29   Language Death and Dying

WALT WOLFRAM

For as long as humans have used language to communicate, particular languages have been dying. In an important sense, obsolescence is simply part of the natural life cycle of language. At the same time, language death has taken on heightened significance in recent decades because it is occurring in epidemic proportions.[1] According to Krauss (1992), up to 90 percent of the world's estimated 6,000 languages face possible extinction in this century, including 80 percent of the languages of North America. By comparison with endangered biological species, language endangerment is astronomical; biologists estimate that less than 8 percent of all mammals and less than 3 percent of all birds are imperiled. Nonetheless there is little public concern over the state of the world's languages while concern for endangered biological species is considered an international crisis.

The proliferation of symposia, special interest groups, and publications (e.g. Dorian 1989, Hale et al. 1992, Robins and Uhlenbeck 1991, Wolfram 1997, Grenoble and Whaley 1998a) dedicated to obsolescing language varieties in the last couple of decades points to the escalating severity of language endangerment. On a theoretical level, the loss of a language variety without adequate documentation deprives language scientists of an essential database for inquiry into the general knowledge of human language; on a social level, it deprives people of one of the most integral components of diverse cultural behavior (Hale 1998). Both the theoretical and humanistic issues underscore the concern for language death here, but our focus is on describing and understanding the process of language death as a sociolinguistic phenomenon rather than the theoretical and/or practical implications of the situation.

Although the traditional treatment of language death limits this designation to whole languages typically existing in bilingual contexts, our treatment extends this focus to include obsolescing varieties of a language in monolingual contexts as well, following the argument offered in Wolfram and Schilling-Estes (1995) and Schilling-Estes and Wolfram (1999). In fact, the empirical study of dialect death in a monolingual context informs our understanding of

the linguistic process and the sociolinguistic context of language obsolescence in significant ways.

1   Types of Language Death

Campbell and Muntzel (1989) identify four primary types of language death, each of which has linguistic and sociolinguistic consequences.

1.1   Sudden language death

Sudden language death occurs when a language abruptly disappears because its speakers die or are killed. In such cases (e.g. Tasmanian; Nicoleño, a Native American Indian language in California), the transitional phase is so abrupt that there are few if any structural consequences as the language dies. It is, of course, possible for an already-dying language to suddenly become extinct, so that this type of death is not necessarily mutually exclusive with other types, but it is also possible for sudden language death to affect a monolingual group of speakers.

1.2   Radical language death

This process resembles sudden language death in terms of the abruptness of the process, but is distinguished by the shift to another language rather than the complete disappearance of the speakers of a language. In radical language death, speakers simply stop speaking the language as a matter of survival in the face of political repression and genocide. Campbell and Muntzel (1989) cite radical language death for several Native American languages in El Salvador after an Indian uprising in the 1930s. Those thought to be Indian by appearance, including language use, were rounded up and killed in wanton acts of genocide. Many speakers of indigenous languages simply abandoned their native languages to avoid recognition as Indians. In such cases of language abandonment, there are still speakers who were once productively competent in the language, so there may be linguistic consequences on speakers' use of the language after long-term non-use or covert use (Holloway 1997). For example Bereznak and Campbell (1996) note that speakers in this situation may retain good command of the phonology while losing productive use of some of the lexicon over years of non-productive language use. There are also reports of a "recovery process" as speakers may start to use the language productively again after a period of disuse (Torres 1989: 66) or even a type of recovery as native speakers consult intensively about their language with linguists (Hill 1979).

1.3   *Gradual language death*

The most common type of language death, and the one most critical for our examination of language variation here, is the case of language loss due to "the gradual shift to the dominant language in a contact situation" (Sasse 1992: 22). In such cases, there is often a continuum of language proficiency that correlates with different generations of speakers. For example, fewer younger speakers use the dying language variety and with less proficiency in more restricted contexts than their older cohorts within the community; speakers who do not have a full range of functional or structural competency in the language have often been labeled *semi-speakers* (Dorian 1977), though the label obviously covers a wide range of proficiency levels.

1.4   *Bottom-to-top language death*

The distinguishing feature of bottom-to-top language death is the way in which the situational contraction of language use takes place. In many cases, a dying language will be retained in more casual and informal contexts while it is not used in more formal settings. In the case of bottom-to-top language death, the language loss takes place in everyday conversation and casual settings while the language is retained in more formal, ritualistic contexts. This contraction follows the Latinate pattern where the language was used in formal ecclesiastical contexts long after it died in everyday conversation.

1.5   *Discussion*

A couple of qualifications should be made about Campbell and Muntzel's (1989) taxonomy of language death. First, the various types of processes are not mutually exclusive so that, for example, a language undergoing gradual language death may suddenly disappear due to changes in social and political circumstances, or going through radical language death may actually be maintained covertly while it is not used in public interaction. It should also be noted that the process of dying is often much more complex than models of death that presume a unidimensional recession continuum in terms of language form and function. For example, Schilling-Estes's (1998) study of the performance register in the moribund Ocracoke dialect spoken on the Outer Banks of North Carolina does not show a simple top-to-bottom or a bottom-to-top stylistic recession in the use of a traditional dialect icon. Instead, there is a complex array of factors that come into play, ranging from a variety of situational contexts to the proactive personal initiative of speakers in the construction of a linguistic self. Detailed analyses of obsolescing forms suggest that their decline cannot be reduced neatly to a universally predictable regression slope. In fact,

as we shall see, it cannot even be assumed that the reduction of language forms is the only path to obsolescence.

2   Causes of Language Death

The factors leading to language death are non-linguistic rather than linguistic, and may involve a wide array of variables. For example, Campbell (1994) includes the following factors responsible for language death:

> Discrimination, repression, rapid population collapse, lack of economic opportunities, on-going industrialization, rapid economic transformation, work patterns, migrant labor, communication with outside regions, resettlement, dispersion, migration, literacy, compulsory education, official language policies, military service, marriage patterns, acculturation, cultural destruction, war, slavery, famine, epidemics, religious proselytizing, resource depletion and forced changes in subsistence patterns, lack of social cohesion, lack of physical proximity among speakers, symbolism of the dominant language . . . , stigmatization, low prestige of the dying variety, absence of institutions that establish norms (schools, academics, texts), particular historical events, etc.   (Campbell 1994: 1963)

Taxonomies of the causes for language endangerment and death (e.g. Grenoble and Whaley 1998b, based on a typology of minority languages by Edwards 1992) generally include both *macro-variables* referring to broader situations external to the community and *micro-variables* relating to specific factors affecting a particular speech community. On a macro-level, for example, general economic conditions and the emergence of telecommunications technology may affect different language groups in varied situations, whereas on a micro-level, the specific local economy and particular patterns of telecommunicative access impact the everyday life of the speech community in a distinctive way.

Most inventories of language endangerment include economic, political, ideological, ecological, and cultural factors. One of the most prominent factors is economics; in fact, Grenoble and Whaley (1998b: 31) point out that "for endangered languages one must take into account the potential of economic issues to outweigh all others combined." They note that over and over again, relinquishing a native language variety is tied to the belief that success in another language is crucial for economic survival and advantage. Furthermore, economics may impact a minority community's ability to maintain its indigenous language due to the cost of published materials, schools, and minority language media.

Political factors involve asymmetrical relations of power between different ethnic and social groups. Languages representing politically subordinate groups are more likely to undergo shift than those associated with dominant groups, although there are well-known exceptions where the language of the politically

oppressed group has been retained while the language of the dominant group is lost (Fasold 1984: 217). Most notable is the shift to English by the Norman conquerors of England in the eleventh century (Kahane and Kahane 1979). Political power is also typically related to other important variables accounting for language loss, including economic advantage, cultural ethnocentrism, and ideological indoctrination.

Ideological factors include assumed belief systems and underlying values about language use and diversity. For example, one of the reasons that there is so little public concern for endangered languages in the USA is the widespread belief that language diversity only impedes communication and that world understanding would actually increase significantly if everyone spoke the same language – English. This ideology underscores the "unifying" function of a standard language (Garvin and Mathiot 1956) and justifies an attitude of monolingual ethnocentrism in the USA. In the process, it promotes general disregard for maintaining minority languages.

Ecological factors include geographical location and physical environment, as well as population demographics. The numbers and concentrations of speakers and their physical proximity to other groups are important factors in language maintenance and death (Thomason forthcoming). On a micro-level, the kinds of social networks within the community and the interactions of community members with outsiders are essential variables in the maintenance and recession of a language variety.

At the same time, cultural values have to be considered along with patterns of contact. Henning Andersen (1988) observes that it is not uncommon for communities that are becoming more open in terms of increasing contacts with the outside world to remain psychologically closed; nor is it unheard of for relatively closed communities to be psychologically open, wholeheartedly embracing the cultural and linguistic innovations they happen to encounter. Thus, Andersen urges that a distinction be drawn between *open* vs. *closed* communities and *endocentric* vs. *exocentric* ones (1988: 74–5), with the former distinction referring to levels of contact with the outside world and the latter referring to the degree to which the community is focused on its own internal norms or is more outwardly focused. Andersen maintains that community attitudes often play a far greater role in guiding the directionality of change in contact situations than levels of contact itself. Grenoble and Whaley (1998b: 24) state that "subjective attitudes of a speech community towards its own and other languages are paramount for predicting language shift" and Grinevald (1998: 142) observes that "Language loss is . . . mostly a matter of shift in language loyalty."

Both broad-based macro- and micro-variables are involved in language death, and socio-political, sociocultural, sociopsychological, and sociodemographic variables must be factored into understanding the social context of language demise. Some of these factors may take precedence over others in a particular language contact situations, but most cases of language loss are framed by an interrelated, multidimensional set of social conditions.

3   Models of Language Loss

According to Cook (1989: 235), the most consistently reported phenomena for dying languages are "(a) structural (and stylistic) simplifications and (b) dramatic increases of variability due to incongruent and idiosyncratic 'change'." In fact, in some instances, language "decay" and language loss are simply assumed to be inextricably linked (e.g. Dressler 1988). Although there is ample support for a *dissipation model* of language death (Schilling-Estes and Wolfram 1999) in which language structures and functions are reduced, it cannot simply be assumed that this is the only alternative for language loss. Thus, Swadesh (1948: 235) observes that the last speaker of Yahi, a Native American language, had "a flawless command of his own language" and Dorian (1982: 31) cites Hill's (1973) observation of Native American languages in which the last speakers "either speak fairly well or not at all."

Our own research (Schilling-Estes and Wolfram 1999) on moribund varieties of English indicates that the dissipation model is not the only path for change in obsolescing language varieties. The investigation of Smith Island English (Schilling-Estes 1997, 2000; Schilling-Estes and Wolfram 1999) in the Chesapeake Bay region of Maryland shows that, as Smith Islanders come into increasing contact with the outside world, they are *not* losing the features of their dialect that serve to distinguish their speech variety from surrounding varieties and from mainstream varieties of English. Rather, their dialect is actually becoming more rather than less distinctive – and doing so rather rapidly. Nonetheless, the Smith Island dialect is classified as a moribund language variety, since it is rapidly losing speakers as more and more islanders move off the island in search of employment in the face of the declining maritime industry. The Smith Island dialect is actually characterized by a *concentration model*, in which structural distinctiveness is intensified among a reduced number of speakers.

In figures 29.1 and 29.2 we compare the change for two dialectally distinctive diphthongs, /au/ and /ai/, for three generations of speakers in Ocracoke and Smith Island. For quite different reasons, we consider both of these language varieties to be moribund. Ocracoke is being inundated by outsiders as its economy changes from a marine-based to a tourist-based service industry; as noted above, Smith Island, a traditional fishing community, is rapidly losing its population as islanders move away from the island in search of economic opportunity. On each island, speakers may realize /ai/ in *tide* or *time* with a raised nucleus, such as [ʌˑ] or [əˑ], and /au/ with a raised and/or fronted nucleus and a fronted glide, as in [hæˑs] for *house* or [bræˑn] for *brown*. In examining three generations of speakers in these communities, we assume the apparent-time construct (Bailey et al. 1991) with respect to language change.

Figures 29.1 and 29.2 show that the patterning of these diphthongs is changing in each community in significant but different ways. Younger speakers in Ocracoke are losing the traditional raised nucleus of the /ai/ diphthong and the fronted glide of the /au/ diphthong, whereas the younger generation on
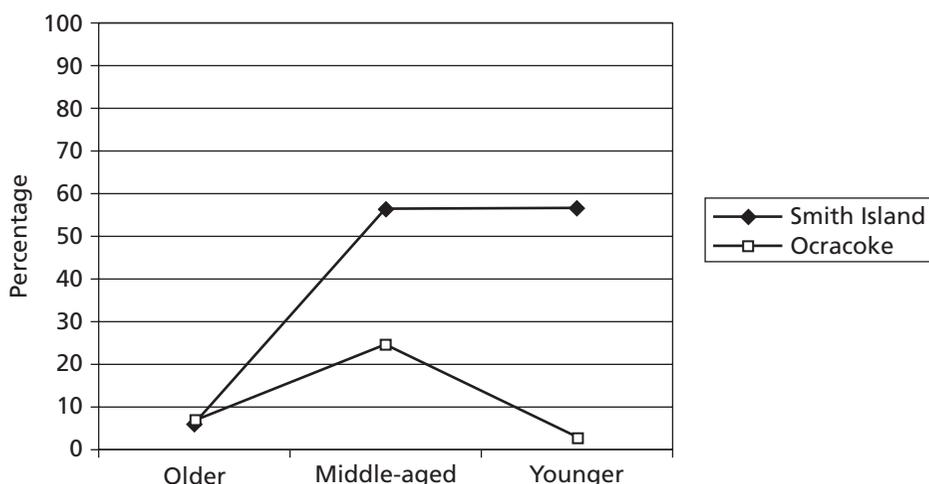
Figure 29.1 The incidence of front-gliding /au/ in Ocracoke and Smith Island for three generations of speakers

Source: Schilling-Estes and Wolfram (1999)
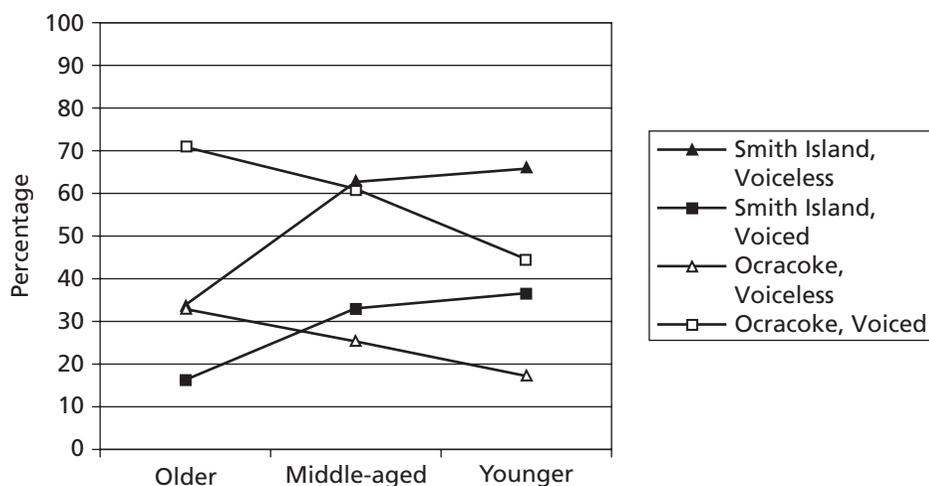
Figure 29.2 The incidence of back/raised nucleus for /ai/ in Ocracoke and Smith Island for three generations of speakers in two linguistic environments

Source: Schilling-Estes and Wolfram (1999)

Smith Island is greatly increasing these distinctive dialect traits. We thus see that the death of these language varieties is proceeding quite differently in the two communities; in the one case by receding and in the other case by heightening the use of distinctive dialect traits.

   Although the concentration model is not generally discussed with respect to situations in which entire languages are lost, the survey of the structural

consequences in the next section clearly presents some cases where it is implied. For example, Campbell and Muntzel (1989) indicate that some dying languages are characterized by a type of intensification in which marked features are "overused" when compared with healthy varieties of the language. However, the intensification we find on Smith Island is not simply the erratic overgeneralization or hypercorrection of a few scattered language features. Rather, it seems to represent the orderly progression of ordinary language change, if at a heightened pace. Furthermore, it seems to affect the language variety as a whole rather than just a few marked features (Schilling-Estes 1997). A similar case of genuine concentration of an entire language may be that of Copper Island Aleut. According to Vakhtin (1998), Copper Island Aleut originated as a pidgin Aleut with a Russian substrate. Through contact with Russian, it quickly became increasingly Russianized, so rapidly in fact that the youngest generation could barely communicate with the oldest. At this point, young speakers began reintroducing Aleut stems into the language – in effect rendering the language more distinct from the Russian that surrounded it. It can also be argued that cases in which the progress of language death has been halted or reversed via the implementation of revitalization programs (e.g. Mohawk; see Jacobs 1998) are instances of linguistic concentration, although the process can clearly take place apart from direct intervention.

The kinds of grammatical and lexical processes found in some instances of language loss have sometimes led researchers to regard language death and pidginization as different aspects of the same phenomenon, thus leading researchers to hypothesize a *pidginization model* of language recession in language death. Dressler and Wodak-Leodolter (1977) conclude that "language death therefore can be looked at as a sort of pidginization" and Samarin (1971: 132) observes that "pidginization should be seen as any consistent reduction of the function of language both in its grammar and its use." Whereas some kinds of reduction in obsolescing languages are analogous to the processes found in pidginization, such as the reduction of vocabulary, reduced clause subordination, emergence of simpler, more transparent surface structures, and so forth, Dorian (1978) and Schmidt (1985), among others, argue that it is simplistic and erroneous to equate a dying language with a pidgin or the pidginization process. Dorian (1978: 606–7), for example, points out that "radical morphological simplification, as found in many pidgins, is not characteristic of ESG [East Sutherland Gaelic], even among its most halting speakers, and even very near the point of extinction." She notes further that the quantity of morphological complexity and variety of allomorphs is hardly typical of that found in pidgins. Schmidt (1985) shows that Dyirbal, a moribund Australian language, shows resistance to some kinds of morphological simplification while engaging in others, which is also not typical of pidginization. Certainly, the cases of concentration we noted above offer strong counterevidence to the pidginization hypothesis.

There are also functional differences between pidgins and dying languages. Schmidt (1985: 394) notes that pidgins typically begin in more formal contact situations between strangers for purposes that often relate to commerce and trade whereas dying languages serve quite different functions and may contract

differently; for example, obsolescing language varieties may be used in informal situations among people sharing close personal ties. Pidgins often serve a primary instrumental function whereas dying languages often serve an integrative function. Such evidence supports the contention that there are fundamental formal and functional differences in pidgins and the pidginization process and language death.

We should also mention the *deacquisition model* of language loss in which language death is viewed as the mirror image of language acquisition. Based on the examination of phonological change in the two moribund Athapaskan languages, Cook (1989: 241) suggests that "the degenerative process of language death produces a mirror image of the orderly developmental process of child language." As noted in the previous paragraphs, however, there is ample counterevidence to reject this hypothesis. The degeneration of language structures, for example, is not a necessary condition of death and dying. Even in cases of structural reduction, there is ample counterevidence to conclude that the order of recession is a mirror image of the hierarchical order of language acquisition.

Finally, we should mention the *matrix language turnover model* proposed by Myers-Scotton (1998; Myers-Scotton and Jake, forthcoming) to explain the morphosyntactic dimensions of language attrition. The model was proposed to account for all kinds of bilingual speech, including the kind of language attrition that may take place in language death. Briefly put, this model proposes that many instances of language death involve a shift from one dominant, or matrix language, to another, and that not all morphemes have the same freedom of appearance in either monolingual or bilingual production. Accordingly, it is proposed (Myers Scotton 1998; Myers-Scotton and Jake forthcoming) that "content morphemes" carrying thematic roles are more likely to resist loss than "system morphemes," which do not carry thematic roles. Although many cases of language attrition may follow this pattern, other factors, including focused socio-symbolic meaning associated with selective obsolescing forms (Schilling-Estes and Wolfram 1994; Schilling-Estes 2000) may inhibit (or enhance) the operation of internal linguistic principles.

As we document further in the next section, there may be quite different structural and functional paths that characterize language obsolescence. Language loss is a sociolinguistic phenomenon that is subject both to the internal cognitive principles of language organization and external social factors; therefore, no single model or explanation exclusively can account for the process of obsolescence in a given speech community.

4   Structural Levels in Language Death

Language death may affect all levels of language organization, from the formal structural properties of phonology and syntax to the contextual domains of

language use. In the following sections, we discuss the consequences of language death on specific levels of language structure and use. While there are obviously shared characteristics, there are also peculiar manifestations associated with different levels of structure and function.

4.1   *Phonology*

Several phonological traits of dying languages have been highlighted in the research literature on language death. Among the prominent traits are (1) the reduction in inventorial and syllable structure distinctions (Dressler 1972, Andersen 1982, Cook 1989, Holloway 1997); (2) the loss of marked phonological features (Dressler 1972, Campbell and Muntzel 1989, Cook 1989, Holloway 1997, Bereznak and Campbell 1996); and (3) the increased variability of phonetic and phonemic variants (Cook 1989, Campbell 1985). None of these attributes, however, is without some important qualifications. For example, some marked features may be quite persistent and maintained during language loss under particular linguistic and sociolinguistic conditions. Thus, a marked phonological feature typologically shared by both the dying language and the replacement language tends to persist during the obsolescing process (Thomason and Kaufman 1988, Holloway 1997: 56). By the same token, the social saliency of marked phonological features during the dying process may support their maintenance (Schilling-Estes and Wolfram 1999) apart from typological congruency with the replacement language variety. Campbell and Muntzel (1989: 187), for example, cite the case of a Xinca speaker who would "sometimes go hog-wild" in the use of glottalized consonants as the speaker extended the phonetic context and frequency of glottalization well beyond the parameters of use in the healthy version of the language.

There is also evidence that so-called "peripheral language varieties" (Andersen 1988), which may include many moribund varieties, actually gives rise to an increase in exorbitant phonetic variants. We thus cannot unilaterally conclude that phonological reduction is the only alternative for receding language varieties, although it is certainly a dominant pattern. Furthermore, there is no singular hierarchical path when languages do reduce their phonological distinctions, since the reduction is affected by both independent linguistic factors and external social and psychological variables.

4.2   *Morphology*

Several alternatives are available to obsolescing language varieties in their morphological change. Again, the most commonly cited pattern is a reduction in the number of morphologically marked categories and in the number of allomorphs (Elmendorf 1981, Schmidt 1985, Campbell and Muntzel 1989, Dressler 1988, Huffines 1989, Holloway 1997), along with increased variability

in morphological marking. The number of morphologically marked grammatical categories is often reduced, and there may be a concomitant tendency to move from polysynthetic to analytic structures in the process (Schmidt 1985, Holloway 1997). For example, Holloway (1997: 197) reports that the dying Brule dialect of Spanish spoken in Louisiana in the USA "parallels many other dying languages in its preference for the analytical future construction *ir a + infinitive*" as compared with a verbal suffix; Silva-Corvalán (1989: 59) observes the same pattern for Puerto Rican Spanish in New York City. Factors that affect morphological change in language death include frequency, functional load, and markedness (Andersen 1982: 97), although it is difficult to determine the interactive effect of these factors and a precise definition for variables such as "functional load."

Some researchers have also suggested that there is a predictable ordering in the decline of morphemes during language death (Markey 1980, Dressler 1981, Myers-Scotton 1998) based on language-systemic factors. However, other factors, including focused socio-symbolic meaning associated with selective obsolescing forms (Schilling-Estes and Wolfram 1994, Schilling-Estes 2000) argue against concluding that there is an irrevocable ordering hierarchy in the reduction of morphemes.

As with phonology, reduction is not the only alternative for obsolescing language varieties (Dorian 1973, Trudgill 1977, 1986, Voegelin and Voegelin 1977). Dorian (1978: 608) concluded that East Sutherland Gaelic is "dying with its morphological boots on" after observing that there is very little morphological reduction in this obsolescing variety. It is even possible for morphological restructuring in obsolescing varieties to augment and restructure the morphology as a language dies. For example, Schilling-Estes (2000) notes that on Smith Island in the Chesapeake, the system of past tense *be* marking is remorphologizing among younger speakers of this obsolescing variety of English so that leveling to *was* is used primarily for positive constructions (e.g. *I was there, you was there*, etc.) and leveling to *were* for negative constructions (e.g. *I weren't there, you weren't there*). In Smith Island, the morphological restructuring is part of a more widespread pattern of dialect intensification in a dying dialect, but it is also quite possible for morphological restructuring to take place on a selective level in language varieties that are otherwise in line with the dissipation model (cf. Schilling-Estes and Wolfram 1994).

4.3   Syntax

The syntax of dying languages may reveal several different strategies that contract the number of syntactic devices available to speakers of a dying language, resulting in what Andersen (1982: 99) refers to as the tendency to "preserve and overuse syntactic constructions that more transparently reflect the underlying semantic and syntactic relations." One manifestation is the reduction of subordinate clauses (Voegelin and Voegelin 1977, Dorian 1981, Tsitsipis 1984,

Schmidt 1985). Hill's (1989) quantitative study of language death in two Uto-Aztecan languages of Southern California over a 40-year time span shows a significant reduction in the use of relative clauses and gerunds and concomitantly, the number of verbs per sentence. As noted under the discussion of morphology, there is also an increased preference for analytic constructions in the obsolescing process (Dorian 1977, 1978, Trudgill 1977, 1986). For example, Campbell (1985) documents a change from morphological future marking to a periphrastic future in Pipil, a moribund Native American language of El Salvador, while Dorian (1983) documents the change from prepositional and pronominal affixes to free morphemes in East Sutherland Gaelic. This change toward more analytic structures is, of course, a modification that works in tandem with the loss of morphological marking. The reduction of case systems often found in dying languages may also give rise to a more fixed word order (Campbell and Muntzel 1989), as this change typically does when polysynthetic languages become more analytic in non-moribund situations.

It is possible for languages to introduce new structures as well. Thus, Campbell and Muntzel (1989) cite a case in which American Finnish adds a new syntactic structure as it recedes, namely non-co-referential gerundial clauses. In this case, however, the new structure is attributable to English, the dominant language, a fairly common phenomenon of language shift, including language loss. Many innovative cases in the syntax may be attributable to a kind of syntactic calquing from the dominant language, but it is also possible that language varieties might independently add new structures as a by-product of other changes taking place in the syntax. Schmidt (1985), for example, documents the creation of a new purposive clause conjunction as it loses some morphosyntactic categories.

4.4   Lexicon

The decline in the lexicon is one of the most prominent traits noted with reference to language death. Both linguists (Miller 1971, Dorian 1973, Andersen 1982) and native speakers comment on the reduction in the lexicon in moribund language varieties. Dorian (1973: 119) notes that "explicit comment on the decline of Gaelic focuses almost entirely on the lexicon" for speakers of East Sutherland Gaelic who regularly observe that older speakers had more words for items than younger speakers. Although it is sometimes assumed that the lexicon is "the first thing to go" in a dying language, Thomason and Kaufman (1988: 38) dispute this assumption by noting cases where other levels of language organization are affected before the lexicon.

Despite the focus on lexical decline in language death, the processes affecting the lexicon are no different from those found in language contact situations existing in healthy languages. The asymmetries found in borrowing are also typical of asymmetrical social relations in other language contact situations. Thus, massive lexical loans from the dominant language may come into the

776 Walt Wolfram

obsolescing language whereas the converse never happens. At the same time, it cannot simply be assumed that extensive lexical borrowing typifies all cases of language moribundity. Thomason (forthcoming) cites a case where speakers of Montana Salish are quite purist in resisting lexical borrowing from the dominant language in spite of overall lexical attrition, and Craig (1992) cites a similar case in Rama, a Nicaraguan language.

For the most part, the lexical inventories of speakers of moribund varieties will depend on their experience in different situational domains, with frequently used vocabulary in common domains the most persistent as the language dies. Mithun (1989: 284), for example, notes that in Oklahoma Cayuga "words for objects no longer discussed have been forgotten." The strategies for dealing with the recession of the lexicon in a moribund variety are no different from those found in other contact situations (Weinreich 1953, Thomason forthcoming). Words may be borrowed from the dominant language intact or they may be restricted or extended in their semantic reference; calques or loan translations may also take place to compensate for limited knowledge of the obsolescing language, along with circumlocution and topical avoidance. Craig (1992) cites the case of a speaker with limited knowledge of Rama who avoided topics such as fishing due a lack of appropriate vocabulary.

Although most of the focus in the literature is on the process of lexical reduction, it is important to recognize the possibility for lexical innovation as well. Gal (1989) shows that younger speakers with more limited proficiency in Hungarian in an Austrian German-Hungarian bilingual community rely on lexical innovations where more fluent speakers of Hungarian use well-established items. Once again, we cannot rule out the role of creativity and innovation as an adaptive strategy in a dying language.

4.5   Language use

One of the most often cited traits of obsolescing language varieties is their contraction in the contexts or domains of use, often referred to as *stylistic shrinkage*. Mougeon and Beniak (1989: 299) note that the process of dying "usually involves the decline of stylistic options which are tied to those societal domains where use of the minority language is excluded." Stylistic shrinkage in the process of language death is amply documented in the literature on language death (Campbell 1985, Gal 1984, 1989, Hill 1973, Hill and Hill 1977, Holloway 1997), with the predominant pattern restricting language use to the more casual styles as opposed to the more formal. However, as noted previously, the bottom-up model (Bereznak and Campbell 1996) is also a viable pattern for contracting language use; communities may restrict the dying language to more formal, ceremonial functions as language use in everyday situations ceases.

It is also quite possible to combine different registers in obsolescing varieties in ways that expose the dichotomy between formal and informal domains as vastly oversimplified (see Schilling-Estes in the current volume). For example,

particular registers found in more formal settings of language may be retained selectively along with casual speech styles. Campbell (1985), for example, reports that traditional narratives and storytelling are no longer used in Pipil whereas Tsitsipis (1983) reports that this tradition is preserved as other dimensions of communicative competence recede in Arvanítika.

It must also be recognized that particular language functions related to the moribund status of the language may evolve during the obsolescing process. Tsitsipis (1989) notes that a moribund language may become an *object language*, attracting conscious attention and specialized language behavior. We noted the creative use of neologism exhibited by younger Hungarian speakers (Gal 1989) in conversational interactions with older, more fluent Hungarian speakers. Schilling-Estes (1998) also shows that conscious attention to a dialect icon of a moribund language variety in Ocracoke may evoke a "performance style" in which obsolescing forms are offered in rote phrases. This performance style may be used in response to situational factors of various types, but it may also be proactive in the sense that the speaker chooses to initiate the style in the presentation of self. Such cases of stylistic manipulation suggest that the use of different speech styles in moribund language varieties is much more varied and complex than the simple unidimensional casual-to-formal axis on which it is sometimes situated.

5   Variability in Language Obsolesence

Sociolinguistic study over the past three decades has indicated time and time again that there is a great deal of variability inherent in all language varieties (e.g. Labov 1966, 1969, 1972, 1994). Furthermore, this variation often reflects language change in progress. All language change implies variation although the converse does not necessarily hold (Bailey 1973). Variation between fluctuating forms should be expected in language death as well. The real question about this variation is whether it is, in the words of Cook (1989: 235) one of the "most conspicuous phenomena reported on dying languages" and whether there are "dramatic increases in variability due to incongruent and idiosyncratic change" (1989: 235). Dressler (1972) also notes that "fluctuations and uncertainties" are notable traits of dying languages, while Campbell and Muntzel (1989: 187) observe that one of the major characteristics of dying languages is the fact that "obligatory rules may come to apply optionally." Such observations suggest that the variation is unconstrained by the kinds of independent linguistic and external social constraints that have become the benchmark of variation analysis over the past several decades (Labov 1969; Cedergren and Sankoff 1974; Sankoff and Labov 1979).

Although variability is certainly one of the traits that typifies change in moribund language varieties, there exist a limited number of studies that have empirically examined the quantitative dimensions of variability in

obsolescing forms (King 1989, Dorian 1994, Mougeon and Beniak 1989, Bavin 1989), and even fewer studies that frame this variation in terms of systematic constraints on variability (King 1989, Wolfram and Schilling-Estes 1995, Schilling-Estes and Wolfram 1999). Based on her study of moribund New-foundland French variety, King (1989) concludes that variation is strongly correlated with age but that it "does not carry the weight of social meaning which variation carries in healthy speech communities"; this conclusion is also confirmed in studies by Mougeon and Beniak (1989: 309) and Bavin (1989: 283–84). The correlation with age is no doubt a function of the change in progress reflected in different generations of speakers. At the same time, King (1989) finds that "it would appear to be change without the classic social motivation, since no particular social group stands out as linguistically differ-ent" (1989: 144–5). Holloway (1997: 71) suggests that a primary reason for the lack of social correlation has to do with the fact that this variation "is not salient to its speakers." However, social saliency is not a necessary condition for establishing social and linguistic co-variance; there are many cases of cor-relation that exist below a conscious level (Labov 1972).

Dorian (1994), like King (1989) and Mougeon and Beniak (1989), finds that the variants examined in her detailed study of the East Sutherland Gaelic community over three decades do not appear to carry social meaning or stylistic significance; in fact, different variants of the same variable are found to be used at different points in the discourse of one speaker without any evidence of a stylistic shift. Dorian (1994: 633) thus concludes that "a profusion of variant forms can be tolerated within a small community over a long period without a discernible movement toward reduction of variants and also without the development of differences in the social evaluation of most variants." Accord-ingly, she proposes that *personal-pattern variation* is separate from stylistic, geo-graphic, and proficiency-related variation. While personal pattern variation must be recognized in both healthy and moribund language varieties (Wolf-ram and Beckett 2000), it is possible that it may be a much more prominent trait in moribund language varieties.

With respect to independent linguistic constraints on variability, King (1989) finds that variation in obsolescing forms is quite sensitive to linguistic environment. For example, her analysis of variation in clitic pronoun usage in Newfoundland French suggests a systematic correlation with linguistic environment in much the same way that variation in healthy languages is constrained by independent linguistic constraints (Labov 1969, Cedergren and Sankoff 1974, Guy 1993). Quantitative studies of variation in interlanguage (Dickerson 1976, Tarone 1980, Wolfram 1978, 1985) add further support for the conclusion that independent linguistic constraints systematically affect the relative incidence of obsolescing variants in ways that are quite analogous to inherent variability within a self-contained language variety.

Our empirical examination of obsolescing language forms in Ocracoke (Wolf-ram and Schilling-Estes 1995) also indicates that the fluctuation of the variants

Table 29.1 Systematic variability for /ai/ backing and raising in Smith Island and Ocracoke

Ocracoke raising Input probability = 0.37	Smith Island raising Input probability = 0.26
Age/gender group:	*Age/gender group:*
Older women = 0.56	Older women = 0.14
Older men = 0.63	Older men = 0.42
Middle-aged women = 0.52	Middle-aged women = 0.62
Middle-aged men (poker group) = 0.67	Middle-aged men = 0.51
Middle-aged men (Non-poker) = 0.36	Younger women = 0.55
Younger women = 0.32	Younger men = 0.69
Younger men = 0.37	
	Following segment:
	Vl. Obs. = 0.77
Following segment:	Vd. Obs. = 0.51
Vl. Obs. = 0.36	Nasal = 0.40
Vd. Obs. = 0.72	Liquid = 0.06
Chi-square per cell = 1.708	Chi-square per cell = 0.719
Total Chi-square = 23.911	Total Chi-square = 17.262

Source: Schilling-Estes and Wolfram (1999)

may be systematically constrained in ways that are no different from other types of inherent variability. That is, both independent linguistic and social constraints may affect variability. For example, consider the results of the Varbrul statistical analysis for the raising/backing of the nucleus in the diphthong /ai/ in Ocracoke and Smith Island in table 29.1. At least in Ocracoke, the backing/raising of /ai/ is clearly an obsolescing variant.

Table 29.1 shows patterned variation of the obsolescing form is quite analogous to the kind of systematic variation typical of others kinds of linguistic change. For example, following voicing affects variability in a systematic way: as shown in figure 29.2, following voicelessness favors the incidence of raising to [əɪ] and following voicing favors the incidence of backing and raising to [ʌɪ]. This constraint pattern follows that found in non-moribund varieties of English that show variation in these variants (Chambers 1973, 1995). Table 29.1 also shows that there are orderly patterns of systematic variation constrained by social factors as well, although they are not necessarily straightforward. For example, cross-sex patterning of variants is different for different generations of speaker, with women sometimes showing higher levels of raising and backing than men and sometimes lower (Schilling-Estes 1999). We also see

that there is a correlation of the backing/raising for /ai/ with a particular social group of men we have designated the "poker game network," a middle-aged group of men known for their espousal of traditional ways of island life (Wolfram and Schilling-Estes 1995, 1997).

While there may be a profusion of variability in language death because of the number of linguistic structures undergoing language change simultaneously, our investigation suggests that some receding structures may, in fact, take on social meaning. This is not to say that all variability in obsolescing language varieties is socially meaningful, but it is certainly possible for some receding features to take on social significance. It may well be that a kind of *sociolinguistic focusing* takes place in language death in some speech communities, where variation in selective structures carries social meaning while variation in many other features does not.

The investigation of obsolescing forms in Ocracoke and Smith Island also lends further insight into the nature of the "increased variability" that is said to characterize dying languages. For example, in the Smith Island case, increased variability appears to be a by-product of the rapid change the dialect is undergoing rather than a product of moribundity per se. Such evidence lends support to Hill's (1989) contention that language change in language death is distinguished only by its rapidity.

It may be argued that much of the variability typifying obsolescing forms is orderly rather than "incongruent" or "idiosyncratic" and is therefore no different from the variability that characterizes healthy languages and language varieties. This is not to deny cases in which variation may overextend the use of features, as in the case of extended use of glottalized consonants by some Xinca speakers as reported by Campbell (1992: 5); he notes that the speaker "glottalized nearly every possible consonant, having failed to learn the rule." Such cases may, however, be restricted to socially noticeable language features (Schilling-Estes and Wolfram 1999). In the case of *overgeneralization*, or *hyperdialectalism* (Trudgill 1986: 66–78), forms are extended to environments where they are not linguistically expected. Cases of hyperdialectalism may parallel the "overuse" of "exotic" features that sometimes accompanies overall structural recession in language death situations (Campbell and Muntzel 1989: 188–9). There may be a linguistic and sociopsychological basis for such cases, linguistic in the sense that there are extended linguistic environments for the use of such forms and sociopsychological in the sense that these forms have become socially obtrusive or "object forms." These cases in language death do not, however, seem to be appreciably different from well-attested cases of structural and statistical hypercorrection cited in the sociolinguistic literature (Wolfram and Schilling-Estes 1998). In cases where the variability does seem to be somewhat disorderly from a linguistic point of view, we can often point to the strong social meaning attached to the variable features to explain the unusual linguistic patterning (Wolfram and Schilling-Estes 1995).

Although a number of researchers seem to hold the view that variability in language death is different from that found in ordinary language change,

there is little empirical evidence to support this contention. The profusion of variation may simply be a product of the extent and rapidity of language change. In a situation where change is simultaneously affecting many different structures within the system in a compressed time frame, there will be many more items undergoing variation, thus giving the appearance that change is chaotic and incongruent. Given the rapidity of change in many cases of language death, it may well be the case that different speakers are simply more widely dispersed for more variables along the S-curve of language change (Bailey 1973), in which variation starts slowly in a limited linguistic environment, goes through a rapid mid-point of variation as it extends its structural boundaries, and ends slowly in restricted environments. Importantly, when variation is examined for specific structures undergoing change, the change cycle appears to show the kind of systematic variability found in more stable language situations as well as language variation in interlanguage (Dickerson 1976, Wolfram 1978, 1985). The variation is at least constrained by independent linguistic variables and, in some cases, may be constrained by social constraints as well.

While the empirical examination of the quantitative dimensions of language variation in moribund language situations is still in its infancy, there is no reason to suspect that such variation will turn out to be radically different from the systematic variation found in other kinds of language variation.

6   Complexity in Obsolesence

Our profile reveals that language death is a complex sociolinguistic process involving alternative paths to obsolescence. Unfortunately, the metaphor of death and decay so often used to describe language loss has tended to obscure an understanding of the varied responses to obsolescing language varieties. On all levels of languages organization we have examined, for example, innovative options are available to speakers of moribund language varieties, arguing against a simplistic, unidimensional reduction-based model of language obsolescence. Furthermore, there is a range of cultural and individual responses that may be manifested in the process of language shift, making it a dynamic sociolinguistic phenomenon. As Gal (1989) notes:

> we should examine the linguistic changes occurring during language shift not only through the metaphor of death and decay that the "pastoral" tradition provides, but also through an image of conflict and competition between differing forces – cognitive, interactional, symbolic – whose effects on the details of linguistic practice are sometimes contradictory.   (Gal 1989: 330)

The circumstances framing obsolescing language varieties are as multidimensional and complex as any other sociolinguistic situation. Obsolescing language varieties are affected by the same linguistic-cognitive principles and the same

patterns of variation as those found in other language contact situations; they are also affected by an interactive array of macro- and micro-social and sociopsychological variables. Responses to the loss of a language variety are at once both collective and individualistic, and they may be reactive and/or proactive. In this respect, language death resembles the loss of human life itself: there are many paths that lead to the same ultimate destiny and a wide array of responses that affect the journey in significant ways.

NOTE

1   The term *language death* has been used in two different senses in the research literature. It has been used both for cases in which an entire language becomes extinct as well as for cases of *language shift* (Fasold 1984: 213), where a language variety is lost in one community but continues to be used in another setting. For example, even though a Hungarian dialect may be lost in a German-Hungarian community in Austria, there are still plenty of speakers of Hungarian. The sociolinguistic dynamics of language attrition discussed here seem to apply to both types of situations though it may be necessary to recognize differences in these situations for other reasons.

REFERENCES

Andersen, Henning (1988). Center and periphery: Adoption, diffusion, and spread. In J. Fisiak (ed.), *Historical Dialectology*. Berlin: Mouton de Gruyter. 39–83.

Andersen, Roger W. (1982). Determining the linguistic attributes of language attrition. In R. D. Lambert and B. F. Freed (eds.), *The Loss of Language Skills*. Rowley, MA: Newbury House. 83–118.

Bailey, Charles-James N. (1973). *Variation and Linguistic Theory*. Arlington, VA: Center for Applied Linguistics.

Bailey, Guy, Tom Wikle, Jan Tillery, and Lori Sand (1991). The apparent time construct. *Language Variation and Change* 5: 359–90.

Bavin, Edith L. (1989). Some lexical and morphological changes in Walpiri. In Nancy C. Dorian (ed.), *Investigating Obsolescence*. Cambridge: Cambridge University Press. 267–86.

Bereznak, Catherine and Lyle Campbell (1996). Defense strategies for endangered languages. In H. Goebl, P. H. Nelde, Z. Star and W. Wölck (eds.), *Contact Linguistics: An International Handbook of Contemporary Research*. Berlin: Walter de Gruyter. 659–66.

Campbell, Lyle (1985). *The Pipil Language of El Salvador*. Berlin: Mouton de Gruyter.

Campbell, Lyle (1992). Language death. In Keith Brown and Nigel Vincent (eds.), *The Encyclopedia of Linguistics*. London: Aberdeen University Press.

Campbell, Lyle (1994). Language death. In R. E. Asher and J. M. Y. Simpson (eds.), *The Encyclopedia of Language and Linguistics*, vol. 4. Oxford/New York: Pergamon. 1960–8.

Campbell, Lyle and Martha Muntzel (1989). The structural consequences of language death. In Nancy C. Dorian (ed.), *Investigating Obsolescence*. Cambridge: Cambridge University Press. 181–96.

Cedergren, Henrietta J. and David Sankoff (1974). Variable rules: Performance as a statistical reflection of competence. *Language* 50: 333–55.

Chambers, J. K. (1973). Canadian raising. *Canadian Journal of Linguistics* 18: 113–35.

Chambers, J. K. (1995). *Sociolinguistic Theory*. Oxford: Blackwell.

Cook, Eung-Do (1989). Is phonology going haywire in dying languages? Phonological variations in Chipewyan and Sarcee. *Language in Society* 18: 235–55.

Craig, Colette (1992). Language shift and language death: The case of Rama in Nicaragua. *International Journal of the Sociology of Language* 93: 11–26.

Dickerson, Wayne B. (1976). The psycholinguistic unity of language learning and language change. *Language Learning* 26: 215–32.

Dorian, Nancy C. (1973). Grammatical change in a dying dialect. *Language* 49: 414–38.

Dorian, Nancy C. (1977). The problem of the semi-speaker in language death. *International Journal of the Sociology of Language* 12: 23–32.

Dorian, Nancy C. (1978). The fate of morphological complexity in language death: Evidence from East Sutherland Gaelic. *Language* 54: 590–609.

Dorian, Nancy C. (1981). *Language death: The Life Cycle of a Scottish Gaelic Dialect*. Philadelphia, PA: University of Pennsylvania Press.

Dorian, Nancy C. (1982). Linguistic models and language death evidence. In L. Obler and L. Menn (eds.), *Exceptional Language and Linguistics*. New York: Academic Press. 31–48.

Dorian, Nancy C. (1983). Natural and second language acquisition from the perspective of the study of language death. In R. Andersen (ed.), *Pidginization and Creolization of Language Acquisition*. Rowley, MA: Newbury House. 158–67.

Dorian, Nancy C. (1986). Abrupt transmission failure in obsolescing languages: How sudden the "tip" to the dominant language communities and families. In V. Nikiforidu, M. Van Clay, M. Niepokuj and D. Feder (eds.), *Proceedings of the Twelfth Annual Meeting of the Berkeley Linguistics Society*. Berkeley: Berkeley Linguistics Society. 72–83.

Dorian, Nancy C. (ed.) (1989). *Investigating Obsolescence: Studies in Language Contraction and Obsolescence*. Cambridge: Cambridge University Press.

Dorian, Nancy C. (1994). Varieties of variation in a very small place: Social homogeneity, prestige norms, and linguistic variation. *Language* 70: 631–96.

Dorian, Nancy C. (1998). Western language ideologies and small-language prospects. In L. A. Grenoble and L. J. Whaley (eds.), *Endangered Languages*. Cambridge: Cambridge University Press. 3–21.

Dressler, Wolfgang (1972). On the phonology of language death. *Chicago Linguistic Society* 12: 448–57.

Dressler, Wolfgang (1981). Language shift and language death – a protean challenge for the linguist. *Folia Linguistica* 12: 448–57.

Dressler, Wolfgang (1988). Language death: linguistics. In F. J. Newmeyer (ed.), *The Cambridge Survey*, vol. 4:

Language: The Socio-cultural Context. Cambridge: Cambridge University Press. 184–92.

Dressler, Wolfgang and Ruth Wodak-Leodolter (1977). Language preservation and language death in Brittany. *International Journal of the Sociology of Language* 12: 33–44.

Edwards, John (1992). Sociopolitical aspects of language maintenance and loss: Towards a typology of language minority situations. In W. Fase, K. Jaspaert, and S. Kroon (eds.), *Maintenance and Loss of Minority Languages*. Philadelphia: John Benjamins. 37–54.

Elmendorf, William (1981). Last speakers and language change: Two California cases. *Anthropological Linguistics* 23: 36–49.

Fasold, Ralph W. (1984). *The Sociolinguistics of Society*. Oxford: Blackwell Publishers.

Gal, Susan (1984). Peasant men can't get wives. In J. Baugh and J. Sherzer (eds.), *Readings in Sociolinguistics*. Englewood Cliffs, NJ: Prentice Hall. 292–304.

Gal, Susan (1989). Lexical innovation: The use and value of restricted Hungarian. In Nancy C. Dorian (ed.), *Investigating Obsolescence*. Cambridge: Cambridge University Press. 313–31.

Garvin, Paul and Madeline Mathiot (1956). The urbanization of the Guaraní language. In A. F. C. Wallace (ed.), *Men and Cultures: Selected Papers from the Fifth International Congress of Anthropological and Ethnological Sciences*. Philadelphia: University of Pennsylvania Press. 365–74.

Grenoble, Lenora A. and Lindsay J. Whaley (eds.) (1998a). *Endangered Languages: Current Issues and Future Prospects*. Cambridge: Cambridge University Press.

Grenoble, Lenora A. and Lindsay J. Whaley (1998b). Toward a typology of language endangerment. In L. A. Grenoble and L. J. Whaley (eds.), *Endangered Languages*. Cambridge: Cambridge University Press. 22–54.

Grinevald, Colette (1998). Language endangerment in South America: A programmatic approach. In L. A. Grenoble and L. J. Whaley (eds.), *Endangered Languages*. Cambridge: Cambridge University Press. 124–59.

Guy, Gregory (1993). The quantitative analysis of linguistic variation. In D. R. Preston (ed.), *American Dialect Research*. Amsterdam: John Benjamins. 223–49.

Hale, Ken (1998). On endangered languages and the importance of linguistic diversity. In L. A. Grenoble and L. J. Whaley (eds.), *Endangered Languages*. Cambridge: Cambridge University Press. 192–216.

Hale, Ken, Michael Krauss, Lucile Watahomigie, Akiri Amamoto, Colette Craig, Laverne Masayesva and Nora England (1992). Endangered languages. *Language* 68: 1–42.

Hill, Jane H. (1973). Subordinate clause density and language function. In C. Corum, T. Smith-Stark and A. Weiser (eds.), *You Take the High Node and I'll Take the Low Node: Papers from the Comparative Syntax Festival*. Chicago: Chicago Linguistic Society. 33–52.

Hill, Jane H. (1979). Language death, language contact, and language evolution. In W. McCormack and S. Wurm (eds.), *Approaches to Language: Anthropological Issues*. Mouton: The Hague. 47–78.

Hill, Jane H. (1989). The social functions of relativization in obsolescent and non-obsolescent languages. In

Nancy C. Dorian (ed.), *Investigating Obsolescence*. Cambridge: Cambridge University Press. 347–54.

Hill, Jane H. and Ken Hill (1977). Language death and relexification in Tlaxcalan Nahuatl. *International Journal of the Sociology of Language* 12: 55–69.

Huffines, Marion Lois (1989). Case usage among the Pennsylvania German sectarians and nonsectarians. In Nancy C. Dorian (ed.), *Investigating Obsolescence*. Cambridge: Cambridge University Press. 211–41.

Holloway, Charles E. (1997). *Dialect Death: The Case of Brule Spanish*. Amsterdam: John Benjamins.

Jacobs, Annette. (1998). A chronology of Mohawk language instruction at Kahnawàke. In L. A. Grenoble and L. J. Whaley (eds.), *Endangered Languages*. Cambridge: Cambridge University Press. 117–23.

Kahane, Henry and Renée Kahane (1979). Decline and survival of Western prestige languages. *Language* 55: 183–98.

King, Ruth (1989). On the social meaning of linguistic variability in language death situations: Variation in Newfoundland French. In Nancy C. Dorian (ed.), *Investigating Obsolescence*. Cambridge: Cambridge University Press. 139–48.

Krauss, Michael (1992). The world's languages in crisis. *Language* 68: 4–10.

Labov, William (1963). The social motivation of a sound change. *Word* 19: 273–307.

Labov, William (1966). *The Social Stratification of English in New York City*. Washington, DC: Center for Applied Linguistics.

Labov, William (1969). Contraction, deletion, and inherent variability of the English copula. *Language* 45: 715–62.

Labov, William (1972). *Sociolinguistic Patterns*. Philadelphia: University of Pennsylvania Press.

Labov, William (1994). *Principles of Linguistic Change: Internal Factors*. Cambridge, MA: Blackwell Publishers.

Markey, Thomas (1980). *Diffusion, Fusion, and Creolization: A Fieldguide to Developmental Linguistics*. Papiere zur Linguistik.

Miller, Wick (1971). The death of language or serendipity among Shoshoni. *Anthropological Linguistics* 13: 114–20.

Mithun, Marianne (1989). The incipient obsolescence of polysynthesis: Cayuga. In Nancy C. Dorian (ed.), *Investigating Obsolescence*. Cambridge: Cambridge University Press. 243–58.

Mougeon, Raymond and Edouard Beniak (1989). Language contraction and linguistic change: The case of Welland French. In Nancy C. Dorian (ed.), *Investigating Obsolescence*. Cambridge: Cambridge University Press. 287–312.

Myers-Scotton, Carol (1998) A way to dusty death: The matrix language turnover hypothesis. In L. A. Grenoble and L. J. Whaley (eds.), *Endangered Languages*. Cambridge: Cambridge University Press. 289–316.

Myers-Scotton, Carol and Janice L. Jake (forthcoming). Explaining aspects of codeswiching and their implications. In J. Nicol and T. Langendoen (eds.), *Bilingualism*. Oxford: Blackwell Publishers.

Robins, Robert H. and Eugenius M. Uhlenbeck (eds.) (1991). *Endangered Languages*. Oxford: Berg.

Samarin, William A. (1971). Salient and substantive pidginization. In D. Hymes (ed.), *Pidginization and Creolization of Languages*. London:

Cambridge University Press. 188–213.

Sankoff, David and William Labov (1979). On the uses of variable rules. *Language in Society* 8: 189–222.

Sasse, Hans-Jürgen (1992). Theory of language death, language decay, and contact-induced change: Similarities and differences. In M. Brenzinger (ed.), *Language Death: Factual and Theoretical Explorations with Special Reference to East Africa*. Berlin: Mouton de Gruyter. 59–80.

Schmidt, Annette (1985). The fate of ergativity in dying Dyirbal. *Language* 61: 378–96.

Schilling-Estes, Natalie (1997). Accommodation vs. concentration: Dialect death in two post-insular island communities. *American Speech* 72: 12–32.

Schilling-Estes, Natalie (1998). Investigating "self-conscious" speech: The performance register in Ocracoke English. *Language in Society* 27: 53–83.

Schilling-Estes, Natalie (1999). Reshaping economies, reshaping identities: Gender-based patterns of language variation in Ocracoke English. *Proceedings of the Fifth Berkeley Women and Language Conference*. Berkeley: Berkeley Women and Language Group. 509–20.

Schilling-Estes, Natalie (2000). Exploring morphological change: The *was/weren't* pattern in Smith Island. Unpublished manuscript.

Schilling-Estes, Natalie and Walt Wolfram (1994). Convergent explanation and alternative regularization: *Were/weren't* leveling in a vernacular English variety. *Language Variation and Change* 6: 273–302.

Silva-Corvalán, Carmen (1989). Past and present perspectives on language change in US Spanish. *International*

Journal of the Sociology of Language 79: 53–66.

Swadesh, Morris (1948). Sociologic notes on language loss. *International Journal of American Linguistics* 14: 226–35.

Tarone, Elaine (1980). Some influences on the syllable structure of interlanguage phonology. *International Review of Applied Linguistics* 18: 139–52.

Thomason, Sarah G. (forthcoming). *Language Contact*. Edinburgh: Edinburgh University Press.

Thomason, Sarah G. and Terrence Kaufman (1988). *Language Contact, Creolization, and Genetic Linguistics*. Berkeley, CA: University of California Press.

Torres, Lourdes (1989). Mood selection among New York Puerto Ricans. *International Journal of the Sociology of Language* 79: 67–77.

Trudgill, Peter (1977). Creolization in reverse: Reduction and simplification in the Albanian dialects of Greece. *Transactions of the Philological Society 1976–1977*: 32–50.

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

Tsitsipis, Lukas D. (1983). Narrative performance in a dying language: Evidence from Albanian in Greece. *Word* 34: 25–36.

Tsitsipis, Lukas D. (1984). Functional restriction and grammatical reduction in Albanian language in Greece. *Zeitschrift für Balkanologie* 20: 122–31.

Tsitsipis, Lukas D. (1989). Skewed performance and full performance in language obsolescence: The case of an Albanian variety. In Nancy C. Dorian (ed.), *Investigating Obsolescence*. Cambridge: Cambridge University Press. 139–48.

Vakhtin, Nikolai (1998). Copper Island Aleut: A case of language "resurrection." In L. A. Grenoble and L. J. Whaley (eds.), *Endangered Languages*. Cambridge/New York: Cambridge University Press. 317–27.

Voegelin, Carl and Francis Voegelin (1977). Is Tübatulabal deacquisition relevant to theories of language acquisition? *International Journal of American Linguistics* 43: 333–6.

Weinreich, Uriel (1953) *Languages in Contact*. New York: Linguistic Circle of New York.

Wolfram, Walt (1978). Contrastive linguistics and social lectology. *Language Learning* 28: 1–28.

Wolfram, Walt (1985). Variability in tense marking: A case for the obvious. *Language Learning* 35: 229–53.

Wolfram, Walt (1997). Issues in dialect obsolescence: An introduction. *American Speech* 73: 1–12.

Wolfram, Walt and Dan Beckett (2000). The role of individual differences in Earlier African American Vernacular English. *American Speech* 75: 1–30.

Wolfram, Walt and Natalie Schilling-Estes (1995). Moribund dialects and the language endangerment canon: The case of the Ocracoke Brogue. *Language* 71: 696–721.

Wolfram, Walt and Natalie Schilling-Estes (1997). *Hoi toide on the Outer Banks: The story of the Ocracoke Brogue*. Chapel Hill, NC: University of North Carolina Press.

Wolfram, Walt and Natalie Schilling-Estes (1998). *American English: Dialects and Variation*. Oxford: Blackwell Publishers.