery
68.6. [do you see] those boys?
69.4. your daughter(s)
70.1 brothers and sisters [collective]
71.6. daughter-in-law
72.4. they want to get married, they will soon get married
76.3. look out [for the cars]! ["geb axd"]
78.1. we heard all about it.
82.2. grouchy
87.4. a year ago
92.3. five, six
96.3. [you two may go, if] you want to
98.4. [we didn’t know whether he would] ever [get back] ["sai lewes"]

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Study title: Deitsch perceptual dialectology\textsuperscript{170}

Date: July 2000
Place: Bucks Co. and Montgomery Co. Pennsylvania
Lancaster Co., Pennsylvania
Kalona, Iowa
Holmes County, Ohio
Manner: written questionnaire
Population: 68 returned of 133 mailed\textsuperscript{171}
Linguistic foci: none
Social foci: perceptions of regional and social dialect differences in Deitsch, travel patterns.

\textsuperscript{170} For a report on the findings of this study see Keiser 2001a and 2002b (forthcoming).
\textsuperscript{171} Questionnaire was mailed to a subset of interviewees and respondents from previous studies.

Part 1. A. On the map below, draw circles around areas where people speak Deitsch (Pennsylvania German) differently from you.
- If two or more communities sound like each other, include them all in the same circle.
- If differences exist within one community (for example, within Lagrange County), draw circles to subdivide it.
B. Label each area using whatever name you or others would commonly use. Labels can be in English or in Deitsch.

C. List other Deitsch dialect areas outside the area of this map:

D. Please add any comments/details:

Please return by December 18.
**Part 2.** If you have traveled to any of the areas you circled on the map in Part 1, please list them below.

<table>
<thead>
<tr>
<th>PLACE (CITY AND STATE)</th>
<th>HOW OFTEN</th>
<th>LONGEST LENGTH OF STAY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>daily</td>
<td>day or less</td>
</tr>
<tr>
<td></td>
<td>1-2 times/week</td>
<td>several days</td>
</tr>
<tr>
<td></td>
<td>1-2 times/month</td>
<td>1-2 weeks</td>
</tr>
<tr>
<td></td>
<td>1-2 times/year</td>
<td>1-2 months</td>
</tr>
<tr>
<td></td>
<td>rarely or just once</td>
<td>3 months or more</td>
</tr>
<tr>
<td></td>
<td>daily</td>
<td>day or less</td>
</tr>
<tr>
<td></td>
<td>1-2 times/week</td>
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</tr>
<tr>
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<td></td>
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<td>1-2 months</td>
</tr>
<tr>
<td></td>
<td>rarely or just once</td>
<td>3 months or more</td>
</tr>
</tbody>
</table>

**Part 3.** Name________________________ Date of Birth________________________

City________________________ State________

To receive a summary of the results of this research, check this box ☐

**THANK YOU for your time and assistance in this research! PLEASE RETURN BY DEC. 18,** or your earliest convenience.

Please do not hesitate to contact me with your questions and comments. Steve Hartman Keiser, The Ohio State University, Linguistics Dept., 1712 Neil Avenue, Columbus, OH 43210. Phone: 614-292-4052. Email: shkeiser@ling ohio-state.edu.
**Study title:** Deitsch dialectology questionnaire, Johnson County (Kalona), Iowa

**Date:** October 2-4, 2001

**Place:** Kalona, Iowa

**Manner:** oral interview with eighteen item translation task

**Population:** Old Order Amish, New Order Amish, Old Order Mennonite, Conservative Mennonite, Mennonite, and Brethren.

**Linguistic foci:** morphological marking of gender for human females, monophthongization of /a1/

**Social foci:** travel patterns
Deitsch dialect geography questionnaire: Johnson County, Iowa. October 2001
The Ohio State University

Instructions (read to informant): “Provide the Deitsch equivalent of the following words and phrases. I’ll read in English and you respond in Deitsch.”

**English oral stimuli (/a/ words in italics)**

1. I *like my aunt’s apple butter*  
   **ix gleːx meː ænt ɪrə latveːk**
2. There’s a fly on Amy’s apron.  
   **sis ən muk uf di emi ɪrə jats**
3. *Maybe that girl’s dress is yellow.*  
   **vlaɪx is sel medl ɪrə rok gel**
4. *nine houses*  
   **nɛm hæːsə**
5. People often *mARRY* in autumn  
   **let dun əft hæːrə in ʃpɔtʃæn**
6. Let’s *stay* here with her  
   **velo do blæːvə mit si**
7. *three white sheep*  
   **dreeː væːsi jof**
8. I see *five pigs.*  
   **ix sen fimf sæː**
9. Do you see *their mouths?*  
   **senʃt itə mêːht**
10. Mary and her husband *snored.*  
    **mæn ən ɪrə ˈmæn hen kʃneːkst**
11. If I were you, I’d *listen* to those women.  
    **ven ix dix vɛn dediʃ hæːks tsu seli væːblæːʃt**
12. Today we mowed *my sister’s lawn.*  
    **hæːt hɛn maː ʃvestə itə hox ɡmet**
13. It’s hard to walk *one mile fast.*  
    **sɪs hæt fu e mæːl fteŋ ˈlæʃt**
14. *My horses don’t bite* when I speak Dutch.  
    **mæː ɡil dun net bæːsə ven ix deʃf ʃwetsə**
15. Will your *new friend* *stay* overnight?  
    **tʃel dæː nəː ʃrɛnd ɪvəˈnækt b læːvə**
16. It’s *time to clean the upstairs*  
    **sɪs tʃæːɾ ʃ d.i ʃpæxə bɔtsə**
17. We will build the *barn on the mountain.*  
    **mɪə tʃeːl di jəːf of di mɔuntən bəʊn**
18. How far can you *throw* the ball?  
    **vi wɛt kænt du di bɔl ʃmæːʃə**

**Personal Information**

Name

DoB

In what other Amish communities do you have family?

How often do you visit them? how long are the visits?

Do you make other out of state visits?
BIBLIOGRAPHY


Horvath Barbara M. and Ronald Horvath. 2001a. Places that are more or less the same: comparing language change in Australia and New Zealand. ms.


Mufwene, Salikoko. 2000. Creolization is a social not a structural process 65-84 in *Degrees of restructuring in Creole languages*, I. Neumann-Holzschuh and E. Schneider eds., Amsterdam, Philadelphia: J. Benjamins


Ramos-Pelícia, Michelle. in progress. dissertation field work on Puerto Rican Spanish in Lorain, Ohio.


Reed, Carroll. 1972. A phonological history of PG. E. Firchow et. al. (eds.) *Studies for Einar Haugen*, 469-481.


