# FIGHTING LANGUAGE ENDANGERMENT

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# Preface to the second edition

This book explores a range of issues associated with working in a community directed project to prepare a dictionary for community use. In conjunction with my studies as a MA and then a PhD student in Linguistics at the University of Melbourne between 1995 and 1999, I approached the Tsimshian community proposing to work with them on preparing an updated and expanded dictionary for the community. My involvement with the Tsimshian community was supported by my PhD supervisor, Dr Jean Mulder, who had also completed her PhD working on Sm'algyax, the language of the community. Before I made my decision to work on the language, I was fortunate to be able to meet and discuss my plans with Doreen Robinson, who with her husband, Bill Robinson, were respected elders in the community. Other people who were important to the work are mentioned in the acknowledgments to the first edition.

The book identifies a range of practical, theoretical and personal challenges associated with working closely with language activists in a First Nations community who are seeking to address language loss. Looking back on my experiences since this formative time, I am struck by how persistent these challenges are – both in my own work, described above, and in the work of others (see for example, Hinton et al 2018 and a range of papers in the journal Language Documentation and Conservation, among other publications). While researchers have become increasingly engaged in seeking to address these problems, they reflect problems that cannot be solved with linguistic methods alone, representing as they do tensions between academic and community driven agendas, and indexing patterns of authorisation and agency that sometimes actively work against the goals of language revitalisation.

There are several different ways this book can be read. It is an account of my time doing research in partnership with the Tsimshian community, working with people to compile a dictionary for their language Sm'algyax. As such it addresses the lexicographical decisions that had to be made. It provides a practical model for compiling a dictionary in a community context.

The book is also one account of the linguistic history of the Tsimshian community and their language, Sm'algyax. It provides an overview of the fortunes of the community since contact, provides a general introduction to the language and points the reader to other resources on the language. Sm'algyax is a beautiful language and it was a privilege to spend time learning to see the world through its lens.

The book also describes the tensions that circulate behind lexicographic decisions – questions of representation and of authority in decision making. These questions are made troubling by the legacies of colonisation, that both mask and at the same time reveal questions of power and authorisation – Who gets to decide what is right? Whose interests are prioritised? Which speakers or speech communities are represented? How? (See also discussion in Easton and Stebbins 2015, Eira and Stebbins 2008, Stebbins 2014, Stebbins and Planigale 2010.)

It was a real honour to be trusted to hold the space in which the community navigated these decisions, and especially to do so knowing how little I really understood. The people I worked with were extraordinarily generous and patient with repeated examples of my clumsiness and incomprehension. I feel enormous gratitude towards all the people I worked with for supporting me through these struggles. The lessons I learned from this work have taken many years to settle and guide my professional practice still.

Finally, and unusually for the time when it was written, particularly given the genre of the dissertation, this book is a personal reflection on my own experiences and role in the process of developing the dictionary. Fieldwork requires significant emotional resources. It is lonely, confronting and challenging on every level. This is true both in situations where the researcher is an outsider, as I was, but as others have noted, equally

true for people doing research within their own communities. Participant observation, which was in effect the primary method used in this project, places the researcher in an anomalous position – (notional) insider and (real) outsider, experiencer and observer, participant and documenter. In the context of a community reeling under the pressures of colonisation, none of these positions are without their difficulties (see also Stebbins, Eira and Couzens 2018).

I have written elsewhere about how erroneous the Indiana Jones trope is with regards to my experiences of fieldwork (Stebbins 2012). I am no swashbuckler. This confused perception is perhaps understandable when it is expressed by people with little understanding of what might be involved. Surprisingly to me at the time, I also felt deeply misunderstood at my home institution, by my peers. At one stage, some of my fellow students had jokingly allocated themselves different types of cookies/biscuits/crackers as indexes of their identity. I was not part of this playful conversation, but I was allocated the hardest and driest of crackers, apparently a reflection of how tough I was. I found this interpretation shocking since at the time I could hardly bear to go onto campus and spent hours sleeping each afternoon in an attempt to recover my equilibrium after a long stint in the field. I felt as raw and shaky as an invalid. Looking back now, I am more ready to acknowledge that I was indeed resilient – I recovered from the various dents in my psyche that I collected in the field and have found ways to turn this territory into fertile ground moving forward.

This book, I hope, offers solace to others navigating the dark shadows of fieldwork. The anxieties and dilemmas usually only aired during tea breaks at conferences are laid bare here. The book is clear about the linguistic aspects of these hidden troubles as well as more personal difficulties. Becoming vulnerable in a community where many people are vulnerable was perhaps inevitable. It is heart-breaking to watch people weather one bereavement after another; to know that the lives of the people I was growing to love were daily circumscribed by the effects of systemic racism; to hear accounts of child removal into institutions; to see the long lasting resonances these experiences leave behind; and to understand both the sheer scope of people's ambitions for a better life for future generations as well as the hurdles that render such a vision audacious.

Twenty years on from this work, my gratitude towards the people I worked with in the Tsimshian community has only continued to grow. I found my heart through this work. Through writing the thesis that became this book, I also found the courage to keep my heart open to all of the possibilities and consequences of engaging in language projects in minority and oppressed language communities. The work of partnering with minority communities in the context of colonisation does not become easier because the root causes require massive change at the national, regional and local level. Having a clearer understanding of what is happening and why it is so difficult has helped.

This book was originally published by the Endangered Languages of the Pacific Rim project, led by Professor Osahito Miyaoka and funded by the Japanese Ministry of Education, Science, Sports, Culture, and Technology. The project was based at Osaka Gakuin University in Japan and provided significant support for nearly 200 researchers across the years 1999 to 2003. The project published a broad range of material, often with a descriptive focus, including grammars, and dictionaries, but also supported the development of databases and the publication of textbooks. I was fortunate during my fieldwork in the Pacific Northwest to get to know Fumiko Sasama, who was a member of the project team and a fellow researcher in the Tsimshian community and very kindly provided an introduction to the first edition of this book. Because the project was completed in 2003, and the publications from the project were not available for sale, it has been some time since copies of the book were available to new readers.

This new edition ensures that the book will be available in digital format in the long term.

# Foreword

Sm'algyax, or called Coast Tsimshian, is the language of the Tsimshian people who live on the northwest coast of British Columbia, Canada. Today it is spoken by only a few hundred people. Although most speakers are now over sixty years of age and speaker numbers have dwindled over the past few decades, there has been growing concern about the preservation of Sm'algyax within the Tsimshian community.

Increasing efforts to maintain Sm'algyax have recently led to the publication of a new dictionary designed specifically for language learners. The Sm'algyax Learners' Dictionary has around 3,600 entries and includes not only lexical words but also grammatical words, clitics, affixes, and example sentences. The dictionary was produced through a community directed project under the auspices of the Ts'msyeen Sm'algyax Authority. In the present publication Tonya Stebbins, technical advisor and compiler of this dictionary, describes the process of community directed documentation for an endangered language based on the dictionary project. This publication describes the typological, sociolinguistic, and historical background to the project and discusses various issues related to lexicography, including dictionary design, the preparation of glosses, the development of spelling conventions, and the treatment of neologisms.

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# Introduction

Around the world indigenous languages are losing speakers. Because language is such a significant expression of identity and culture, indigenous communities are seeking ways to support and strengthen their languages. This book discusses a number of sociopolitical and descriptive issues arising from the development of the *Sm'algyax Learners' Dictionary*. The dictionary was developed in partnership with the Tsimshian Nation and is being used as a teaching tool in the Sm'algyax Language Program.

Part 1 provides background to the approach taken in this book. This approach marries the development of the dictionary with research into the language. A symbiotic relationship between the descriptive, pedagogical and sociolinguistic areas of research allows for a fundamentally practical approach including the preparation of user-friendly materials.

Communities who speak endangered languages place a great deal of importance on sociolinguistic and historical factors relating to language change. In Part 2 the history of the Tsimshian Nation is shown to be closely tied up with the vitality of the language. Sociolinguistic factors important to understanding the state of the language today are identified and the typology of the language is described.

Part 3 describes the development of materials for use within the Tsimshian community. A number of language planning problems are discussed in depth here. Some of these become particularly acute when working with communities of endangered languages. The discussion provides examples specifically relating to Sm'algyax, though the methodologies developed here could be used in similar situations elsewhere. They include: orthography development; dictionary design; and the management of lexical expansion.

Part 4 gives an evaluation of the community directed language work in relation to the *Sm'algyax Learners' Dictionary* project identifying strengths and challenges associated with this approach.

## PART ONE: COMMUNITY DIRECTED LANGUAGE DOCUMENTATION
### *Chapter One: Responding effectively to language endangerment*
This chapter introduces the main themes of the book: the benefits of community directed language documentation in situations of language endangerment. This chapter considers what roles linguists can usefully have in supporting endangered languages, discusses processes commonly involved in reversing language shift, and details Tsimshian attitudes towards research on their language Sm'algyax.

## PART TWO: SM'ALGYAX: THE LANGUAGE OF THE TSIMSHIAN NATION
### *Chapter Two: History of Sm'algyax and the Tsimshian Nation*
This chapter provides information about the social history the Tsimshian Nation as it is relevant to Sm'algyax since European activity in the Pacific Northwest began. The language was increasingly limited as the Tsimshian became more economically dependent and more restricted in their activities. The literature review of Sm'algyax is included here because writings in (or on) the language are increasingly significant to the community as representations of the language as a social construct. The development of the Sm'algyax writing system is described in this chapter.

### *Chapter Three: Sm'algyax Today*
An assessment of the vitality and cohesion of Sm'algyax at the close of the twentieth century is provided in this chapter through an analysis of speaker demographics and situations in which the language is used. Language

variation and language change are discussed and the influence of English is assessed. Current programs for language revitalisation in the Tsimshian community are described and evaluated.

## Chapter Four: Introduction to Sm'algyax Grammar

This chapter provides comprehensive background information on Sm'algyax including a discussion of genetic relations, typology, and a part of speech inventory. The case for Sm'algyax as a polysynthetic language is examined in depth using the criteria set out in Fortescue (1994). Sm'algyax is found to be a somewhat poly-synthetic language in relation to these criteria. Among other things, it uses incorporation and derivational processes in the creation of clauses. Less conclusively, it has both head- and dependent-marking inflection and relatively simple morpho-phonology.

## PART THREE: COMMUNITY DIRECTED LANGUAGE DOCUMENTATION IN PRACTICE

### Chapter Five: Dictionary Design/or the Sm'algyax Learners' Dictionary

A survey of the issues identified by reviewers of dictionaries in the *International Journal of American Linguistics* over the past decade is presented in this chapter, following an overview of the types of dictionaries currently being produced for specialist purposes (including learners' dictionaries and bilingual dictionaries). Particular attention is paid to the tensions involved in addressing the needs of language communities as well as linguists. The model that was developed for the *Sm'algyax Learners' Dictionary* is described, and example entries are provided. The stages involved in developing the dictionary with the Tsimshian community are discussed.

### Chapter Six: Lexical expansion in Sm'algyax

This chapter examines processes of lexical expansion in the Tsimshian community and addresses concerns community members have about the significance of loan words from English. As the curriculum for the language program was developed it became clear that speakers did not have words for certain everyday, non-traditional items and concepts. All of the morphological means for generating new word forms in Sm'algyax are described as are the socio-linguistic processes involved in lexical expansion. Overall, I find that it is the cohesiveness of the speech community rather than the lexical resources of the language that are hampering lexicalisation.

### Chapter Seven: Representing Sm'algyax words through English

A range of issues associated with developing adequate English glosses in the *Sm'algyax Learners' Dictionary* are addressed in this chapter. The challenges posed by cultural differences, reflected in the vocabularies of English and Sm'algyax, are discussed from several perspectives. The differences between Sm'algyax words and their potential English glosses are described in terms of equivalence. This provides a framework for representing the meaning of Sm'algyax words in English in the *Sm'algyax Learners' Dictionary*.

### Chapter Eight: Polysemy and homonymy in the Sm'algyax Learners' Dictionary

This chapter sets out criteria for dealing with homonymous and polysemous forms in Sm'algyax. Using these criteria it is possible to identify a number of one to many relationships between lexical forms, grammatical classes and/or lexical meanings. Semantic relatedness and word class membership are key criteria for distinguishing between homonymy and polysemy in Sm'algyax. Sense modulation is a frequent strategy for lexical expansion in Sm'algyax; made possible by the high frequency of stems with broad semantic scope in the lexicon.

### Chapter Nine: Spelling in Sm'algyax

As is typical for the languages of the Pacific Northwest, Sm'algyax has a large phoneme inventory with 65 phonemes, including glottalised voiceless stops, nasals, laterals, and glides, and labialised and palatalised velar

stops. In the vowel system there is a contrast between short, long, and interrupted vowels and short and long diphthongs. Orthographic depth is discussed as it provides a useful starting point for considering issues related to the development of spelling conventions for Sm'algyax. Morpho-phonology is also discussed in relation to the development of spelling conventions for the language.

### Chapter Ten: Variation in Sm'algyax

Variation in Sm'algyax posed a number of interesting problems for the development of the Sm'algyax Learners' Dictionary. The main parameters of variation in the language are identified in this chapter and a critical discourse analysis approach (cf Pennycook 1994, Eira 1998) is used to understand attitudes towards standard-isation within the Tsimshian community. Variation within the language is assessed in terms of its functionality and a set of principles for managing variation in the Sm'algyax Learners' Dictionary is developed.

## PART FOUR: REFLECTIONS ON THE COMMUNITY DIRECTED APPROACH

### Chapter Eleven: Community directed language work: requirements and outcomes

The three broad themes of this book – community efforts to support an endangered language, basic descriptive work, and collaborative practice in an situation of language endangerment – are revisited here. The approaches taken to each of these themes are reviewed and relevant findings are summarised. Directions for future community directed language work are discussed in view of the challenges identified in relation to the Sm'algyax dictionary project.

## ACKNOWLEDGEMENTS

## NOTE ON EXAMPLES

In order to give the reader a sense of the results of the analysis presented here, I have sometimes opted for including extracts from the dictionary by way of illustration. Where it is useful to note particular morphological relations these are mentioned in the text.

In glossed examples, the first line is a sentence in the practical orthography used for Sm'algyax. The second line shows the morphemic analysis.

Unless otherwise indicated, examples come from my own field notes or from texts collected in the field. Examples taken from the works of other authors are presented here with the analysis I have developed through my involvement with the dictionary project. See the sources for original analyses.

## ABBREVIATIONS

Square brackets [ ] are used to set off morphemic glosses within the text, and angle brackets < > are used to set off graphemes. The equal sign '=' indicates clitic boundaries and the hyphen '-' indicates affix boundaries. In addition, the following abbreviations are used in this paper:

1= first person
2 = second person
3 = third person
A = subject of transitive verb
CF = contrastive focus
CONT = continuous aspect
DEM = demonstrative
DER = derivational affix
DM = dependency marker
EVID = evidential
full stop '.' is used in glossing indivisible
morphemes
FUT = future tense
IMPF = imperfect aspect
INDEF = indefinite
MF = manner focus
N = noun
NEG = negative
NP = noun phrase
O = object of transitive verb
PAST = past tense
PERF = perfective aspect
PL = plural
POSS = possessive
PREP = preposition
S = subject of intransitive verb
SG = singular
SLD = Sm'algyax Learners' Dictionary
TOP = topicaliser
V = verb
Vi = intransitive verb
VP = verb phrase
Vt = transitive verb

# Map 1: Local Map of Northwest British Columbia

Ketchikan ●

New Metlalatla ●

Hazleton ●

Lax Kw'alaams
(PortSimpson)
●

Dixon Entrance

Metlakatla
● Prince Rupert

Port Edward ●

● Terrace

Masset ●

● Kitimat

Queen
Charlotte
Islands

● Kitkatla

Skidegate ●
● Sandspit

● Hartley Bay

British
Columbia

● Klemtu

Hecate
Strait

● Bella Bella

Pacific
Ocean

Queen Charlotte
Sound

● Port Hardy

Vancouver Island

# Map 2: Area Map of the Pacific Northwest
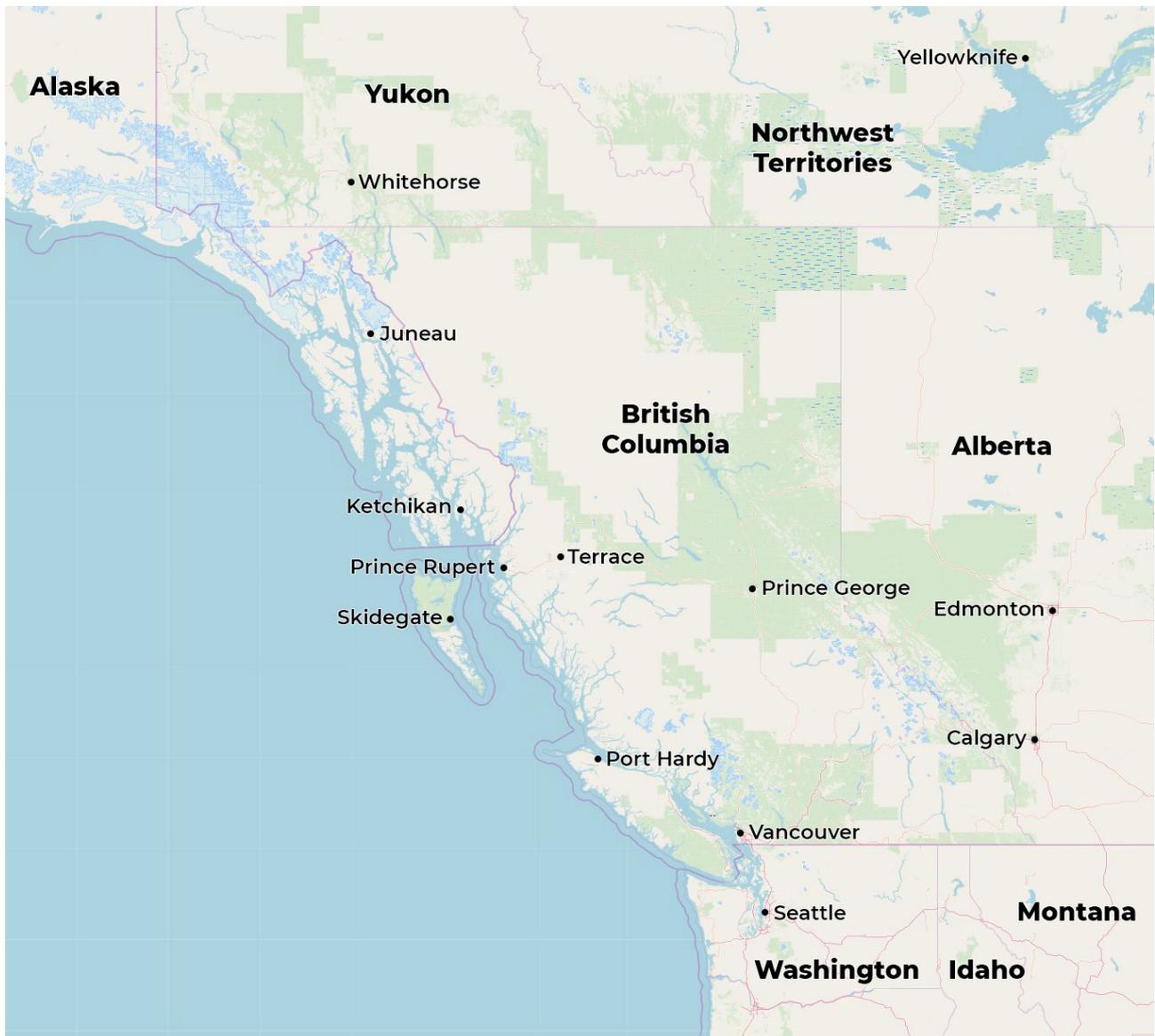
# Part One:
# Community directed language documentation
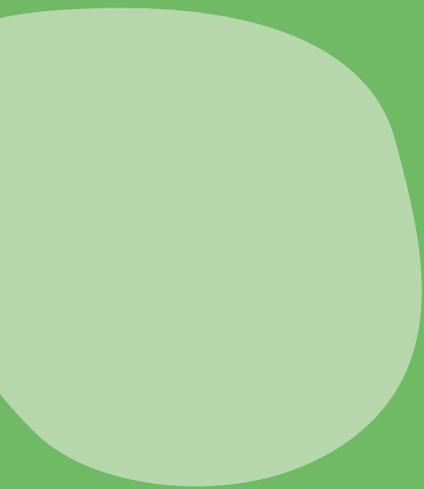
*The process of language loss can be – and, in a few places, is being – slowed, through the attention of linguists, or educationalists, or missionaries with the appropriate attitude, or through the concern and efforts of the people themselves. But, as an empirical observation, it can never be halted and certainly not reversed. Note too that there is no example of a truly dead language ever being revived.*

**Dixon 1997:146**

Dixon's comment suggests that it may well be impossible to reign in or reverse the global trend of language shift to locally dominant languages. The shift to locally dominant languages in all corners of the globe is fuelled by developments in communications technology, the economic and social consequences of industrialisation and colonisation.

This book is not about turning the clock back to pre-industrial, pre-colonial times. The world has been changed and continues to change as these processes work themselves out. It is unrealistic to suppose that language revitalisation efforts can occur in isolation from these processes. The question for many communities with endangered languages today is how to respond to these changes and what to preserve.

Given the myriad factors involved in language shift, it is obvious that no one has, or can have, control over the eventual results of language revitalisation efforts. In addition to global and historical forces, the circumstances of an individual's life influence their ability and their willingness to participate in these efforts.

However, communities can assert control over who has access to the language and how it is represented. Many communities have come to feel that their only option in protecting their authority with regard to the language is to refuse access to others by restricting the availability of documentation and refusing to cooperate with neighbouring groups or outside researchers. While this does maintain control, it also closes off avenues for support for language revitalisation.

Other communities do seek outside support for language documentation and language revitalisation. Unfortunately, the academic structures within which many linguists work do not encourage true partnership with communities. At times this can result in communities experiencing further alienation and disempowerment in relation to their language.

This book presents a new approach to language documentation that seeks to respond to the wider issues of language endangerment while maintaining a high quality of descriptive analysis. In this approach the community is open to external support but maintains control over the research process and over their response to language endangerment in their community.

I refer to this approach as community directed language work, or more specifically, community directed language documentation. This book explores general consid-

erations in undertaking community directed language work drawing on the experience of the Sm'algyax dictionary project, a community directed documentation project in which I worked cooperatively with members of the Tsimshian Nation.

It is empowering for communities to find small and manageable ways to reclaim authority over what is happening to their language. Whether or not any language now endangered ever becomes the first language of its community again, the act of documenting and promoting the language is worthwhile.

The fact that people are involved in language work is evidence of the value that community members and others attribute to the language (and by extension the culture of the community). Respectful interest in the language encourages and supports the efforts of community members who are working for language revitalisation.

The products of the work are of lasting value because they provide a record of the language. They are a valuable resource in language programs. Once a language is no longer spoken, documentation may become a precious community resource.

The process of community directed language work has the potential to transform the relationship of the community to the wider world. This process allows communities to regain their sense of control and agency with regard to their language.

In Chapter One, community directed language documentation is introduced as a strategy for ensuring that language materials are both accessible and relevant to communities with endangered languages. The motivations for this approach are described from both a practical and a political perspective.

# Chapter One:
# Responding effectively to language endangerment

## 1.0 Introduction

This book describes a community-directed language documentation project, the development of the *Sm'algyax Learners' Dictionary* (SLD), which was prepared under the auspices of the Ts'msyeen Sm'algyax Authority, the language authority of the Tsimshian Nation. The Tsimshian Nation is a First Nation of Canada, located in the Pacific Northwest. At a time when language endangerment is an issue for increasing numbers of communities, and now that it has become clear that community initiatives are the key to language revitalisation, this book presents the SLD project as a case study in community directed language documentation.

Over the past few years some progress has been made in publicising the endangered status of many languages. Michael Krauss of the Alaska Native Language Centre has been particularly active in popularising concern for threatened languages. He is widely quoted as giving figures to the effect that ninety percent of the world's languages will not survive the next century (Krauss 1992:7). The issue of language endangerment has been widely discussed. See, for example, Grenoble & Whaley (1998), an edited collection that covers a range of perspectives (with papers by theoretical linguists, field linguists and community members).

Regardless of the importance attributed to indigenous languages and the rich cultural diversity they represent, the fact of the matter is that only those communities in which these languages were once spoken or continue to be spoken by a few are in any position to initiate language revitalisation. Language revitalisation can never successfully be the prerogative of outsiders.

Communities range in their response to language loss from being unconcerned to wanting passionately to restore their ancestral language to their community. In many cases the history of the community leaves its trace in language attitudes. Attitudes can also change over time. Communities often remain unconcerned until the language is no longer regularly heard in the community because until that time there is no apparent problem.

Linguists are among those with the most acute awareness of the problem. We are trained in language documentation so it is natural that among our responses is a desire to see more of these languages properly documented. Unfortunately, documentation alone cannot save languages, although it can mean that they are at least recorded for further study by either community members or other linguists. In the context of language endangerment, particularly in communities that have become passionate about supporting their languages, documentation can be a powerful resource for community directed initiatives. The preparation of documentation in a community directed project not only ensures that the materials are accessible for community members, but reinvigorates the decision making role of the community in relation to their language.

In this chapter, the main theme of the book – community directed language documentation – is discussed in relation to efforts to reverse language shift (§1.1) and to the political motivations that made this approach attractive in the Tsimshian community(§1.2)

## 1.1 Reversing Language Shift

The key role of language communities in language revitalisation is emphasised by Fishman (1989, 1991). He argues that only if 'intergenerational linguistic continuity' is maintained, or in many cases, restored, can there be any hope of language maintenance or revitalisation. In other words, parents need to teach these languages to their children because languages live in families and communities. Given the fact that in many communities with endangered languages the youngest generation of fluent speakers are grandparents rather than parents, and that many of these communities have been disrupted by assimilationist policies and their social consequences, the restoration of language to families and communities is not an easy task.

Efforts to revitalise ancestral languages are discussed under the general heading of RLS (reversing language shift) by Fishman 1989 and 1991. He notes that language classes, particularly at primary school level, are often the strongest response indigenous communities can make to language shift. These classes are generally developed at great personal cost to a few individuals within the community. Unfortunately (as the experience of many can attest (see for example Lutzi-Mitchell & Graburn 1993)), Fishman notes that "there is no reason to assume that schooling. is either a guarantee or even a prop for successful RLS" (Fishman 1989:23).

Success depends on many other factors:

> *Even where schools do not suffer from outright or hidden sabotage by the government authorities on whose personnel, funds and approval they depend ... [they] can yield positive results only if sufficiently surrounded by and embedded within an RLS oriented family-neighbourhoodcommunity field of forces.*
>
> **Fishman 1989: 123**

The kind of language learning required to produce fluent speakers and eventually restore intergenerational linguistic continuity is not a benefit provided only by language programs.[1] RLS can only succeed as a community-wide movement. Declining languages require support from all members of a community if they are to survive.

Clearly a certain amount of support can be offered by linguists in terms of providing knowledge and skills relating to areas such as codification through the development of an orthography and the development of language curricula in contexts (such as programs in schools). Linguists also have skills that can be brought to bear on the interpretation of any previously collected materials in or about the language.

Fishman considers that:

> *Appropriate RLS-status planning can only occur if the societal link between generations is constantly kept in mind and if every putative RLS effort is tested by the question 'how will this effort reach into and reinforce the intergenerational link?' – a link which must take place early, effectively and verbally if RLS is to come about.*
>
> **Fishman 1989:16-17**

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1. Language programs are nevertheless very worthwhile. Located within the school system they combat the continuing role (historically explicit and now structurally endemic) of the school as one of the strongest voices against indigenous languages. They provide links between schools and parents/communities, foster a sense of identity and pride, and certainly seem to make language learning as an adult an easier task.

This focus is useful for linguists working in these contexts and provides a guide in decision making. Overall, it may sometimes mean that the best descriptive choice is neither the most accurate nor the most concise. A case in point is the development of a written standard.

Developing a written standard is worthwhile as it extends the functional domains of the language, assists adults learning the language, may stimulate and certainly allows the development of literature of all kinds (from newspapers to autobiographies); and even if the language does eventually fade, it also allows the possibility of accessible 'salvage' materials which future community members may wish to use.

There are many points at which care must be taken in the development of a written standard to ensure that the result is not so artificial as to share no obvious relationship with local dialects. Such a standard produces new speakers who cannot communicate with older speakers. This fails to reconnect or reinforce in the link between generations and leads to doubts about the authenticity of the new version among older speakers. Energy devoted to such an undertaking under the banner of RLS is not productive. Instead of strengthening the bonds within the language community and broadening that community, changes that result in any level of dissent within the community may lead to division and a further breakdown in the cohesion of the language community (see Fishman 1991:343).

According to Fishman, the point of RLS is not to reconstruct the old language in the image of the newly dominant one. As Fishman notes, the changes associated with 'modernisation' transform the language but are necessary for the language to continue to be relevant. It is a rewarding but difficult task to accomplish modernisation while keeping the language true to its past:

> *Only by persisting in the midst of change, only by indigenising change (thereby taming and refashioning persistence too) does RLS reflect a creative guarantee as to its living potential, rather than degenerate into some totally lifeless, antiquarian oddity. It is not the return of the past that RLS seeks, but the mining of the past so that the core which animated it can continue to be implemented.*

**Fishman 1989:12**

As the discussion in the following section shows, solutions that best serve the community are sometimes at variance with an outsider's ideas about best practice (see also §10.2). The descriptive best practice of a linguist may be motivated by factors that are not relevant to decisions made by speakers. They may also contradict characteristics of the language which only fluent native speakers fully appreciate. All of these factors must be accepted, addressed, and accommodated as far as possible if RLS is to succeed.

Communities wishing to engage in RLS face many stumbling blocks. These include disinterest or antipathy and tensions with outside specialists or within the group over issues of authenticity.

Surveys among the Chilcotin of Central British Columbia and Inuit in Arctic Quebec have found that parents in these communities neither speak these languages with their children, nor consider these languages to be in danger of dying out (see Pye 1992:77 and Taylor et al 1993 :203). A sense of urgency inspired by the knowledge that only intergenerational linguistic continuity can preserve indigenous languages is clearly not felt by respondents in these studies.

Reasons for this apparent lack of concern probably include lack of knowledge about the causes and process of language shift, ambivalence about the value of the language, and the false security that results from hearing older generations of speakers use the language regularly. If languages are heard in everyday use in the

community there may be little apparent cause for alarm. Unfortunately the alarm raised when only a handful of elderly speakers is left comes too late. It is heartening to note that in several communities in Northwest British Columbia some grandparents have made a commitment to addressing their grandchildren in the indigenous language in an effort to reforge the linguistic link between generations. Most of these people only have fluency in their language because their grandparents made this same gift to them.

In her article 'Purism vs. compromise in language revitalization and language revival', Dorian (1994a) argues that debates over the authenticity of learners' language, or the form of the language they are taught, can hamper efforts at language maintenance. The disjunction between generations of speakers is reinforced by criticism from elders and can often be enough to discourage people from the learning task.

Linguistic purism can be identified in a number of forms and fails to support the RLS agenda. For example, conservatism can be a barrier to lexical expansion (Dorian on Gaelic 1994a:487). Without a robust process of lexical expansion, the functional shift to the dominant language is almost guaranteed as domains for using the endangered language become less and less relevant. In some cases, teaching the conservative forms means students are not taught the norms actually used within the community (Dorian on Arabic and Tiwi 1994a:484, and the end of §3.2.1). This means that when they take their version of the language into the community they are unable to interact naturally. Finally, linguistic purism can take the form of criticising learners for their imperfect knowledge, which is a disincentive to learning (Dorian on Mexicano 1994a:486).

Dorian argues that "a common challenge for language renewal and language revitalisation is to limit the restrictive role which puristic attitudes are likely to play in the communities in question, or to channel such attitudes into forms which are useful rather than harmful" (Dorian 1994a:481). Not only elders within communities but also academics and other 'specialists' from outside can display such attitudes.

Collins (1992) describes such a case involving the language of the Tolowa in California. Tolowa people have been involved in language revitalisation efforts for many years. As part of this effort a script was developed and used to produce a pedagogical description of the Tolowa language. The script and the organisation of the grammar are both derivative from English. This leads to the 'misrepresentation' of Tolowa because important aspects of its phonology and grammar are concealed, their incompatibility with the English model meaning that they are not explicitly represented.

From the perspective of a descriptive linguist this means that the material is inaccurate. It does not represent Tolowa properly. The Tolowa it does represent is therefore inauthentic. Nevertheless, the materials are used in Tolowa language programs and represent a commitment by the community to preserve the language. For this reason it seems a little short-sighted to disregard this work altogether. Gradual revisions of the grammar and orthography would possibly be a more productive response.

The Tolowa themselves feel quite different concerns about authenticity. According to Collins "they question the effort to have a *general* linguistic description for the entire valley" (1992:413). Their concerns relate to local variants which reinforce group identity but which have been overlooked in the description.

Although the concerns of linguists about the authenticity of a language have a place in this process it must be a limited place. Purism on the part of linguists is no more helpful than purism on the part of community members. Indeed the status of linguists as outsiders and experts makes a preoccupation with puristic concerns on their part especially problematic. On the whole it seems that such attitudes on the part of outsiders are not tolerated for long. People simply carry on their chosen practices and ignore the advice of the experts. This works well enough until funding bodies confer with experts about the validity of programs. At this point real difficulties created by the tensions between the two perspectives can arise (see Collins 1992:412).

Community directed research changes the balance of power and ensures that the attitudes and preferences of the community are addressed. Although, as the issues discussed later in this book show, many conflicts revolving around language are impossible to resolve to the satisfaction of all concerned, by situating the locus of authority for documentation within the community, issues can be aired in locally appropriate ways. Not only is a great deal learned through this process but the ownership of the final products rests unambiguously with the community.

## 1.2 Social justice and language documentation

Edwards (1985) notes that it is very easy when speaking of language and identity to adopt a value laden stance. He suggests that, while there is a place for advocacy, it is best if the facts can first be set out clearly.

> *My view is simply that, even if one is wholeheartedly and unashamedly committed to a particular ideological position on, say, language and pluralism, the only way to avoid endless and vacuous debate is to confront the issues as they exist, not as one would wish them to exist.*

> **Edwards 1985:ix**

He frames his discussion of language shift in terms of choice, reminding the reader that terms such as 'language murder' and 'language suicide' muddy the true nature of events. Clearly, as Edwards notes (1985:52), there are rarely single causes for these complex phenomena. Unfortunately, the term *choice* has its own connotations and can also be used to muddy our understanding of events. If we are to use this term we would do well to recognise that not every choice an individual makes amounts to a free act in a neutral environment.

As the outline of Tsimshian history in Chapter Two will show, individuals within the Tsimshian community at some time made a forced choice to begin to use English themselves and to teach English to their children. Once the choice to use English as the maternal language was made, the break in intergenerational transmission had occurred. Some Tsimshian families have now been monolingual English speakers for three generations. Tsimshian people, in shifting to English, were not making the free choice of economic opportunists or social climbers. They were compelled by Canadian law, by policies of the Department of Indian Affairs, schools, and by individual teachers to acquire and use English and to give up Sm'algyax. They were also compelled to relinquish cultural practices such as feasting that provided occasions for skilled and elaborate public speaking.

These events and experiences affected language attitudes as well as language choices. There is now a strong current of interest and commitment within the Tsimshian community for strengthening Sm'algyax and teaching it to children. One Tsimshian person put it like this:

> *Sm'algyax is the 'beat of the drums in our hearts'. Let it be the medicine that heals and makes us whole again, and to further strengthen the heritage left to us by our ancestors.*

This quote is a clear expression of the link between language and social justice in the minds of Tsimshian people. From the Tsimshian point of view, any response to language endangerment in the community must also make a contribution to the struggle for social justice. There is no value free stance in elation to language renewal from the Tsimshian perspective. This understanding has a profound effect on the range of roles possible for a language worker in the area. Purely academic language research is viewed as an insult to the community

because it is considered to perpetuate the appropriation of Tsimshian knowledge begun with the removal of ceremonial objects for museum collections in the 1800s and early 1900s. On the other hand research that is seen as relevant and useful to the community (such as the dictionary project) is given enormous support.

Many of the people currently involved in language related activities are non speakers or semi-speakers learning about the language. These people do not seem to have the resources or time to achieve full fluency in Sm'algyax. For some this is a point of frustration but for many others it is not especially troublesome. People within the Tsimshian community who attend adult language classes have a range of motivations and goals. Edwards' (1985:17) distinction between the communicative and symbolic functions of language may usefully be invoked here. A few want to be able to use the language to communicate, but many more want to have some knowledge about the language and how it is used in the community. For the majority, the ability to use Sm'algyax in its symbolic function is both a realistic goal and a satisfactory outcome.

The focus on Sm'algyax as a source of strength for the community is not simply an issue of elaborating group boundaries for the purposes of strengthening ethnicity. Indigenous communities that have been the target of assimilationist policies in British Columbia are not in any danger of losing their status as distinct groups. The group boundaries that distinguish First Nations people from Euro-Canadians and others on the Northwest coast of British Columbia on economic grounds alone are far too well entrenched for that. They are regularly reinforced by activities such as joking among Euro-Canadians that are based on the 'Indian accent' of First Nations people.

Within the Euro-Canadian community identifiable characteristics of First Nations people include: material poverty, poor nutrition, low educational achievement, alcoholism, and health problems. Even within the Tsimshian community there is a dearth of positive ways of expressing and elaborating on Tsimshian identity. For example, in making statements about themselves or their community to me, Tsimshian people regularly said things like: 'We like to argue', 'There's a lot of jealousy in our community', 'You won't want to come back to us dumb Indians.' I am unable to recall an example in which a Tsimshian person made a positive statement about their community. Like the disputes over language variation discussed in Chapter Ten, and the ambivalence of older speakers toward Sm'algyax mentioned above, these statements seem to express a negative evaluation of First Nations identities that was explicit in assimilationist policies but has become increasingly veiled in modern Canadian society.

What many people do have are enormous hopes for their community and commitment to effecting change. People see the revitalisation of Sm'algyax as a powerful way of reasserting their ancestral strength as a nation. The focus on language as a means of identification for many Tsimshian people no doubt results in part from the fact that language was for many years a locus of overt oppression. As the community seeks to strengthen and heal itself, language, with its symbolic function, seems like a fairly obvious place to start. Tsimshian people are defined by rather negative criteria according to others, and these criteria do them no service. They are now seeking to define themselves in new and positive ways.

## 1.3 Conclusion

Although language documentation involves observation and analysis, in endangered language communities it also involves cultural conflict, the negotiation of the allocation of power, and acknowledgement of the history of the language and the community. Any linguist who establishes a good working relationship with more than one or two people in a speech community is involved in these processes. Thus, a community directed approach

to documentation may not require much change in working methods, although it certainly makes these adjustments apparent to the wider community. Community directed research may have a significant impact on the form and content of documentation. In my experience there is a trade off between descriptive elegance (which is sometimes overlooked in favour of more widely understood conventions, and which certainly cannot be imposed *fait accompli*) and the depth and breadth of the project more generally.

The history of the Tsimshian Nation as it relates to Sm'algyax and additional information about the language are given in Part Two. A whole range of issues arising in the development of the SLD as a community directed project are discussed in Part Three. Finally, in Part Four, the project and its outcomes are evaluated.

# Part Two:

# Sm'algyax: the language of the Tsimshian Nation
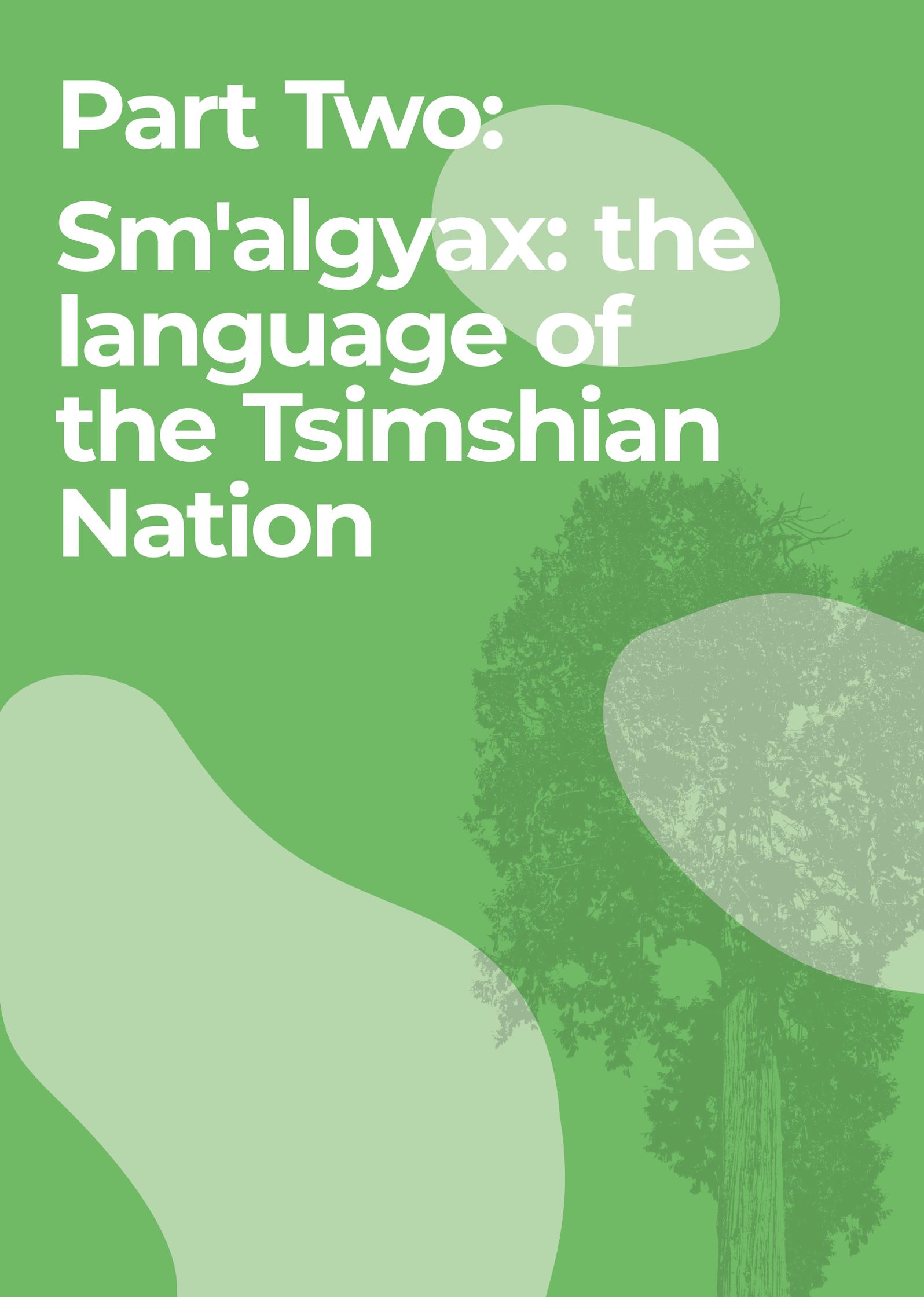
**The past experiences of any community have an impact on their understanding of the world, their expectations about it, and their strategies for dealing with it. These experiences and perspectives impact on community directed language work in a variety of ways. At times they can be invisible, particularly to people who are not community members.**

Community directed language work is more likely to succeed if everyone involved is aware of these contextual factors. This provides a shared starting point for everyone involved in the project. It ensures that there is room for dialogue about these issues so that all of the factors that are important in the project are addressed as appropriate. Where communities have been or continue to be subject to oppression, these assumptions and expectations may reflect aspects of internalised oppression that are no longer apparent to members of the community themselves. Recognising this can be part of a process in which the community acknowledges present challenges and develops alternative visions for the future.

People's perceptions of and attitudes towards language are influenced by both the historical and immediate cultural contexts. In the case of Sm'algyax, the primary reference point for comparison between languages is now English. The typological profile of English is radically different to Sm'algyax. Given the broader impact of racism on the Tsimshian community, it is not surprising to find that assumptions about grammar, based on English, incorrectly give the impression that Sm'algyax is somehow defective.

The preparation of the dictionary was seen by the Tsimshian Nation as a counterassertion to this view because it is evidence of the value and legitimacy of Sm'algyax. Community directed language work allows dialogue about these perspectives. Individuals may hold both views simultaneously. Documentation is a concrete symbol of the value of the language that can be used in interactions with government departments and so on, in addition to reinforcing the significance of the language within the community.

Part Two of this book is intended to help include the reader as an observer in the process of community directed language work. It outlines some of the shared understandings of the history, community and structure of Sm'algyax that formed the basis for participation in the dictionary project.

Chapter Two examines the effects of historical events on the Tsimshian Nation and its language, Sm'algyax. It also describes the development of the orthography and provides an overview of Sm'algyax literature. Chapter Three presents an analysis of Sm'algyax today, including information on speaker demographics, types of variation in the community, and attitudes to influence, on the language from English. Finally in Chapter Four the typological characteristics and structure of Sm'algyax are described.

# Chapter Two:
# History of Sm'algyax and the Tsimshian Nation

## 2.0 Introduction

In this chapter we outline the history of the Tsimshian Nation and consider the impacts of key historical events and developments on its language Sm'algyax. An understanding of these events is crucial as they inform all decisions made about the language within the Tsimshian community today.

A historical overview is given in §2.1. In this section, the fortunes of the Tsimshian Nation as an economic unit and a political force are shown to be closely tied to the status of Sm'algyax within the community. The development of the orthography, which in many ways mirrors the history of contact between the Tsimshian and Europeans, is discussed in §2.2. Finally in §2.3, a review of the literature in and about Sm'algyax is provided.

## 2.1 Historical backdrop

The historical discussion of the Tsimshian Nation in this chapter concentrates on the period of post-European contact because this coincides with the beginning of pressures on Sm'algyax. This period is related to dramatic changes in the relationship between the Tsimshian people and their language. There are a number of identifiable periods in the history of contact with Europeans. In the very early days the maritime fur trade dominated relations (§2.1.1). This was followed by the first stage of acculturation during the mission period in which the majority of Tsimshian people converted at least nominally to Christianity in the late nineteenth century (§2.1.2). The early twentieth century saw the rise of the cannery industry which dominated life for most people on the coast (§2.1.3). During this period acculturation became a governmental as well as a missionary concern and attendance at residential school was the norm for Tsimshian young people (§2.1.4).

English became more dominant at each stage in this history. Efforts to eradicate Sm'algyax, which were undetectable during the maritime fur trade period, became increasingly apparent during the missionary period. Work in the canneries required fluency in English, and the agenda of acculturation was overtly institutionalised in the residential school system. Over the course of this history the relationships between Europeans and Tsimshian also shifted dramatically. In the early days Europeans depended for their welfare on their Tsimshian neighbours who were the key to the fur trade, while in this century Tsimshian people have gradually been disenfranchised on their own territory and became increasingly economically dependent on the provincial and federal governments.

### 2.1.1 THE MARITIME FUR TRADE

The Tsimshian language did not decline during the very early years of contact with Europeans. In fact the early period of contact was a time of strong lexical expansion as speakers incorporated names for new objects and concepts they encountered through contact with Europeans. Examples include *gyudan* 'horse', (borrowed from Chinook), *ga̲lmt'u'utsk* 'pot', and *ga̲lipliip* 'cannon' (words developed from Sm'algyax lexical stock). From

around 1770 to 1830, explorers and fur traders were a presence on the North coast but there were no forts or other permanent settlements in the area (Bolt 1992:15). Trading was generally conducted in Chinook Jargon though later translators were also used.

During this time the trade in furs (especially sea otter pelts) added significantly to the wealth of the Tsimshian people. Rivalries between the great Tsimshian chiefs were heightened during this time and eventually the Hudson's Bay Company was given land at Lax Kw'alaams in 1834 by the chief Ligeex so that he could ensure a secure trading partnership (Bolt 1992:15). Lax



THE EULACHON.

Illustration of an Eulachon by H. L. Todd, 1884

Kw'alaams was a camping site at which several Tsimshian groups had land. It was used as a stop when people journeyed north to fish for oolichan (a type of smelt) in the Nass River in the spring.

Once the fort (Fort Simpson) was established a number of Tsimshian village groups moved their winter village sites to Lax Kw'alaams.[2] After this time the trading relationship intensified and Tsimshian people were sometimes employed by the traders as labourers (Bolt 1992:17).

Although relations between the fort and their Tsimshian neighbours were not trouble free, they were relatively harmonious. Usher notes that many Tsimshian people were employed within the fort. In 1852 five hundred Tsimshian people were instrumental in saving the fort from fire (Usher 1974:37).

During the period in which trade was the focus of relations with Europeans, there were very few direct pressures on the Tsimshian people to adopt Western ways. However, there were changes in economic life and spiritual life. Bolt (1992:19) suggests that there was conflict between the widespread belief among First Nations groups that over-killing could not take place without retribution, and successful participation in the fur trade.

> *The desire for European goods required behaviour that conflicted with ancient taboos and rituals. Hudson's Bay Company records, throughout the whole era of the fur trade, indicate a steady decline in both the number and quality of furs for most species. Undoubtedly, the decline of species produced, for Native people, many inner conflicts.*
>
> **Bolt 1992:18-19**

In addition to trade practices, a series of smallpox epidemics which lasted through most of the 19th century put real strains on the Tsimshian way of life. It is estimated that around a third of the Tsimshian people living at Fort Simpson lost their lives during the epidemic of 1836 alone (Usher 1974:38). Such a large loss of life made it impossible to maintain the usual system of memorial feasting. Many chiefly positions went unfilled because there simply were not enough people eligible and wealthy enough to assert their right to the titles.

## 2.1.2 THE MISSION PERIOD

Efforts at Christianisation of the peoples of Northwest British Columbia by Europeans began in 1857 with the arrival of William Duncan, a missionary with the Church Missionary Society (CMS) at Fort Simpson. According to Usher, Fort Simpson was chosen by the CMS for strategic reasons.

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2.   The name of the settlement was changed to Port Simpson in 1880 (Bolt 1992:162). The change was motivated by the need to distinguish this settlement from Fort Simpson in the Northwest Territories as the similarity was causing problems in the mail system (Mulder 1994:9).

> *[The CMS] were well aware of the role of the Tsimshian Indians as the most important trading nation in the aboriginal economy of the coast, and they recognised the function of Fort Simpson as a meeting-place for the many different tribes of the region.*
>
> **Usher 1974:29**

Thus the CMS considered that by establishing a mission at Fort Simpson they would be in a good position to influence all the First Nations peoples in the area.

The arrival of the CMS, through their representative William Duncan in Fort Simpson, marked the end of the era in which Tsimshian people related to Europeans essentially on their own terms. The fur traders were generally unconcerned with the condition of First Nations people so long as it did not pose any risks to them. The CMS's express purpose in sending Duncan to Fort Simpson was to transform the condition of the Tsimshian people and eventually their neighbours beyond recognition.

Essentially, the CMS mission was to bring to non-Western societies all the values and customs of Protestant Victorian England. In the words of Maunsell (a CMS missionary in New Zealand), besides Christian beliefs and practices, civilisation:

> *... implies an organized society in which the condition of the human species is mentally, morally, and physically elevated. It is intimately connected with the increase of knowledge. It leads to the acquisition of wealth. It humanizes the man, softens the manners and gradually surrounds us with every kind of earthly comfort.*
>
> **cited in Usher 1974:16**

In other words, there was no aspect of Tsimshian life that could not be improved if it were to come to resemble the life of the motherland more closely.

One idea very much in favour within the missionary movement generally during the eighteenth and nineteenth centuries was the creation of Christian villages (Usher 1974:23). From the missionary's point of view, life within the mission could be organised more effectively and without the interference of traditional values that impinged greatly in already established communities. Converts who came to Duncan's village after it was eventually established at Metlakatla in 1862 did so on the undertaking that they would forgo:

> *... the Demoniacal Rites called Ahlied or Medicine work; Conjuring and all the heathen practices over the sick; Use of intoxicating liquor; Gambling; Painting Faces; Giving away property for display; [and] tearing up property in anger or to wipe out disgrace.*
>
> **Laws of Metlakatla, cited in Usher 1974:64**

In addition, all members of the community were to observe the Sabbath and send their children to school. Christian villages were acceptable to converts in many places because they allowed individuals to go about their new lives of observance and industry away from the ridicule of their families and old neighbours.

A smallpox epidemic in the summer of 1862 was also a significant reason for many Tsimshian people to move to Metlakatla. It is commonly estimated that in two years this outbreak killed a third of all the First Nations people in British Columbia (see Bolt 1992:120 and Miller 1997:138 for statistics on the Tsimshian). In the midst of such enormous loss of life only five people died at Metlakatla because Duncan was able to vaccinate people there. From an initial population of fifty, the village quickly burgeoned to over four hundred as people sought protection from the disease.

The initial settlement around the fort at Lax Kw'alaams had forced many different Tsimshian groups into close, prolonged contact. One significant result was increasing competitiveness between the chiefs of the groups.

Metlakatla, Alaska, seen from the water, c.1890s

Subsequently, the move of some people to Metlakatla weakened traditional loyalties to clan groups, as the decision to move to Metlakatla was initially a personal, rather than a group, prerogative. As Usher (1974:61) notes, the moving itself was probably not particularly disruptive or significant. Tsimshian people traditionally moved from place to place as part of the seasonal cycle. In spring they travelled to the Nass to fish for oolichans, and then to seaweed camps. In summer and fall the focus was on catching and preserving salmon, and on gathering berries at other appropriate locations. Disruption to the social order grew out of the strengthening of traditional loyalties resulting the competitiveness of life around the fort. This was followed by the break with traditional loyalties demanded by Duncan from those who moved to Metlakatla. These changes significantly complicated political life within the Tsimshian Nation. The population at Fort Simpson was consistently larger than that of Metlakatla (Bolt 1992:25), and eventually a small group of Methodist converts invited a Methodist missionary to replace Duncan in their community.

This pattern of traditional groups amalgamating and splitting was to be repeated many times over the course of the next century. The repercussions of these changes are felt even today. For example, the leadership of the village of Lax Kw'alaams is shared by nine hereditary chiefs, descendants of the chiefs of the nine tribes that originally settled at the fort. It is not unusual for divisions that arise within the village to include an element of loyalty to the tribes in question.

The CMS expected missionaries to learn the local language and to translate the Bible and other texts such as the Book of Common Prayer into the vernacular to ensure that Christianity would be taken to heart by converts. However, while Duncan learned Tsimshian so that he could communicate with the people, he never made much progress with translation. By 1880 he argued that translation was not worth while because he expected that the community would be English speaking within a few years (Usher 1974:94).This is strange given that community life in the village was conducted in Sm'algyax, and as late as 1878 it was impossible for others to communicate in English when they visited the community (Usher 1974:105).

Overall, Duncan's language policy makes sense if it is viewed in terms of control. Without English, the Tsimshian people depended on Duncan for spiritual guidance because they could not read Christian texts on their own (Usher 1974:94), and they were removed from the influence of other whites – including other missionaries who came to the area – by the lack of a common language (Usher 1974:109). Nevertheless, English was in practice necessary for education (Usher 1974:75) and was strongly associated with the move away from traditional life towards mission life. In the long run, abandonment of the Tsimshian language was a result of Duncan's policies of acculturation.

William Duncan came to disagree with the CMS on a number of fundamental points. They ranged from administrative matters to his refusal to allow converts to take communion. Eventually, disputes such as these led to his dismissal from the CMS in 1882 (Murray 1985:146). Nevertheless, Duncan was to remain on the North coast for the rest of his life. After his dismissal from the CMS, there followed a period of deep division within

Metlakatla. Loyalties were divided between Duncan on one side and the CMS and Church of England, represented by the recently appointed Bishop Ridley, on the other. Both men, Duncan and Ridley, competed for the loyalties of the people. The orthography developed by Duncan and Ridley is described in more detail in §2.2.2 and Chapter Nine.

Ultimately, Duncan and a group of six hundred Tsimshian people moved to Annette Island just inside the Alaskan border. Here they established New Metlakatla. The motivations for the move were complex. Aside from questions of loyalty to Duncan and his teachings, an important factor for many Tsimshian people was the fact that the United States government had made the group a land grant. This was in stark contrast to the appropriation of land by the Crown in British Columbia during this period.



Aerial view of the Skeena River, British Columbia, 2008

At the time of the beginning of the fur trade there were fourteen Tsimshian tribes. They could be divided into three groups based on their territories, particularly the sites of their winter villages (Mulder 1994:6-7). The Canyon Tsimshian (Gitselas and Gitsumgalum) occupied sites on the upper Skeena and the Kistum Kalum rivers. The nine Lower Skeena tribes (Ginakangiik, Git'andoo, Gisp'axlo'ots, Gilutau, Gitlan, Gitwilgyots, Git'tsiis, Gitandoyks and Gidzaxłaał) occupied sites around Metlakatla Pass and all eventually settled at Lax Kw'alaams. Finally, the Outer Coastal tribes (Gitkxała, Gitka'ata and Gitisdzu) occupied coastal territory south of the mouth of the Skeena River.

Besides Metlakatla, New Metlakatla and Port Simpson, a number of other permanent Tsimshian villages were established during the late nineteenth and early twentieth centuries; many were at or near the winter village sites identified above (see Map 2). The village of Gitkxała on Dolphin Island was occupied continuously throughout this period (Campbell 1984:3), eventually becoming reserve land (Kitkatla), and the villages of the Gitselas and Gitsumgalum also became Tsimshian reserves (Kitselas and Kitsumkalum), both of which are situated on the outskirts of Terrace. Many people from Gitsumgalum also settled at Port Essington (approximately opposite Port Edward) and worked in the cannery there until it was closed. Finally, the people of Gitka'ata, who had joined Duncan's mission during the early 1870s, decided to return to their territory, rather than following Duncan north. They established the village of Hartley Bay, not far from their traditional winter village site. It seems that before moving to Metlakatla the Gitka'ata probably spoke Sgüüxs; however, they largely adopted Sm'algyax during their years at Metlakatla (Campbell 1984:8).

The village of Klemtu was settled by the Gitisdzu and by Heiltsuk Kwakiutl when a cannery was established there in 1927 (Mulder 1994:11). It is located on the border of Heiltsuk territory. Although the Gitisdzu spoke Sgüüxs at the time of settlement at Klemtu, English and then Heiltsuk are now the dominant languages in the village. Sgüüxs is used in only one family, and is spoken really fluently by only one elder. The presence of Sm'algyax in the village at this time is the result of the fact that individual elders who are speakers happen to live in the village. This dominance of Heiltsuk is probably due in part to the proximity of Bella Bella which is a larger Heiltsuk community with a hospital and other services.

### 2.1.3 CANNERY LIFE

The Tsimshian people continued to be highly mobile through most of the twentieth century while participation in the cannery industry dominated life on the coast. Canneries were established along the length of the coast and required large numbers of workers during the summertime when the salmon were running. In many ways the lifestyle resulting from seasonal work in the cannery industry dovetailed easily with the traditional economy as it involved hard work and long hours over the summer months. However, rather than collecting food for the winter in the traditional manner, the cannery industry allowed people to earn wages. Nevertheless, work in the canneries was difficult to reconcile with Tsimshian language and culture.

> *The movement of individuals and families to the canneries and towns has resulted in a loss of Coast Tsimshian fluency, in that while many of these movements were seasonal rather than permanent, the pressures toward English usage and against Sm'algyax usage were much more apparent during these periods of increased contact. There was a great deal of racial discrimination ... the message was clear: a command of English would aid in securing a better job, whereas fluency in a native language was only a detriment.*
>
> **Mulder 1994:11**

The cannery economy was at its height in the early decades of this century. The development of refrigeration and the decline in salmon stocks has lead to a decline in the industry over a number of years. At this time the cannery industry no longer represents a viable living for the majority of Tsimshian people. Instead, work in the fishing and forestry industries is available for some, and individuals from various communities have trained as teachers, lawyers, and so on. On the whole, prospects for work are better in towns such as Prince Rupert, Terrace and Prince George; however, many people are reluctant to leave their villages. The economy of the area is not strong, and control of natural resources is largely in the hands of white industrialists with the consent of the provincial government.

Many people look to the treaty process now being conducted between individual First Nations and the provincial British Columbia and federal governments as the means of regaining traditionally held resources and rebuilding the Tsimshian economy. Renewed pride in Tsimshian identity and concern about the vitality of Sm'algyax motivate, and are strengthened by, this process.

### 2.1.4 RESIDENTIAL SCHOOLING

For most of the twentieth century residential schooling was the norm for First Nations children on the coast. The residential school system was imposed on First Nations people through amendments to the Indian Act in the 1920s and 1930s. Not only was attendance compulsory, but parents who refused to comply were fined or gaoled (Ignace 1998:9). Across Canada it was the policy of the residential school system to enforce the acquisition and use of English.

> *Many elders remember being strapped, put in solitary confinement, convicted to do physical labour, and being humiliated, chastised and shamed by their teacher and principal for speaking their language in the school. Some went to residential school for ten years, being admitted at five or six years of age. Others attended for 'only' five or six years.*
>
> **Ignace 1998:9**

While many Tsimshian parents desired education for their children because they believed that it was important for their future economic well being, education came at the price of fluency in the traditional language.

> *When children were sent to residential schools, they were cut off from traditional learning for ten out of twelve months of the year; and not only were they forbidden to speak their language, but they were severely punished if they did. In addition, the children were generally removed from their Coast Tsimshian language environment at a critical age for language development. During this critical period, the children had not mastered the rules of Sm'algyax, and when they were immersed so intensively in English, the latter was incorporated in a far more pervasive way than if English had been learned subsequently.*
>
> **Mulder 1994:12-13**

The residential school system was a very effective tool for forcing people to switch to speaking English. It dramatically reduced opportunities for children to learn the language of their communities by removing them from their families. Because they were shamed and punished as children for speaking Sm'algyax, many people who had managed to learn the language chose to teach their own children English instead. Parents did this partly in the hope that they would be able to protect their children from similar experiences. They also believed that English was important if their children were to participate in the economy of the area.

Even now, when language loss is imminent, many elders are reluctant to speak their ancestral language because the association with shame and trauma is so strong (Ignace 1998.10). Besides the intellectual task of learning or relearning the language, Ignace notes (1998:10) that "... there is a tremendous amount of emotional and psychological trauma and baggage which people continue to have to heal from and overcome" if languages are to be restored to their communities.

Today the residential school system has been disbanded and at least in School District 52 (which oversees education in the villages of Hartley Bay, Kitkatla and Lax Kw'alaams and Metlakatla) Tsimshian people have a voice through the First Nations Education Council.

Language revitalisation and language revival have become concerns for all of the First Nations of Northwestern British Columbia. While the struggle for First Nations language and culture education in schools is largely played out on a district by district basis, a directive from the provincial Ministry of Education in 1996, decreeing that all students in grades five through eight must be taught a second language, has legitimised the demands of many groups.

### 2.1.5 SUMMARY

This overview of the history of the Tsimshian people since contact is far from complete. A number of works on the mission era are available (see for example, Usher 1974, and Bolt 1992). They explore the complex relationships between the missionaries and the people they went to 'save'. The demise of the cannery industry has yet to be fully dealt with in British Columbia; the consequences for the economy of the coast are enormous and will take many years to address.

The years around the turn of this century have been a time of great hope for many First Nations people of British Columbia as most groups are engaged in treaty negotiations with the provincial and federal governments. British Columbia was annexed by the Crown without any negotiations with the First Nations of the area, an action that has been persistently challenged by First Nations groups (see LaViolette 1973, Cail 1974, Berger 1983, Raunet 1984, Wa & Uukw 1987). Most groups are seeking the return of their traditional land and

sea bases along with associated natural resources. They are seeking self-government and more control over the education and health systems that so deeply and directly affect the quality of their lives.

## 2.2 Development of the Sm'algyax writing system

This section provides an overview of the social and political factors of relevance to a discussion of the Sm'algyax writing system(s) (§2.2.1) and discusses the development of several Sm'algyax orthographies and their forms (§2.2.2). The use of the orthography is discussed in more detail in Chapter Nine. The orthography is based on phonemic patterns, although in practice a combination of phonetic, phonemic and morphological information is in fact represented in the orthography.

The phoneme inventory of Sm'algyax is quite large, totalling sixty-five phonemes. Both the consonant and vowel inventories include complex sets of phonemes distinguished by the manner of articulation. For the consonants, this includes series of voiced, voiceless and ejective stops and affricates. Velar stops have a palatalised and a labialised series. Nasals and approximants have glottalised counterparts. There are both labialised and unrounded velar approximants. There also are voiceless fricatives in the consonant inventory. Table 2.1 gives the consonant phonemes of Sm'algyax. Vowels and diphthongs are distinguished according to length and there is also a set of 'creaky' vowels in Sm'algyax. They are presented in Table 2.2.

| | Bilabial | Alveolar | palatalised | Velar (plain) | labialised | Uvular | Pharyngeal | Glottal |
|---|---|---|---|---|---|---|---|---|
| **Stop** | | | | | | | | |
| **voiced** | b | d | gj | g | gw | G | | |
| **voiceless** | p | t | kj | k | kw | q | | ʔ |
| **ejective** | p' | t' | kj' | k' | kw' | q' | | |
| **Nasal** | m | n | | | | | | |
| **implosive** | 'm | 'n | | | | | | |
| **Fricative** | | s | | | | | | |
| **Affricative** | | | | | | χ | h | |
| **voiced** | | | dz | | | | | |
| **voiceless** | | | ts | | | | | |
| **ejective** | | | ts' | | | | | |
| **Approximant** | | | j | ɰ | w | | | |
| **implosive** | | | 'j | 'ɰ | 'w | | | |
| **Lateral** | | | | | | | | |
| **fricative** | | | | | | | | |
| **implosive** | | | | | | | | |

Table 2.1: Sm'algyax consonant phonemes

| | | Front (unrounded) | Back unrounded | rounded |
|---|---|---|---|---|
| **High** | | | | |
| | **short** | i | ɨ | u |
| | **long** | iː | ɨː | uː |
| | **creaky** | i'i | ɨ'ɨ | u'u |
| **Mid** | | | | |
| | **short** | e | | ɔ |
| | **long** | eː | | ɔː |
| | **creaky** | e'e | | ɔ'ɔ |
| **Diphthong-** | **short** | | | ɔy |
| | **long** | | | ɔyː |
| **Low** | | | | |
| | **short** | æ | a | |
| | **long** | æː | aː | |
| | **creaky** | æ'æ | a'a | |
| **Diphthong-** | **short** | æy | aw | |
| | **long** | æyː | awː | |

Table 2.2: Sm'algyax vowel and diphthong phonemes.

### 2.2.1 WRITING IN SM'ALGYAX: A SOCIOLOGICAL OVERVIEW

The history of writing in Sm'algyax parallels the history of contact between the Tsimshian and Europeans, beginning in the late eighteenth century. In the early stages of contact, fur traders and others associated with the fur trade made word lists, several of which still exist, in order to assist them in communication with local groups.

In the missionary period the first orthography intended for use by Sm'algyax speakers was developed. This original Anglican writing system was mainly used for religious purposes. The adoption of a writing system in the context of social change arising from contact situations is quite typical for previously preliterate societies. Its use was an indicator of the degree to which people adopted other Western practices as they adjusted to the new economy that traders brought to the area. As Fishman notes:

> *The creation of writing systems is itself necessarily an outgrowth of culture contact, if not political and economic domination from the outside. Thus, the creation of a writing system is singularly unlikely to be viewed dispassionately and its propagation and acceptance by indigenous networks are necessarily viewed as having implications for group loyalty and group identity.*

**Fishman 1977:xv**

The adoption of a Roman script writing system by members of the Tsimshian Nation was an integral part of their response to the radical economic and political change wrought by contact with Europeans.

Interestingly, this Anglican orthography was never really used outside the religious context. To a certain extent the close association between the Anglican orthography and the influence of the church worked against its wider acceptance as a writing system for all members of the Tsimshian Nation. While there was strong loyalty for the orthography from some people, many others had no interest in something so closely related to the implementation of assimilation. Also, the orthography is quite complex: non-English sounds are spelt with up to four letters, and people report that 'you have to know what is written in order to be able to read it.' Literacy in the Anglican orthography was further limited by the general shift from Sm'algyax to English (especially English literacy) which began in the missionary period.

This larger societal shift away from Sm'algyax has meant that literacy in Sm'algyax was never widespread. Today there are four or five orthographies in use within the Tsimshian community, where fully fluent Sm'algyax speakers number fewer than four hundred. These orthographies are of varying degrees of technical quality and they compete with varying degrees of success for the loyalty of Sm'algyax speakers. The development of this situation and possibilities for its resolution must be understood if language revitalisation is to be supported by any orthography.

Although each orthography has been developed in response to a perceived need for literacy in Sm'algyax, only the Anglican orthography entered a clear field. Since then any new orthography competes with the other orthographies which some speakers have already adopted.

The Anglican orthography is now losing out to other more modern creations, largely because the men and women who supported it are slowly passing away. This orthography is strongly associated with a time of community-wide religious observance which was at its peak early in the twentieth century. The technical failings of this system, and its Christian religious associations, mean that many Tsimshian people have no real commitment to it. However, very few people see the point in change per se, so the rise of a new universal system is far from a natural progression. Sm'algyax speakers who have acquired literacy in one writing system are generally unable to see the merits of alternative systems, and are reluctant to go to the trouble of learning them. Most importantly, there have never been widely available, easy to use, resources for learning any of the Sm'algyax orthographies.

Ultimately, in order to be widely accepted, a Sm'algyax orthography has a propaganda war to win, and a community to educate. Until these ends have been met, it is likely that competing orthographies will continue to be a source for dissent in the Tsimshian community. Because Sm'algyax literacy in the practical orthography is now considered to be an integral part of language learning in the Sm'algyax Language Program (see §3.4), the acceptance of the practical orthography by the wider community is of particular importance. Until this is accomplished the program will continue to trigger deep antipathy from many non-literate, or other-literate, sectors of the Tsimshian community. A reversal in language shift under these conditions is not likely.

## 2.2.2 THE DEVELOPMENT OF SM'ALGYAX ORTHOGRAPHIES

This section considers each of the orthographies developed for Sm'algyax. It begins with the writing systems based completely on English that were used by traders, and follows the process of increasing Tsimshianisation as succeeding orthographies sought to represent Sm'algyax more accurately and create easier systems for speakers to use.

## A. EARLY WORD LISTS

The audience of the writers of the earliest lists were English speaking people in the area. They were used by people who wanted to communicate with Tsimshian people and those from other First Nations. Slightly later,

in the mid to late nineteenth century, lists were also made for inclusion in surveys and reports. Even at this early stage, the difficulties involved in using the Roman alphabet to represent non-European languages were apparent. Tolmie and Dawson observe that:

> *it is much to be desired, if practicable, that by some natural phonetic system ... the representation of the sounds of lndian languages should be removed altogether from the tangle of diverse values and meanings which has grown about the Roman characters.*

**Tolmie & Dawson 1884:5**

Such a system was not available at that time, however, and language-specific characteristics were frequently made obscure. As a consequence, early results left room for improvement by the missionaries.

The following tables show the symbols used by early writers to record Sm'algyax words. The sources included in the tables are published word lists covering the 1860s to 1880s. Because the phonemic inventory of Sm'algyax is so large, I have presented the inventory in a number of separate tables. In each case the phonemes are arranged according to the place of articulation. The first line in each table gives the IPA representation of the phoneme concerned. The difficulties posed by sounds that had no counterparts in European languages are reflected in the various ways they are represented (see especially /gj/, /ɬ/, /x/, and /ɨː/). (The references are to Tolmie & Dawson 1884, Anonymous 1862, Gibbs & Dall 1887, and Anonymous n.d. Due to the limited number of words included in these lists, some phonemes are not represented.) (A few examples of sentences from Hibben & Carswell are given in §3.2.1).

| IPA | b | d | dz | g | gʷ | gʲ | G |
|---|---|---|---|---|---|---|---|
| **Tolmie & Dawson** | p | t | ts | k | kw | ki | k |
| **Anonymous 1862** | p, b | t | ts | k | kw | ke, qe, ka | k, q, c |
| **Gibbs & Dall** | p | t | ch | g, kh | kw | ke | k |
| **Anonymous n.d.** | p | t | ts | c | qu | ki, ky, ke, ka | k, c |

Table 2.3: Representation of Sm'algyax voiced stops and affricates in early word lists.

| IPA | p | t | ts | k | kʷ | kʲ | q | ʔ |
|---|---|---|---|---|---|---|---|---|
| **Tolmie & Dawson** | p | t | ts | k | k | ki | k | - |
| **Anonymous 1862** | p | t | ts | k | q, kw | ke | q | - |
| **Gibbs & Dall** | p | t | ts | k | k | he | - | - |
| **Anonymous n.d.** | p | t | ts | qu | qu | ke | - | - |

Table 2.4: Representation of Sm'algyax voiceless stops and affricates in early word lists.

| IPA | p' | t' | ts' | k' | kʷ' | Kʲ' | q' |
|---|---|---|---|---|---|---|---|
| **Tolmie & Dawson** | - | t | ts, tsh, tz | k, ke | kw | ka, ke | k |
| **Anonymous 1862** | p | t,d | ts | k | kw | ke | k |
| **Gibbs & Dall** | p | t | ch, t's | k | k | ki | k |
| **Anonymous n.d.** | p | t | ts, tch | k | qu | | k |

Table 2.5: Representation of Sm'algyax ejective stops and affricates in early word lists.

| IPA | s | ɬ | x | h |
|---|---|---|---|---|
| Tolmie & Dawson | sh, s | l, tl, kl | huh, h | h |
| Anonymous 1862 | s | l, hil, til | agh, ugh, ach, h | h |
| Gibbs & Dall | s, sh | l, hl, thl, al | augh | h |
| Anonymous n.d. | s, sh | l, sl | kk, ak | h |

Table 2.6: Representation of Sm'algyax fricatives in early word lists.

| IPA | m | 'm | n | 'n | l | 'l | j | 'j | w | 'w | ɰ | 'ɰ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tolmie & Dawson | m | - | n | n | l | - | y | y | w | w | - | - |
| Anonymous 1862 | m | - | n | n | l | l | y | y | w | w | gh | - |
| Gibbs & Dall | m | m | n | n | l | - | y | y | w | w | - | - |
| Anonymous n.d. | m | - | n | n | l | l | y | y | w | w | - | - |

Table 2.7: Representation of Sm'algyax liquids, nasals and glides in early word lists.

| IPA | i | iː | e | eː | æ | æː | a | aː | ɔ | ɔː | u | uː | ɨ | ɨː | ə |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tolmie & Dawson | i | ī | i | ei | u, a | ā | ā | ā | oh | oa | oo | oo | i | eu | - |
| Anonymous 1862 | ī | ee | - | - | a | ar | a | ar | | - | - | oo | - | oogh | - |
| Gibbs & Dall | e | ee | i | aa | a | a, au | a | a, au | oh | u | i | oo | u | oh | - |
| Anonymous | i | ee | - | - | a, ah | ah | a | ah | o | - | - | oo | - | a | - |

Table 2.8: Representation of Sm'algyax short and long vowels in early word lists.

| IPA | i'i | e'e | æ'æ | æy | æyː | a'a | aw | awː | ɔ'ɔ | ɔy | ɔyː | u'u | i'ɨ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tolmie & Dawson | - | - | - | a-ī | a-ī | - | auw | - | - | oi | oi | o-u | - |
| Anonymous 1862 | - | - | a- | i | i | - | - | - | - | - | - | - | - |
| Gibbs & Dall | ee-u | - | - | ai | ai | - | aw | aw | - | oi | - | u | - |
| Anonymous n.d. | - | - | - | i | i | - | ou | ou | - | - | - | - | - |

Table 2.9: Representation of Sm'algyax creaky vowels and diphthongs in early word lists.

## B. MISSIONARIES

William Duncan was probably the first person to use the Sm'algyax orthography as a means of communicating more than superficially. Duncan's main use of the orthography was to write sermons or speeches which he translated from English. This represents a significant shift in the use of writing in Sm'algyax from the practices of the traders who required the language only for the purposes of trade. Shortly after Duncan's arrival in Lax Kw'alaams (Port Simpson), he began to take lessons in Tsimshian from a man named Clah (Arthur Wellington). As the following quote shows, Duncan viewed writing in Sm'algyax as a method of learning, as well as a way of recording new words.

> *I wrote his name on a slate. I said, 'you try' and he shook his head. So I took hold of his hand with the pencil in it and I shoved his hand along ... 'C-1-a- h'. 'Now,'I said, 'you try'*

*and I gave the pencil back to him. 'Tumpahluh! Tumpahluh!' 'Oighack! Oighack!' he cried,*
*which means 'right.' So I knew I had it. 'Pahl' is try. 'Tumpahluh' is 'I will try'.*

**cited from Murray 1985:39**

There is no mention of the source of Duncan's orthography in Murray's discussion, but it seems likely from the forms Duncan used that he began with the orthography developed by early traders. There was a further important shift in Duncan's use of the orthography when he began to write in Sm'algyax for his Tsimshian audience. According to Murray (1985:49f), Duncan was able to translate portions of Christian texts within two years of his arrival and have them sent to Victoria to be printed.

The Sm'algyax orthography had a Tsimshian audience from this point on. Interest in literacy among the Tsimshian people was high; there was strong support for the school Duncan started. Though attendance was sporadic, it was typically around one hundred pupils a day over the first winter (Murray 1985:47f). The schoolhouse was built by Tsimshian people about a year after Duncan's arrival. Later, Duncan and many Tsimshian people chose to move to Metlakatla to begin a community away from the Hudson's Bay Company.

Within a decade of Duncan's departure from Lax Kw'alaams, a Tsimshian woman, Kate Dudoward, began a school there. According to Bolt (1992:39f), Kate Dudoward had been educated at an Anglican school in Victoria. She returned to Lax Kw'alaams to teach other members of the community European skills. We can only speculate about the role of Sm'algyax as a language of instruction, and specifically about whether or not Sm'algyax literacy was taught in the school. It is certainly possible that this strategy was used given that acquiring literacy in one's mother tongue is far easier than in a second (and less well known) language. It was not until 1874 when Charles M. Tate arrived and set up two day schools under the auspices of the Wesleyan Methodist Church that missionary controlled education was resumed in Lax Kw'alaams (Bolt 1992:41).

Ridley was appointed Bishop of Caledonia in 1879. Like Duncan, he learnt Tsimshian from speakers at Lax Kw'alaams. Ridley (1887b: l-2) claimed to have been the first to develop a writing system for any of the languages in the area. However, Duncan's 1885 publication in Sm'algyax indicates that Ridley's claim was exaggerated. Given the intensity of the acrimony between the two, and the much longer period of Duncan's residence, it seems likely that Ridley in fact made adjustments to the system Duncan was using but did not acknowledge this. It may have been that their teacher Clah provided the link between the two clergymen. He taught them both the language, and may have learned to write from Duncan and subsequently taught Ridley. A copy of Duncan's



*William Downie Lax Kw'alaams*
*(Port Simpson) 1893*

1885 publication held at the Newberry Library, Chicago, contains annotations made by Ridley with the comment: 'This is a copy of translations made by Mr. William Duncan the first missionary to the Zimshian. It is a real curiosity. I will rewrite a few words.' His annotations make it possible to compare his writing system to Duncan's system.
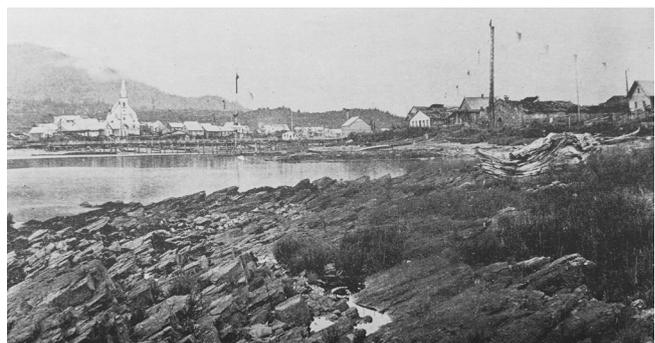
There is also a partial list of Sm'algyax words, made by Agnes Knight (see Walker 1885-1887). She travelled across the continent to work in the mission run by Thomas Crosby at Lax Kw'alaams in the mid-late 1880s, apparently as a matron of the girls' boarding school (see Bolt 1992 plate 12). Her list is English to Sm'algyax,

but only covers the letters A-I. It was written in the back of her journal, and at the letter I it seems she simply ran out of room and stopped. Although it is likely that the list was continued in another notebook, I have not been able to locate any further materials by Knight.

The idiosyncratic nature of some of the ways she represents sounds suggests that she made up her own system. Her list is strongly influenced by English spellings, with less of an eye to cross-linguistic consistency than the later traders' lists. Overall, however, her results seem to make a more readable system, probably because she was only focussing on Sm'algyax. The only real difficulties are with non-English sounds, especially /x/ and /ɬ/.

The following tables show the development of the writing systems as used by the missionaries. In every case it is the sounds not familiar from European languages that cause the most difficulty.

| IPA | b | d | dz | g | gʷ | gʲ | G |
|---|---|---|---|---|---|---|---|
| Duncan | b | d | ts | g, gh, kh | qu | gy | kh c |
| Ridley | b | d | z | g, k | gw | gī | g |
| Knight | b | d | dz | g | gw | ge, gi | g |

Table 2.10: Representation of Sm'algyax voiced stops and affricates in missionary works.

| IPA | p | t | ts | k | kʷ | kʲ | q | ʔ |
|---|---|---|---|---|---|---|---|---|
| Duncan | p | t | ts | kh | qu | ke | kh | - |
| Ridley | p | t | ts | k | qu | kī | - | - |
| Knight | p | t | - | k | gw | key | - | - |

Table 2.11: Representation of Sm'algyax voiceless stops and affricates in missionary works.

| IPA | p' | t' | ts' | k' | kʷ' | kʲ' | q' |
|---|---|---|---|---|---|---|---|
| Duncan | p | t | ts | kh | qu | ke | kh |
| Ridley | p, b | d | z | g | gw | g | g, g |
| Knight | b | d | dz, z, j | g | gw | ky | k |

Table 2.12: Representation of Sm'algyax ejective stops and affricates in missionary works.

| IPA | s | ɬ | x | h |
|---|---|---|---|---|
| Duncan | sh | kl, thl | hr | h |
| Ridley | sh | l, tl | k | h |
| Knight | sh | l, lthl | huh | h |

Table 2.13: Representation of Sm'algyax fricatives in missionary works.

| IPA | m | 'm | n | 'n | 'l | j | 'j | w | 'w | ɥ | 'ɥ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Duncan | m | - | n | nh | - | y | - | w | - | - | - |
| Ridley | m | - | n | n | l | y | y | w | w | - | - |
| Knight | m | - | n | - | - | y | y | w | w | - | - |

Table 2.14: Representation of Sm'algyax liquids, nasals, and glides in missionary works.

| IPA | i | iː | e | eː | æ | æː | a | aː | ɔ | ɔː | u | uː | ɨ | ɨː | ə |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Duncan | e | ee | - | ay | ah, h | - | a | - | o | oa | | - | - | - | |
| Ridley | i | ē | - | ē | a | a, ā | - | - | o | au | ō | ō | - | - | |
| Knight | e | e, u | - | - | a | a | a | - | o | u | - | - | - | - | |

Table 2.15: Representation of Sm'algyax short and long vowels in missionary works.

| IPA | i'i | e'e | æ'æ | æy | æyː | a'a | aw | awː | ɔ'ɔ | ɔy | ɔyː | u'u | ɨ'ɨ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Duncan | - | - | - | - | igh | - | ou | - | - | oi | - | - | - |
| Ridley | - | - | - | ai | - | - | ou | - | - | oi | - | - | - |
| Knight | - | - | - | ay | - | - | ow | - | - | oi | - | - | - |

Table 2.16: Representation of Sm'algyax creaky vowels and diphthongs in missionary works.

## C. LINGUISTS

Franz Boas published a number of texts and other linguistic materials on Sm'algyax in the years spanning the turn of the century (see §2.3). He used a phonetic transcription system analogous to the IPA in his work. This system is even more detailed than the practical orthography which is in use today, including for example, a symbol for schwa.

Like Boas, Maurice Barbeau also did research on Sm'algyax (see §2.3). Barbeau's writing system for Sm'algyax may be ascertained by examining his comments in a letter to Boas in 1915. In the letter he identifies the symbols that he and Boas use differently. From his comments it seems reasonable to assume that in other respects his system was like Boas'. Barbeau published very little Sm'algyax language material as his main interest was in popularising First Nations' legends in English, so this letter is a valuable indication of his practices.

William Beynon, the Tsimshian ethnographer, was employed at various times to collect texts for both Boas and Barbeau. Beynon is the first Tsimshian person from whom we have a large corpus of Sm'algyax texts. Beynon's writing system can be characterised as an elaboration and synthesis of the systems he was originally taught. For example, he represents the vowel [ɨ] as ǫ and is the first author to identify and treat this sound consistently.

The following tables show the correspondences between the Sm'algyax phonemic inventory and the writing systems devised by Boas, Barbeau, and Beynon. The practical orthography (PO), described in more detail in (D) below, also appears in the following tables.

| IPA | b | d | dz | g | gʷ | gʲ | G |
|---|---|---|---|---|---|---|---|
| Boas | b | d | dz | g | gʷ | g˙ | g |
| Barbeau | b | d | dz | g | gw | gy | g̣ |
| Beynon | b | d | dz | g | gw | g˙ | g, q |
| PO | b | d | dz | g | gw | gy | g |

Table 2.17: Representation of Sm'algyax voiced stops and affricates in linguistic descriptions.

| IPA | p | t | ts | k | kʷ | kⁿ | q | ʔ |
|-----|---|---|----|----|-----|-----|---|---|
| Boas | p | t | ts | k | kʷ | k | q | ' |
| Barbeau | p | t | ts | ḵ | kw | ky | ḵ | ' |
| Beynon | p | t | ts | k | kw | - | q | ' |
| PO | p | t | ts | k | kw | ky | ḵ | ' |

Table 2.18: Representation of Sm'algyax voiceless stops and affricates in linguistic descriptions.

| IPA | p' | t' | ts' | k' | kʷ' | kⁿ' | q' |
|-----|----|----|-----|-----|------|------|-----|
| Boas | p! | t! | ts! | k! | kʷ! | k'! | q! |
| Barbeau | p' | t' | t's | k' | 'kw | 'ky | ḵ' |
| Beynon | b | d, t' | dz, t's | g, k | gw | g | g |
| PO | p' | t' | ts' | k' | k'w | k'y | k' |

Table 2.19: Representation of Sm'algyax ejective stops and affricates in linguistic descriptions.

| IPA | s | ł | x | h |
|-----|---|---|---|---|
| Boas | s | ł | x | h |
| Barbeau | s | ł | rh | h |
| Beynon | s | ł | x̱ ɣ | h |
| PO | s | ł | x | h |

Table 2.20: Representation of Sm'algyax fricatives in linguistic descriptions.

| IPA | m | 'm | n | 'n | l | 'l | ȷ | 'j | w | 'w | ɰ | 'ɰ |
|-----|---|----|---|----|---|----|---|----|---|----|---|----|
| Boas | m | m! | n | n! | l | l! | y | y! | w | w! | r | - |
| Barbeau | m | 'm | n | 'n | l | 'l | y | 'y | w | 'w | - | - |
| Beynon | m | m | n | n | l | l | y | y | w | w | - | - |
| PO | m | 'm | n | 'n | l | 'l | y | 'y | w | 'w | ẅ | 'ẅ |

Table 2.21: Representation of Sm'algyax liquids, nasals and glides in linguistic descriptions.

| IPA | i | iː | e | eː | æ | æː | a | aː | ɔ | ɔː | u | uː | ɨ | ɨː | ə |
|-----|---|----|---|----|---|----|---|----|---|----|---|----|---|----|---|
| Boas | i, î | ī | e, ê | ē | a | ä | a | ā | o, ô | â, o | u | ū | ᴇ | ᴇɾᴇ | ᴇ |
| Barbeau | i | ee | e | ee | a | æ | a | æ | o, ɔ | aw | u | u, oo | - | - | e |
| Beynon | i | iˑ | ɛ | - | a | ä | a | - | ɔ | ɔˑ | u | uˑ | ə̢ | ə̢ | ə |
| PO | i | ii | e | ee | a | aa | a | aa | o | oo | u | uu | ü | üü | - |

Table 2.22: Representation of Sm'algyax short and long vowels and in linguistic descriptions.

| IPA | i'i | e'e | æ'æ | æy | æyː | a'a | aw | awː | ɔ'ɔ | ɔy | ɔyː | u'u | ɨ'ɨ |
|-----|-----|-----|-----|-----|------|-----|-----|------|------|-----|------|-----|-----|
| Boas | i'ᵇ | e'ᵇ | e'ᵇ | ai | - | a'ᵇ | āu | - | o'ᵇ | âi | - | u'ᵇ | - |
| Barbeau | | | æ | ai | - | | au | - | | - | - | - | - |
| Beynon | | - | aˑ | ai | - | a'a | ao | - | | ɔi | - | uˑ | - |
| PO | i'i | e'e | a'a | ay | aay | a'a | aw | aaw | o'o | oy | ooy | u'u | ü'ü |

Table 2.23: Representation of Sm'algyax creaky vowels and diphthongs in linguistic descriptions.

## D. PRACTICAL ORTHOGRAPHY

The practical orthography was developed by the linguist John Dunn and elders from the Tsimshian Nation in 1974 (Dunn 1978a:iv). It was based on the Hindle/Rigsby orthography for Gitksan (Hindle & Rigsby 1973). It also clearly benefits from the linguistic analysis underlying the earlier linguistic transcription systems which led to Beynon's writing system. Significant differences between earlier systems and the original practical orthography include the lack of a schwa symbol, and the indication of syllabic consonants.

Since the publication of Dunn's Practical Dictionary (1978a), the orthography has been used in the Sm'algyax Language Program in the village schools. During this time some changes have been made as people gaiu experience in writing and adapt the system to their needs (Mulder 1994:28).

For example, the underlining of syllabic consonants is no longer in practice. In Dunn (1978a) 'thread' is spelled *nlu 'upis*. Another example is the word 'sit in a row' which is written *xswn.* in Dunn (1978a). Other phonemes that occur as syllabic consonants in Sm'algyax which are underlined in Dunn's dictionary, include /m/ in *mmah* 'kiss' and /1/ *llooks* 'float.PL'. Although it is useful to provide information about syllable structure, the practice of identifying syllabic consonants in writing has never been widespread among Sm'algyax speakers. In the SLD syllabic consonants can be identified by examining the pronunciation guides for particular words. The pronunciation guides for the above words, as well as their current spellings, are given in the following table (syllable boundaries are indicated using a back slash and primary stress is shown using an asterisk):

| Dunn's spelling | SLD spelling | Pronunciation guide |
| --- | --- | --- |
| *nlu 'upis* | *nlu 'upis* | *n\lu'u\*pis* |
| *xswn* | *xswn* | *x\*swn* |
| *mmah* | *mmah* | *m\*mah* |
| *llooks* | *llooks* | *l\*looks* |

Table 2.24: Indication of syllabic consonants in Dunn (1978a) & SLD.

Another significant change has been to stop the alternation between placing the apostrophe after an ejective consonant in word initial position, and before an ejective consonant elsewhere. Writers are tending to consistently place the apostrophe after the consonant. Compare the examples in the following table:

| Dunn's spelling | SLD spelling | English gloss |
| --- | --- | --- |
| *gants'aa'ts* | *gants'aats'* | 'sticks for drying skins' |
| *waal'k* | *waalk'* | 'bufflehead' (a type of bird) |

Table 2.25: Treatment of word final ejectives in Dunn (1978a) & SLD.

The treatment of unstressed vowels continues to be a problem for Sm'algyax writers. Due to the absence of a symbol that represents the schwa, speakers are forced to nominate a particular vowel in neutralised contexts. While individuals can generally think of something that they are happy with, groups of people, particularly when they come from different villages, find it very difficult to agree on the 'right' way to represent an unstressed vowel sound. This issue is discussed in more detail in §9.2.1. At this point, however, it is useful to note merely that the lack of a neutral vowel has lead to spelling variants such as the following (the current spellings were those agreed to by members of the Dictionary Committee):

| Dunn's spelling | SLD spelling | English gloss |
|---|---|---|
| *łŭmoom* | *łamoon* | 'help' |
| *se'awulksk* | *sa'awulksk* | 'drift away' |
| *mütkya'wn* | *midiikya'wn* | 'left hand' |

Table 2.26: Treatment of neutral vowels in Dunn (1978a) & SW.

Tables 2.27 and 2.28 show the graphemes used in the practical orthography to represent the phonemes of Sm'algyax in the SLD. The common name used in the Tsimshian community for each grapheme and an example word are also given.

| IPA symbol | Sm'algyax Letter | Name of Letter | Example word |
|---|---|---|---|
| b | b | b | *ba'wis* 'monkey' |
| d | d | d | *daala* 'money' |
| dz | dz | d, z | *dzap* 'make' |
| g | g | g | *gap* 'eat' |
| gʷ | gw | g, w | *gwa'a* 'this' |
| gʸ | gy | g,y | *gyelx* 'outside' |

Table 2.27: Sm'algyax consonant graphemes.

| IPA symbol | Sm'algyax Letter | Name of Letter | Example word |
|---|---|---|---|
| G | g | back g | *gaax* 'raven' |
| h | h | h | *haas* 'dog' |
| k | k | k | *ksuut* 'autumn' |
| k' | k' | hard k | *k'oy* 'me' |
| kʷ | kw | k, w | *kwdii* 'hungry' |
| kʷ' | k'w | hard k, w | *k'wilii* 'three' |
| kʸ | ky | k, y | *k'yi'nam* 'give' |
| kʸ' | k'y | hard k, y | *kyoox* 'grass' |
| q | k̲ | back k | *'mak̲* 'catch fish' |
| q' | k̲' | hard back k | *k̲'aa* 'cut' |
| l | l | l | *laan* 'fish eggs' |
| 'l | 'l | hard l | *'lax* 'needle' |
| ł | ł | barred l | *łems* 'in-law' |
| m | m | m | *maas* 'bark' |
| 'm | 'm | hard m | *'moosx* 'chewed fat' |
| n | n | n | *na'ax* 'dress' |
| 'n | 'n | hard n | *'niit* 'he, she, it' |
| p | p | p | *ptal* 'rib' |
| p' | p' | hard p | *p'iyaan* 'smoke' |
| s | s | s | *sah* 'day' |
| t | t | t | *tgwah* 'glass' |
| t' | t' | hard t | *t'aa* 'sit' |
| ts | ts | t, s | *tskah̲* 'herring' |
| ts' | ts' | hard t, s | *ts'aaẅ* 'inside' |

Table 2.27: Sm'algyax consonant graphemes.

| IPA symbol | Sm'algyax Letter | Name of Letter | Example word |
|---|---|---|---|
| w | w | w | *waas* 'rain' |
| 'w | 'w | hard w | *'wa'at* 'sell' |
| ɥ | ẅ | dotted w | *nnaa ẅłk* lullaby |
| 'ɥ | 'ẅ | hard dotted w | *ẅa̲h* 'oolichan' |
| χ | x | x | *xbiis* 'box' |
| j | y | y | *yaa* 'walk' |
| 'j | 'y | hard y | *'yens* 'leaf' |
| ʔ | ' | glottal stop[3] | *ak'aks* 'water (pl)' |

Table 2.27 continued: Sm'algyax consonant graphemes.

| IPA symbol | Sm'algyax Letter | Name of Letter | Example word |
|---|---|---|---|
| æ | a | a | *ada* 'and' |
| a | a̲ | back a | *la̲k* 'fire' |
| ae: | aa | long a | *baa* 'run; |
| aː | a̲a̲ | long back a | *ła̲a̲xs* 'claws' |
| æ'æ | a'a | creaky a | *da'al* 'but' |
| a'a | a̲'a̲ | creaky back a | *ła̲'a̲sk* 'seaweed' |
| aw | aw | a, w | *awta* 'porcupine' |
| aw: | aaw | long a, w | *aw'aaws* 'curly' |
| æy | ay | a, y | *daya* 'say' |
| æy: | aay | long a, y | *maay* 'berry' |
| e | e | e | *gyels* 'mussles' |
| e: | ee | long e | *eesk* 'promise' |
| e'e | e'e | creaky e | *'ne'en* 'confirm' |
| i | i | i | *bilhaa* 'abalone' |
| i: | ii | long i | *dii* 'hill' |
| i'i | i'i | creaky i | *si'ił* 'trying' |
| ɔ | o | o | *ol* 'bear' |
| ɔ: | oo | long o | *boot* 'boat' |
| ɔ'ɔ | o'o | creaky o | *so'ox* 'robin' |
| ɔy | ooy | long o, y | *sm'ooygit* 'chief' |
| u | u | u | *ts'u* 'although' |
| u: | uu | long u | *buut* 'boot; |
| u'u | u'u | creaky u | *t'u'utsk* 'black' |
| ɨ | ü | dotted u | *müsiin* 'copper' |
| ɨː | üü | long dotted u | *yüü* 'hide' |
| ɨ'ɨ | ü'ü | creaky dotted u | *dü'ün* 'kill off' |

Table 2.28: Sm'algyax vowel and diphthong graphemes.

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3.  Glottal stops are not conventionally written word initially

## 2.3 Survey of writings on Sm'algyax

Three core groups have developed materials in or about the language: missionaries, linguists and language teachers. Overall, two major types of writing have been produced: linguistic materials that describe the language, either grammatical descriptions or vocabulary lists; and textual materials that use the language in Bible translations, *adawx* (Tsimshian narratives), and other texts.

Most of the early material is now difficult for community members to read. Much of the work by linguists is aimed at a professional audience and, again, may be of limited direct relevance to language revitalisation programs within the community. Teaching materials designed within the community are obviously of direct relevance as they are designed by speakers specifically for language teaching and language promotion.

### 2.3.1 LINGUISTIC MATERIALS

### A. GRAMMATICAL DESCRIPTIONS

At least two grammars of Sm'algyax have been based on Ridley's Anglican texts (which seem largely to have been prepared by Sm'algyax speakers under the tutelage of Ridley (Bishop Caledonia)). The accuracy of these grammars cannot be greater than the accuracy of the texts, which are extremely difficult for modern speakers to read. The grammar by Ridley (1895) includes a discussion of Sm'algyax phonetics, which would no doubt be a useful resource for anyone wishing to make use of his texts. In other respects it is a unique piece of late nineteenth century Anglican scholarship including an extensive comparison of Sm'algyax to Hebrew and an admixture of cultural information, often couched in rather critical terms (for example 'the pernicious potlatch').

The second grammar of Sm'algyax based on these texts was published in 1894 by A.F. Graf von der Schulenberg. It is written in German; however, a translation of this text into English was published in 1982 by Virginia Flaherty. This grammar also contained a word list which is yet to be translated.

In 1911 Franz Boas published a grammar of Tsimshian that describes both Sm'algyax and Nisga'a. In the preceding years he had published several other articles relating to the language, and Ridley and von der Schulenberg both acknowledged him as a source. Boas' articles are discussed below as they are generally recordings of sayings or *adawx*. His grammar has been a point of departure for subsequent work in the language. Various finer points of analysis have since been clarified Boas (1899) also published a review of von der Schulenberg's grammar. One of Boas' students, Amelia Susman, wrote a discussion on Sm'algyax phonemes (1940a), another on dependency markers (1940b) as well as other material (1940c).

John Dunn published a grammar in 1979 (republished in Dunn 1995). This work provides a great deal of information about the phonology of Sm'algyax (including reduplication patterns). It also describes plural formation, categorises and lists the phonologically dependent prefixes, the derivational affixes, and the numbers, formulates basic sentence structures and provides examples of more complex syntactic constructions. Dunn has also published or presented a number of articles on Sm'algyax prehistory and dialect distribution (1969a & 1969b, 1976, 1979a), phonology (1970 (PhD Diss), 1978c, 1979g, 1980b, 1981) and on particular aspects of the grammar (1974 on the preverbal position, 1978b on relativisation, 1979b on dependency markers, 1979d on pronominal concord, 1979e and 1983 on non-basal suffixes). Some papers have been concerned with language obsolescence (1972a, 1972b).

A discussion of ergativity in Sm'algyax was published by Jean Mulder in 1994. Among the topics covered in relation to ergativity are the uses of the two major systems of inflectional morphology (dependent pronouns and dependency markers) first identified by Boas (1911). Complex syntactic constructions such as coordina-

tion and subordination, topicalisation, relativisation, causatives, and reflexives are also covered. This work is highly technical in its approach and contains a good deal of information about Sm'a lgyax. Further discussions of Sm'algyax ergativity may be found in Mulder (1987, 1988 (PhD Diss), 1989a & 1989b).

Fumiko Sasama has published work on Sm'algyax plural formation (especially via reduplication) (1995), based on her 1995 M.A., and has also published a discussion of certain aspects of the phonetics and phonology (1997).

## B. VOCABULARIES

Vocabularies of Sm'algyax have been collected by two main groups: early explorers and linguists. Early vocabularies may be found in: Anonymous n.d., Davidson 1867, Gibbs & Dall 1877, Anonymous 1862, Tolmie & Dawson 1884, and Wilson 1890. Many of the earliest writers were professionals, such as missionaries and doctors, employed by the Hudson's Bay Company. These word lists were often published alongside lists for other northwest coast languages and were intended for the use of other English speakers wishing to communicate with First Nations people. Later authors were associated with agencies such as the Geological and Natural History Survey of Canada.

All of these lists, while of historical interest, are generally of limited value. The earlier ones are written without much consistency, while the later ones tend to repeat the same core vocabulary, based on a questionnaire developed by George Gibbs (1863). Gibbs was in fact the chief linguistic adviser to the Smithsonian Institution during the 1860s (Campbell 1997:46).

Word-lists have also been made by linguists. Both von der Schulenberg (1894) and Boas (1912) produced vocabularies based on the texts they had been studying. As noted above, von der Schulenberg's vocabulary is yet to be translated. Boas' vocabulary contains about 2000 words written phonetically. Later, using the current orthography, Dunn (1978a) produced a Sm'algyax to English dictionary of over 2000 items (republished in Dunn 1995). The vocabulary it includes is quite similar to Boas (1912). Dunn's dictionary was reviewed by Eastman (1982:733) who notes there are some technical and practical problems that remain unresolved in Dunn's dictionary. These include the highly phonetic nature of the orthography and the numerical organisation of entries which occasionally obscures relevant information. Dunn also produced a glossary based on publications developed by the Sm'algyax Language Teachers (Hutchingson et al 1992, described below).

Other sources that contain vocabulary include other papers by Boas (1888, 1939); Dunn (1979c, 198 a, 1984, 1986), Dunn & Dunn (1972), and Dunn & Hays (1980, 1983); ethnographic work by Durlach (1928); a brief grammatical description by Crosby (1897); field notes by Garfield (1928-1934) and her 1966 book; a word list, ethnographic notes, and a description of the counting system by Gibbs (n.d., 1860, 1877); field notes by Green (1829); field notes by Jacobs (1934); a grammatical description by La Grasserie (1902) (a French translation of von der Schulenberg at least in the vocabulary); a vocabulary list, discussion of orthographical issues and field notes by Leer (1975, 1976); field notes by Miller (1977); an ethnographic description by Scouter (1841); and a vocabulary by Tolmie (1850).

## 2.3.2 TEXTUAL MATERIALS

## A. TRANSLATIONS OF ANGLICAN RELIGIOUS TEXTS

The bulk of the material published in the nineteenth century was developed under the auspices of the Anglican church. The earliest material was produced by William Duncan, a lay missionary (see Duncan 1859-1896, 1880 and 1885). His work is interesting from a linguistic perspective because he was the first to attempt to

use writing to communicate in Sm'algyax. His orthography formed the basis for later religious writings in Sm'algyax.

During the time that William Ridley was Bishop of Caledonia he oversaw the translation and publication of the gospels (1882b, 1882c, 1887a, 1889), portions of the Book of Common Prayer (1885, 1892a), the Letters of Paul, James, Peter, John and Jude (1898), two volumes of hymns (1881, 1882a), two volumes of a newsletter (1887-1888), Scripture cards (1888b) as well as some smaller texts (1880, 1888a). There continues to be a great deal of affection for these materials among members of the Tsimshian community, including (in a few cases) a great deal of loyalty to the orthography then in use.

Other religious materials include a translation of Acts 18:9-26:6 (Anonymous 1879); the hymns 'Lead kindly light' and 'Just as I am' by Collison (1875); hymns by Kirkby (1865); and the hymn 'I'm going home to die no more' by Tate (1900).

## B. *ADAWX* COLLECTED IN ANTHROPOLOGICAL LITERATURE BY BEYNON AND TATE

Boas began field work in British Columbia in 1886 (Maud 1982:50). Publications resulting from his work at this time are generally ethnographic in nature and include texts in Sm'algyax (see Boas 1886, 1889, 1891, 1895, 1908). During this time Boas was collaborating a great deal with George Hunt, a Kwakiutl speaker. Later on, Boas and Barbeau collaborated with Sm'algyax speakers to collect *adawx*. During the early part of the twentieth century, a few Tsimshian worked with the anthropologists Franz Boas and Marius Barbeau in collecting *adawx* from the Tsimshian oral tradition.

From 1902 to 1914, Henry W. Tate sent Boas texts written in the Anglican orthography (Maud 1982:96). With the help of Archie Dundas, Boas retranscribed them into his own phonetic system. The texts sent by Tate were printed by Boas as Tsimshian Texts (New Series) (1912) and Tsimshian Mythology (1916). These texts form the basis for Boas' vocabulary mentioned in §3.2.1 (B).

Barbeau began working with the Tsimshian ethnographer William Beynon in 1914, when he employed him as an assistant. Much of the material Beynon sent to Barbeau was published in English in fairly populist works (see Barbeau 1928, 1950, 1953, 1958, 1961).

William Beynon was the grandson of Clah (Arthur Wellington), the man who had taught the missionary William Duncan to speak Sm'algyax (see Maud 1982:126, Murray 1985:39). At first, he used Barbeau's writing system in his work; later he began to send materials to Boas (Beynon 1932-1939), and was trained to use Boas' system of transcription for this purpose.

In later work for Boas, Beynon did not follow Boas' conventions exactly but elaborated the system in ways that allow for more accurate representation of Sm'algyax phonemes. The transcription system developed by Beynon was used to record a large number of *adawx*. Anyone who wishes to read these texts must first become familiar with Beynon's system.

Beynon's work as an ethnographer is described in Halpin (1978). During his lifetime Beynon was always referred to as an informant or an interpreter. In fact, from 1916, Beynon worked independently with as an ethnographer obtaining materials from Tsimshian informants (Halpin 1978:143). The material he sent to Boas (Beynon 1932-1939) was never published but is available on microfilm and has been used by a number of researchers. Various texts from this transcription have been revised for use in the language program.

Other early material includes Morrison (1889), a collection of Sm'algyax proverbs with English translations and explanations.

## C. TEXTS FOR TEACHING

Over the past few years the First Nations Education Services office within British Columbia School District 52 has been developing materials for use in language and culture programs. Of particular interest – because of their Sm'algyax content and recent publication – are Hutchingson et al (1992) and the Sm'algyax Language Committee (1996). Many other works have been published over the years (see Mulder 1994:15 for a complete listing of earlier materials).

# 2.4 Conclusion

Section 2.1 of this chapter described how increasing economic dependence on the Euro-Canadian economy was associated with a decline in the use of Sm'algyax. Although English gained increasing importance for Sm'algyax speakers through the early years of contact, it was the residential school system that broke the chain of intergenerational transmission of the language. It is the ongoing, deeply personal consequences of this interventionist and socially destructive policy that individual Sm'algyax speakers struggle to put to rest as they seek to revitalise the language.

In §2.2, the development of the writing system was shown to be closely associated with historical events. Traders, missionaries, researchers and community members have been involved in developing writing systems for the language. The orthography currently in use was developed within the community, with assistance from linguists. Although it is not universally approved, it is used within the school system. In Chapter Nine the development of spelling conventions – a prerequisite to wider use of the orthography – is discussed in more detail.

Previous materials in or about Sm'algyax have proven to be a valuable resource in the development of the SLD. This literature was reviewed in §2.3. There are three main groups of writers: researchers interested in anthropology and linguistics, missionaries interested in communicating the tenets of their faith, and teachers interested in fostering the use of the language and passing on knowledge about the culture.

Having established the key events and processes that have lead to the endangerment of Sm'algyax (including changes wrought by mission life and the residential school system, and changes which occurred through participation in the fur trade and the cannery industry), as well as outlining the written resources the community has at its disposal, the following chapter gives more detail about the state of Sm'algyax today.

# Chapter Three:
# Sm'algyax Today

## 3.0 Introduction

This chapter gives detailed information about the use of Sm'algyax. It begins by describing contexts in which Sm'algyax is currently used and providing speaker demographics (§3.1). The range of variation observed among speakers is set out in §3.2. In §3.3 language shift from Sm'algyax to English in the Tsimshian community is distinguished from changes in Sm'algyax, reflecting the dominance of English among speakers. Finally, current efforts to revitalise the language are discussed in §3.4.

## 3.1 Using Sm'algyax

Many factors contribute to perceptions about the vitality of a language. Speaker demographics is perhaps the most objective measure. Demographics for Sm'algyax are presented in §3.1.1. Contexts in which the language is spoken are also important as a language widely spoken among older generations may falsely appear to be strong. Contexts in which Sm'algyax are spoken are presented in §3.1.2. The value of occasions when Sm'algyax is spoken as opportunities for language learners is assessed in §3.1.3.

### 3.1.1 DEMOGRAPHICS FOR SM'ALGYAX

Within the Tsimshian community the most fluent Sm'algyax speakers (those for whom Sm'algyax is their first language and continues to be their dominant language) are all well over 65 years of age. In fact many are into their 80s or beyond. Of all speakers, these people have the strongest intuitions about the language and the most extensive vocabularies. They also tend to be the most tolerant to dialect differences. When this group passes away, Sm'algyax in its richest form will be lost. The next group of speakers are between 50 and 65 years of age. Members of this group are often fluent Sm'algyax speakers; however, English is the dominant language for the majority in this group, and speaking Sm'algyax can be 'hard work'.

Within this group there is generally less tolerance for dialect differences, and intuitions about the language may not be immediate but must sometimes be dredged from memory. This group has a great deal to offer in tenns of language revitalisation. In particular they have close relationships with the members of the most fluent group and follow the traditional practice of turning to their elders for information. Members of this group may have begun to acquire Sm'algyax as their first language, but they also generally spent a number of years at residential school.

Finally, there are a number of semi-speakers and a few speakers of Sm'algyax with varying degrees of fluency in the 30-50 year age group. Within this age group are many people with good passive knowledge of Sm'algyax and a large number who know fragmentary words and phrases. Most of this group did not acquire Sm'algyax as their first language and, like the previous generation, generally spent a number of years in residential school. Community classes for adults targeted towards this group could be very useful for bridging the gap between passive and active abilities in the language.

There is no really satisfactory source of statistics for the speaker population of Sm'algyax. Census data from the 1991 Canadian census suggests that there are 395 speakers in the Tsimshian language family (cited in Ignace 1998:15). Unfortunately, because of the use of the label Tsimshian to refer to the language family, it is not clear whether or not members of the Nisga'a or Gitksan Nations who speak their languages have been included as members of this group. Furthermore many First Nations people choose not to participate in the census process so it is likely that a large number of individuals are not represented by this figure. Kinkade (1991:162) suggests that there are around 200 speakers of Sm'algyax, a figure also reported by Boseker (1994:149).

There is some consensus among linguists who work in the area and members of the Tsimshian nation that around four hundred is a likely figure. With such a small number of fluent speakers every death is a significant loss for the language. During my time in Prince Rupert it was usual for one or two speakers a month to pass away. For this reason speaker demographics should be a cause for concern. Not only is the total number of speakers quite low, but the most fluent speakers are in the oldest segment of the Tsimshian population.

### 3.1.2 CONTEXTS FOR SPEAKING SM'ALGYAX

Excluding formal teaching such as the Sm'algyax Language Program (discussed in §3.4), there are three major contexts in which Sm'algyax is used today. Firstly, it is spoken in public (before Tsimshian audiences) at feasts and meetings such as the Tsimshian Tribal Council Annual Assembly and regional Language Teacher Conferences. On occasions such as these the use of Sm'algyax is a powerful means of asserting Tsimshian identity and community. It has always been the practice to speak the 'elevated register' of Sm'algyax at feasts, and this practice continues today as far as speakers are able to use it (see §3.2.1 for more information about the elevated register). The elevated register is also used on occasions such as funerals, when Tsimshian ministers take the pulpit.

Secondly, Sm'algyax is used between family members, close friends and language teachers. Although talk of this kind is generally carried out in private, Sm'algyax is heard 'out-of-doors' occasionally. In these contexts

Sockeye salmon (Oncorhynchus nerka) by Timothy Knepp, 2001

the use of Sm'algyax reinforces intimacy between speakers. This is because the ability to speak the language is not shared by 'just anyone'. Using the language in these situations emphasises the common history of the speakers as people who have learned the language.

Finally, Sm'algyax is used by fishermen on the coast as a means of communicating to each other without being understood by others on the CB radios. Overall their use of Sm'algyax is more formulaic than in other contexts and contains a good deal of alternation with English. The primary aim of this use of Sm'algyax is to exclude others from the exchange of information about locations where fish are plentiful. Tsimshian fishermen compete with many other groups from within Canada and elsewhere for the annual salmon catch, and this use of Sm'algyax is a strategy of competition.

### 3.1.3 POSSIBILITIES FOR LANGUAGE REVITALISATION

In none of these cases is the language used to communicate with children. Only adults who have acquired the language along the way (with varying degrees of proficiency) can participate in these interactions. Among the younger generations of Tsimshian people are many who know a few words and phrases and have some passive knowledge of the language. However, they generally cannot use the language as a means of everyday communication. This intergenerational gap was created in a large part by the residential school system. Luckily

there have been exceptions. The very small number of younger fluent speakers today learnt Sm'algyax at the insistence of their grandparents.

Against this background, it is clear that moves within the community to foster language use and teach the language to Tsimshian children are the result of a real change of heart. Although community programs have been working towards this goal for over twenty years, the response of the community has until recently been one of limited interest and support. As the section §3.4 will show, however, there is a growing awareness of the importance of Sm'algyax to the Tsimshian community as a resource of cultural knowledge and a powerful marker of identity. More and more people are engaging in activities relating to the language and participating in community discourse about saving the language.

## 3.2 Variation in Sm'algyax

There are four major parameters for variation in Sm'algyax as it is spoken today. These are: the use of different registers in formal and informal speaking (§3.2.1); dialect differences (§3.2.2); variation due to incomplete language change (§3.2.3); and variation, particularly in pronunciation, due to differing degrees of fluency in the language (§3.2.4). Whereas the first three changes are all associated with fluent speakers, the final type of variation is associated with language learners and semispeakers.

### 3.2.1 REGISTERS

There are clear differences between formal public speaking (including narrative and speech giving) and casual private speech in Sm'algyax. Similar dual codes have been observed or mentioned for other Amerindian languages including the Californian languages Wappo and Yuki (Elmendorf 1993). In the elaborate public register of speaking in Sm'algyax, orators demonstrate their command of a more complex system of grammatical markers. This ability is a part of the performance of public speaking. It is understood to have aesthetic value. In order to learn to speak in this elaborate way Mulder reports that:

> *Historically a spokesperson was specially trained to speak for a chief, and people were trained to be traditional storytellers. Not only does a Coast Tsimshian person have to have ownership of a legend or narrative, but he or she also has to be versed in the proper way of telling it. Sm'algyax speakers who perform these roles are traditionally elders and have had a number of years in which to listen and prepare for their roles.*

**Mulder 1994:31.**

These differences between the elaborate and everyday registers particularly involve the system of grammatical markers called dependency markers. A general introduction to dependency markers used in Sm'algyax is given in at the end of §4.2. In casual speech only some of the parameters influencing the choice of dependency marker in the elaborate system are used. The elaborate system is sensitive to the distinctions between common and proper nouns, the role of the referent (making an ergative-absolutive distinction), definiteness, the location of the referent (present or absent), and aspect. Dependency markers in casual speech, on the other hand, are only sensitive to the distinction between common and proper nouns, the role of the referent, and aspect.

There has been some discussion in the linguistic literature about the nature and history of these registers. Authors observe that while the elevated register is used in public speaking, individuals vary in their use of the system. Some speakers use the elaborate system while others mix the full and reduced systems to varying

degrees. Boas (1912:68-69) notes that some speakers used more of the distinctions in elicited texts than others. Dunn (1979b:134) reports that he found only a subset of the dependency markers identified by Boas when eliciting rote-memory text. This lead him to conclude (1979b:139-140) that the dependency marking system was evolving into a simpler system. Finally Mulder (1994:31) identifies contexts in which the full system continues to be used by Sm'algyax speakers, and suggests that the loss of the full system of dependency markers noted by Dunn is due to a lack of training and opportunity, rather than evidence for language change.

The fact that the reduced system of dependency markers is not a new phenomenon is evidence for the hypothesis that the variability of people's use of the dependency marker systems is a matter of learning rather than an example of language change. If the system of dependency markers was the result of simplification, one would expect the reduced set of dependency markers to be quite new within the written record of Sm'algyax.

Furthermore, one would expect some of stigma to be associated with the reduced system as it would be a sign of a less proficient speaker (cf. Dorian's discussion of New Tiwi 1994a:482f). In fact neither of these is the case. A related point is that there are other languages in which dual registers exist side by side. While it is true that the elevated register may have disappeared first as a result of functional shift, this does not mean that the reduced systems of the everyday register were developed in its stead, rather the reduced systems simply expanded to be used in all situations.[4]

Although the vast majority of recorded historical material in Sm'algyax is in the elevated register (a natural result of collecting *adawx* and translating the bible and the Anglican liturgy), there is one small word list (Anonymous 1862) that includes a few everyday sentences which clearly show the use of the reduced system of dependency markers.

The following everyday sentences from the early word list clearly show the everyday dependency marker -a in use. In the full system this dependency marker marks common nouns which are indefinite regardless of their case. In the reduced system the dependency marker -a marks common nouns without reference to definiteness or case. The following sentences contain identifiable unique referents, taking the dependency marker -a from the reduced system rather than the dependency markers -da for definite absolutive NPs in example (3.1) and -ga for indefinite oblique NPs in example (3.2). This indicates that the reduced system was used in these sentences. Given that they date from the middle of last century, these sentences provide evidence that the reduced system is not a new development:[5]

(3.1)   *Yoques **a***          *tsund*                    (not -*da*)

        *Yooks=**a***          *tsal*

        Wash=**DM**            face

        'Wash your face' (Anonymous 1862:14)


(3.2)   *Dowlnt **a***          *walpn*                   (not -*ga*)

        *Daawł-n-t=**a***       *walp-n*

        Go.away-2A-3O=**DM**    house-POSS

        'Go home' (Anonymous 1862:13)

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4.  In some cases elaborate registers of speech relating to ceremonial uses may outlast all other forms of a language. This largely depends on the processes of assimilation the community goes through. Where ceremonial practices continue uninterrupted or are revived as markers of social identity, these registers of language may outlast everyday registers.
5.  The first line in these examples is transcription given by Hibben & Carswell, the second line uses the current orthography.

For proper nouns the dependency marker used in the reduced system with S and O arguments is -*s*. Example (3.3) contains the pronoun *'nüüyü* (first person singular). Pronouns are treated in the same ways as proper nouns in Sm'algyax, so the -*s* dependency marker is used. If this were the full system then the dependency marker -*das* (used for imperfective present proper nouns) would appear instead.

| **(3.3)** | *Asaghn* | *e* | *dum* | *dowla* | *wa**s*** | *nuyou* | (not -*das*) |
|---|---|---|---|---|---|---|---|
| | *Hasa̲x-n* | *a* | *dm* | *daawɫa* | *awaa=**s*** | *'nüüyü* | |
| | want-2A | PREP | FUT | go.away | toward=**DM** | me | |

'Do you want to go with me?' (Anonymous 1862:12-13)

Although the Tsimshian people had been in contact with Europeans for decades before 1862, their language was quite secure until this time. As late as 1857 Hudson's Bay Company was employing translators to facilitate communication with the Tsimshian. The great wealth the fur trade brought to the Tsimshian had led to competition between chiefs. The competition for status was played out in the winter feasts that became increasingly elaborate. In other words, at the time the list in Hibben and Carswell was published there was a great deal of public speaking in Sm'algyax in the elevated register going on within the Tsimshian community. Given these historical facts it makes no sense to suggest that the reduced system was somehow evolving due to language obsolescence at this time. It wasn' t until the missionaries who worked in the area were at the height of their influence from the late 1860s that English made any inroads on Sm'algyax.

In fact, it was only in the twentieth century, because of the Canadian government's policy of sending young children to residential school, that Sm'algyax sustained lasting damage to its vitality. The reduced system of dependency markers was clearly already in use half a century before these developments.

The most sensible explanation for the decline in the use of the full system of dependency markers is simply the decline during this century of opportunities for people to learn and then use this system. There is a clear relationship between the decline in use of Sm'algyax and the decline in opportunities for public speaking due to the ban on winter feasting (potlatching), prohibited by the Canadian government between 1885 and 1950 (Cole & Chaikin 1990:1). Although Mulder (1994:31) reports that the full system has been used in public speaking on occasions such as feasts, community events, and in sermons in more recent times, over the span of the century opportunities for people to be trained as public orators and make a commitment to learn the elevated register have been very limited. This is consistent with the trend through most of this century away from Sm'algyax in favour of English.

These factors combined to bring about a situation in the late 1960s and early 1970s in which those people with rights to various stories had not had the training to tell them properly, and consequently their speech was biased towards the everyday register with which they were better acquainted. Thanks to a gradual renewal of traditional feasts along the coast, this trend appears to be reversing. Individuals within the Sm'algyax community again have the opportunity to become skilled orators. Unfortunately, the speakers who have worked at this skill over the past few years are from the most recent generation to have learnt to speak Sm'algyax well. Unless younger speakers learn first the common language and then the elevated register, the ability to speak in this way may still be lost.

As I have just suggested, if the reduced system was a result of fairly recent change, it is likely that its use would attract criticism from elders in the community. In fact, there is an entirely different attitude to the full and reduced systems of dependency markers (and the use of archaic forms) among speakers. Fluent speakers are

sensitive to forms involved in each register of speaking and know which contexts are appropriate for their use. This has been clearly demonstrated to students who have attended the University of Northern British Columbia Sm'algyax course. Students in this course acquire knowledge of Sm'algyax by examining *adawx* that consistently make use of the full system of dependency markers. When students attempt to apply this knowledge by speaking Sm'algyax outside the classroom to other speakers of Sm'algyax they receive feedback along the lines of "That's pretty fancy language you're using."

The use of features of the elevated register by students of the language is remarkable to others for two reasons. Firstly, it is not appropriate to use the elevated register in casual conversation. In order for the students to take the risk of practising to speak the situation is necessarily intimate, and their use of the elaborate register demonstrates a lack of knowledge about the social aspects of speaking Sm'algyax. Secondly, it must be quite obvious to their audience that the students have very limited ability in the language, making their attempts to use the elevated register (generally attempted by only the most skilled of speakers) even more unusual.

### 3.2.2 LANGUAGE CHANGE

Variation due to language change is exemplified by the variation between [kɫ] and [ɫ] word initially. Some speakers (particularly those from Hartley Bay) use the consonant cluster [kɫ] word initially where [ɫ] is used by other speakers. Of the speakers with whom I worked on the dictionary project, no-one ever felt the need to assert the presence of [kɫ] in disagreement with others. Only two examples of [kɫ] initial words were included in the 1998 version of the dictionary: *kɫgüü* 'children' and *kɫgooy* 'pay'. The first is clearly related to the form *ɫgu* 'little, small' and in Dunn's dictionary the form *kɫgum'ol* 'bear cub' is recorded. After consultation with the dictionary committee this was changed to *ɫgum'ol* in the new dictionary. The other form, *kɫgooy*, was given to me by a Hartley Bay speaker. In the latest version of the dictionary the consonant cluster has been returned to *kɫgum'ol* 'bear cub', and two additional forms *kɫgumhanaal'nax̱* 'daughters' and *kɫgum'yuu* 'sons' have been added.

It seems that the variation between [kɫ] and [ɫ] is an example of consonant cluster simplification which is not yet complete, and is particularly tenacious among Hartley Bay speakers, though for others it is in the last stages of development. Speeches given in the high style at feasts may include more clusters of this kind as they contain many more archaic features than are used in everyday speech.

### 3.2.3 DIALECTS

For Sm'algyax speakers, dialect features are loosely associated with particular villages. Environmental or historical aspects of group life are especially reflected by dialect differences based on lexical variation. These differences are important to all Sm'algyax speakers. They arose from a situation (that continues in various adapted forms) in which each community had a distinctive identity that was signalled to others largely through language. Such pervasive differentiation between speech communities was a sign of their vitality and cohesion.

Because most speakers have a variety of Sm'algyax influenced by the home villages of each of their parents, as well as the village in which they spent most of their lives, making statements about the distribution of words based on individual speakers is consequently problematic.[6] One significant difficulty with the distribution of these forms is that it may be misleading to state that speakers in one place use a particular form because it

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6.  Although it would certainly be interesting to establish boundaries of distributions for Sm'algyax variants using methods of dialectology, there are many other language related undertakings (such as delivering community classes and developing language materials) which are understood to be more important at this time. Furthermore, as the discussion in Chapter Ten indicates, there is a great deal of potential for conflict in any situation that seeks to state definitively which words belong where.

is probable that some form will be used by at least one other group in another village somewhere within the Sm'algyax speech community. It is easy to make overstatements about the exclusivity of the use of word forms in situations like this.

At this time it is no longer easy to find speakers of pure, say, Hartley Bay Sm'algyax, as one of the language teachers observed. A direct result of increased mobility between communities has been that the speech community in any village (indeed any household) is rarely homogeneous. This is not to say that individuals never moved between villages in the past. What is new is the fact that there is no longer a strongly shared norm from which these outsiders could deviate and perhaps eventually choose to adopt.

The long process of language loss in each community, particularly the practice of restricting talk in Sm'algyax to closed situations, has lead to the fragmentation of these speech communities. For several decades there have been relatively few opportunities for a shared norm in a community to be demonstrated and reinforced. This situation is exacerbated by the process of language loss (attrition) in individuals. Because of the lack of exposure to their own and other dialects of Sm'algyax, some speakers show limited or empty lexical repertoires for areas that have not been central to their experience, as well as uncertainty about the exact form of words they use more often.

With these reservations in mind, let us consider the language spoken in Hartley Bay. Hartley Bay was originally in the territory of the Southern Tsimshian. Over the past century the Southern Tsimshian (the Gitga'ata, originally speakers of Sgüüxs) have been absorbed into neighbouring groups and no longer form a viable socio political unit. There is one really fluent speaker of Sgüüxs left who lives in the village of Klemtu. Around the time that William Duncan and his followers moved to Alaska, the Gitga'ata, who had settled in Metlakatla BC, decided to move southwards to Hartley Bay. Hartley Bay Sm'algyax is widely considered to show influences of Sgüüxs. While the large set of cognate terms (see for example Compton 1993) confirm the genetic relationship, it is difficult to identify recent Southern Tsimshian influences in Hartley Bay Sm'algyax.

One possible example is the name for 'hummingbird' which is distinctive in Hartley Bay.[7] The term for hummingbird in Hartley Bay is *ałdigaws*. In Kitkatla the word for a hummingbird is *k'a'algmgaws*. This term is shared by most speakers from Lax Kw'alaams. Occasionally people from Lax Kw'alaams will say *k̲'ogigaws* instead.



Lax Kw'alaams (Port Simpson), from the hill above Hudson's Bay Company post, British Columbia, 1878

The language spoken at Lax Kw'alaams also reflects the history of the village. Lax Kw'alaams is the Sm'algyax name for Port Simpson. This area was the site of traditional winter villages for several tribes. The Hudson's Bay Company relocated there in 1834 at the invitation of Chief Ligeex. As the Tsimshian economy changed with the growth of the fur trade, many more people came and settled permanently at Lax Kw'alaams. For many years this was the site of the most intensive contact between Tsimshian and European culture.

7.  Another possible source of this claim is the tendency for Hartley Bay speakers to centralise front vowels /i/, /a/ to /e/. More information about Sgüüxs is required in order to know how significant its influence on the Hartley Bay accent has been.

One example of a dialect difference arising from this situation is the word *lataab* meaning 'table'. This word entered Tsimshian from French via the Chinook trading Jargon. It is used by many speakers in Lax Kw'alaams, though other Sm'algyax speakers may use it at times. Speakers from other villages are on the whole far more likely to use the word *ha'litxooxk* 'table' which makes use of Sm'algyax forms (*ha'li-txooxk* can be analysed as 'means.of-eat.PL').

Thus, the dispersal of goods along the coast is reflected in some vocabulary. Another example is the set of words for 'frying-pan'. There are three words for 'frying-pan' recorded in the dictionary. They are *lapweel, ganmeets'*, and *galm'eetsisk*. The form of the first word suggests that it is another borrowing from Chinook of the French word *la poêle*. This word is now considered to be archaic by many speakers. The other two words seem to be equally current. Both the latter words make use of Sm'algyax word formation processes (*gan-meets'* can be analysed as 'CAUSE-fry' and *galm-'eets-isk* can be analysed as 'RECEPTACLE fry-DER'). It seems most likely that the latter words originated in communities away from Lax Kw'alaams where the Chinook Jargon had less influence.

### 3.2.4 FLUENCY

Much of the variation exhibited by language learners and semi-speakers of Sm'algyax is not acceptable to fluent speakers of the language. This issue is discussed in more detail in Chapter Ten. These examples generally involve the use of English phonology in Sm'algyax.

For example, the phrase *Dala waan?* is widely used as a greeting by Sm'algyax learners. They are trying to say 'How are you?' which is taught as *Nda wila waan?* Elders frequently correct younger speakers about the use of the reduced form. The proper interpretation for *Dala waan?* is 'You go do it'. Elders find it rather disconcerting to hear this phrase when a young person addresses them.

It is easy to see how younger people have misinterpreted what they have heard. The stress pattern for *Nda wila waan?* in conversation is *Nda wila **waan**?* The syllable *wi* in *wila* can be very difficult to identify in natural conversation, often only indicated by labialisation of the *la*. The failure of learners to hear the *n-* is probably due to the fact that it shares the same place of articulation as the first letter in the following syllable *da*, and English speakers are not particularly used to syllabic nasals. However, fluent Sm'algyax speakers are sensitised to these signals and are unable to interpret the phrase *Dala waan?* as anything but the command 'You go do it'.

## 3.3 English influence on Sm'algyax

This section considers the relationship between English (the dominant expanding language) and Sm'algyax (its displaced counterpart). This section makes an important distinction between language shift and language change due to contact. In language shift the speakers of one language abandon that language in favour of another. As the discussion in Chapter Two showed, the process of language shift is almost complete in the Tsimshian community.

Attendant to this change but distinct from it are changes to the structure of Sm'algyax that can be associated with forms and patterns acquired from English – the newly dominant language. Although many speakers of Sm'algyax view this as a kind of infection from English, it is possible to take a more positive view. Language contact very often leads to modifications of the languages involved to the advantage of speakers. Most importantly, changes due to language contact need not be associated with language shift.

The code-copying framework (Johanson 2001) is useful in addressing these changes. In this framework, any characteristic of the dominant language (called the model code) may be incorporated into the language under

examination (called the base code). Each language is treated as a distinct and unitary system. This means that a community shift from one language to another must be treated as separate processes from contact induced language change.

Language contact very frequently leads to changes in one or both of the languages involved. Where one language changes to become more like another, code-copying has occurred. Features of a language which may be copied include the material properties of the model code (e.g. new phonology copied from the model code into the base code), semantic properties (e.g. the use of a term in the base code for polysemous senses originally found only the model code), combinatorial properties (e.g. changes in word order), and frequential properties (e.g. changes in the frequency with which a system in the base code is used).

Global copying (commonly known as borrowing) involves copying a cluster of these properties. A word copied from the model language into the basic code brings with it a phonological form, a sense, and so on. Depending on the formal differences between the two languages the word may be adapted in various ways. Phonological adaptation is a strong feature of global copies from English into Sm'algyax. The word *Russian*, for example, was copied into Sm'algyax as *Luusn*. Borrowing is discussed in more detail in Chapter Six.

One of the most distinctive sounds of Sm'algyax (at least compared with English) is the high back unrounded vowel <ü> /ɨ/. Only a few speakers in New Metlakatla, Alaska use this phoneme and the frequency of its use is decreasing throughout the Sm'algyax language community. The back vowel <u> /u/ is used instead. This is an example of frequency copying. The use of /u/ is increasing in frequency at the expense of /ɨ/ - a change that reflects the frequency of these sounds in English.

The Sm'algyax spoken at New Metlakatla is probably the most English influenced of all the Tsimshian varieties. The history of the settlement is important in explaining the state of the language there today. The community was established by Duncan and his followers in an exodus from Canada (see §2.1.2). Duncan was strongly committed to shifting the language of the community from Sm'algyax to English. Whilst his colleague at Port Simpson, Thomas Crosby, seems to have had a tolerant attitude towards the use of other languages during worship, Duncan apparently found this rather alarming. He reported his concern to the Church Missionary Society in the following terms:

> *all prayed* aloud *at once – Mr. Crosby in English. The others – some in Tsimshian, some in Nishkahh ... each prayed whatever came into his mind at the time, and thus they turned the sacred office of prayer into a ... Babel of tongues.*
> **Duncan to CMS February 12 1975, cited in Bolt 1992:43**

In New Metlakatla, more strongly than in the other communities, the use of English was associated by all parties with modernisation and Christianisation, the processes seen as the means by which Tsimshian people could survive and perhaps even flourish in the new order imposed by Europeans. This explains the presence of English as the model code, but we can also explain the vulnerability of <ü> /ɨ/ in Sm'algyax on language internal grounds.

Donegan's treatment of fortition provides additional motivation for the shift from <ü> /ɨ/ to < u> /u/. She identified a disadvantage in "combining high sonority with either palatal or labial colouring" (Donegan 1993:101) and argued (1993:109) that this disadvantage prompts phonological change associated with overcoming difficulties in pronunciation which arise when conflicting features must be articulated simultaneously.

It is also worth keeping in mind that phonological systems tend to become more symmetrical over time (Hock 1991:152). This is one reason why the Sm'algyax system might have lost the <ü> /ɨ/ independently of any

influence from English. As the following chart shows, there is asymmetry in the Sm'algyax vowel system. By deleting the /ɨ/ from the system it becomes a more typical six vowel system.

| | Front | Back | |
| | unrounded | unrounded | rounded |
|---|---|---|---|
| High | i | ɨ | u |
| Mid | e | | o |
| Low | æ | a | |

Table 3.1: Generalised vowel chart for Sm'algyax.

One other contributing factor to the loss of [ɨ] in Sm'algyax is the difficulty in representing this sound in writing. Chapter Nine discusses the practical orthography in more detail. At this point it is useful simply to note that because the sound /ɨ/ is represented by the special character ü it is more complex to write and type than a letter more straightforwardly based on the Roman alphabet. Writers very often fail to make a distinction between /ɨ/ and /u/. This leaves readers with the impression that the sound is uncommon. In the long run, this is likely to have a negative impact on the vitality of the sound, particularly in the case of language learners who cannot predict when the sound <ü> should be present. From this perspective we see that the model code may have an indirect but powerful influence on the base code.

The community next most strongly influenced by English is probably Lax Kw'alaams. In this village, there is a very strong tendency for speakers to produce a palatal-alveolar fricative [ʒ] in places where most Sm'algyax speakers would have an alveolar affricate [dz]. For example, the word *dzaّ'wes* 'salal berries' is pronounced [dzɑ'wes] by most speakers while speakers from Lax Kw'alaams also frequently say [ʒɑ'wes]. It is also possible to hear [ʒɔːx] rather than [dzɔːx] for *dzoox* 'ashamed' from a speaker from Lax Kw'alaams. As with the loss of <ü> in New Metlakatla, the simplification of the affricate [dz] to [ʒ] may be due to code-copying from the English phonological system. This is an example of material copying since the form [ʒ] is present in English but absent from other varieties of Sm'algyax.

Note that Sm'algyax has also had some impact on English within the Tsimshian community. In the code-copying framework this is known as imposition because speakers of the basic code are imposing characteristics of it onto the model code. For example, Tsimshian English is an r-less dialect, just like Australian English. There is no */r/* in the Tsimshian phoneme inventory. Many people commented on my Australian accent and its affinities with Tsimshian English based on this feature.

This process is generally limited to members of the speech community who speak the base code. As I noted in §1.2, 'Tsimshian English' is stigmatised in the wider Euro-Canadian community.

## 3.4 Efforts to revitalise Sm'algyax

There are currently a number of efforts at language revitalisation under way in Tsimshian communities. The earliest of these, the Sm'algyax Language Program, has been running for twenty years (§3.4.1). Since its inception there has been a gradual increase in community support for language revitalisation programs. Community classes for adults are offered when there is enough interest. These classes provide an alternative to the more formal training offered through a number of tertiary programs (§3.4.2). Most positively, at a con-

ference held in Prince Rupert in 1997, members of the Tsimshian community voted on a number of resolutions intended to strengthen language revitalisation efforts in the community (§3.4.3).

### 3.4.1 THE SM'ALGYAX LANGUAGE PROGRAM

Beginning with the village school in Hartley Bay, the Sm'algyax Language Program has been running in all Tsimshian villages since 1979 (Mulder 1994:14). In the fall of 1997 the Sm'algyax Language Program was extended to the town schools of Prince Rupert in the upper elementary and junior high school grades. The town program started because the Provincial Ministry of Education introduced the requirement that a second language be taught to all students in grades five through eight (Debbie Jeffrey pers. comm.). Any language was acceptable, provided there were students, teachers and a curriculum in place so that the program could be conducted. The default language in most schools across the province is French.

The Prince Rupert school communities show some ambivalence about the program. Among Tsimshian people, many parents of Tsimshian children consider French (the other and previously only second language taught in schools) to be a more profitable course to take, while some others do not believe Tsimshian is worth learning. Within the Euro-Canadian community some people are concerned that emphasising First Nations identity creates extra tensions within the student body. While it is true that the Sm'algyax Language Program has become an identifying mark among students, the results of this need not be seen in only a negative light. For many Tsimshian students, as well as students from other First Nations who are enrolled in the course, this has been an important opportunity to learn about their identity in a positive, safe environment.

In 1997/1998 students were allotted two one hour long classes of instruction each week. Classes were rarely in fact an hour long as this time included moving the students from their regular classrooms and settling them down. Also, classes were regularly missed when special programs for the whole school clashed with the language program timetable. Under these conditions it is not feasible to have full fluency in Sm'algyax as a goal for the program. As well as a greater number of contact hours, students need to be able to practice Sm'algyax at home if they are to gain any real fluency. Although full fluency is the long-term goal of the program, the more realistic, short-term goal is to give the students a framework for learning Sm'algyax. This includes learning basic vocabulary, useful sentences or sentence frames; and developing pronunciation and listening comprehension skills.

Clearly the program represents a valuable assertion of Tsimshian identity and Sm'algyax in an historically hostile environment. The presence of the Sm'algyax Language Program in town schools marks a change in attitudes among the Euro-Canadian as well as the Tsimshian population. Strong support for the program has also come from other First Nations communities in Prince Rupert. This suggests that the program is valued for its role in strengthening First Nations identity.

### 3.4.2 OPPORTUNITIES FOR ADULT LEARNERS

Community classes in Sm'algyax have run intermittently in Tsimshian communities for a number of years. The classes depend on the willingness of the language teachers in the Sm'algyax Language Program to give their time. During the school year 1997-1998 a number of new classes were begun in Prince Rupert and Metlakatla, staffed by the teachers in the town language program. These classes have an important role to play in providing adults with a safe environment in which to learn Sm'algyax. For many adults, who cannot make a commitment to the University courses described below, the flexibility of these classes is an important benefit.

Within the past twenty years a number of courses that provide opportunities to learn about Sm'algyax have been offered by British Columbia universities. The earliest of these ran between 1982 and 1984 and was offered to the teachers in the Sm'algyax Language Program. The teachers completed a Native Indian Languages Diploma

(one year full-time equivalent) through the University of Victoria. This course was delivered in Prince Rupert and had a strong linguistic focus, concentrating on Sm'algyax. Beginning around the same time, the Simon Fraser University Native Teacher Training Program (a Bachelor of Education: four years full-time equivalent) was conducted in Prince Rupert. Within this program courses intended to develop students' understandings of First Nations languages were run in 1982 and 1989. Students from a number of Northwest First Nations were able to learn about the language of their communities.

The University of Northern British Columbia (UNBC) has its main campus in Prince George. There are branches in many northern towns, including Prince Rupert and Terrace, and courses are offered in a number of languages including Sm'algyax, Nisga'a and Gitksan on a fairly regular basis, depending on the availability of instructors. The focus of the courses varies. The Sm'algyax course is based on the study of *adawx* (traditional oral texts). While the structure of the language is analysed in relation to the texts, the course is more about studying literature than learning language. Credits from these semester length courses can be counted towards various programs.

The Simon Fraser University program continues to train First Nations teachers from the Haida, Nisga'a, Gitksan and Tsimshian nations. Both general teacher training programs and Language and Culture teacher training programs are currently being run in Prince Rupert. Over the past couple of years the Language and Culture program has included Sm'algyax content within the linguistics courses and the trainees have also taken the Tsimshian courses offered through UNBC. People who complete the course have a good understanding of Sm'algyax grammar and a metalinguistic framework for dealing with the language. Given supplementary language training they could provide a pool of teachers for future programs.

### 3.4.3 *Dm sagatgyedm algyaga Ts'msyeen* (STRENGTHENING THE TSIMSHIAN LANGUAGE)

In June 1997 a conference on the state of Sm'algyax was held in Prince Rupert. It was sponsored by the Ts'msyeen Sm'algyax Authority and the Tsimshian Tribal Council. The conference was attended by about 200 people. Over three days delegates focused on the following areas:

> **Lessons of the past:** discussion of the effects of the residential school experience and other policies of cultural assimilation.
>
> **Teaching Sm'algyax:** description of the programs currently being taught, with representatives from the UNBC and the Sm'algyax Language Program.
>
> **Where are we now?:** discussion on current research on Sm'algyax, the relationship between language and culture, and the use of Sm'algyax at home and in language programs.
>
> **Possibilities for language support:** discussion of the role of the Language Authority, and of the materials available through the language programs.
>
> **Youth Panel:** discussion by young people of their feelings for the language.
>
> **Future directions for language revitalisation:** discussion of the possibilities for reviving Sm'algyax as a 'home' language, using new technology to learn Sm'algyax, immersion schooling, and rediscovery programs (learning from elders).

One participant at the conference described it as "something of a watershed". There was a sense of growing resolution within the community for protecting the language. The goals expressed by the resolutions were: to foster environments and create programs in which to learn Sm'algyax; to maintain the language through organ-

isational support, political activity, and the work of linguists; and to raise the profile of the language and foster pride in Tsimshian language, identity and culture. It would be fair to say that the vision created by delegates to the conference was optimistic and ambitious, and that the implementation of each of the specific steps involved will require a great deal of dedication and hard work from members of the community.

At this time, the Tsimshian Tribal Council is directing most of its energy towards treaty negotiations with the provincial and federal governments, trying to protect the Tsimshian land and resource base, and developing a new economic base and political context for the Tsimshian Nation. The social fabric of the wider Tsimshian community is pulled quite thin even before programs such as a drop-in centre are contemplated. The needs of the Tsimshian community are diverse: in some cases the same individual will be involved in education, forestry, and fishery issues, in addition to considerable family responsibilities. There are a limited number of people in a position to contribute to these programs. Furthermore, tensions between old power structures (the will of the chiefs) and new ways of doing things (bodies such as the First Nations Education Council who obtain government funding for language and cultural programs) are sometimes difficult to resolve.

## 3.5 Conclusion

This chapter has described the status of Sm'algyax in the Tsimshian community at the turn of the 21st century. As we saw in §3.1, speaker numbers are small and fluent speakers tend to be elderly. However, contexts for using the language have been expanding over the past few years and the community is increasingly committed to language revitalisation.

There is a great deal of variation within the Sm'algyax language community. In §3.2, parameters for variation were identified as including: the formal and informal registers, incomplete language change, dialect differences, and differences due to language ability (fluency).

English, as the dominant language in the area, is also having an effect on the structure of Sm'algyax. Changes to Sm'algyax itself must be distinguished from the shift to speaking English. Some phonological changes due to English influence were discussed in §3.3. Finally in §3.4 we reviewed current programs for revitalisation underway in the Tsimshian community. Programs target both young people and adults and are widely supported by members of the community.

This information sets the scene for the community directed project described in Part Three of this book. The following chapters provides information about Sm'algyax from a structural and typological perspective. Together these factors form the basis for the issues discussed in relation to the development of the SLD.

# Chapter Four: Introduction to Sm'algyax Grammar

## 4.0 Introduction

This chapter provides information about Sm'algyax from a genetic and typological perspective. It is complementary to Chapter Three in which the language is discussed in relation to the language community. This chapter is laid out as follows: in §4.1 the linguistic affiliations of Sm'algyax are discussed; in §4.2 a general introduction to Sm'algyax grammar is given and the dependency markers are described; the part of speech inventory for Sm'algyax is given in §4.3. In §4.4 the status of Sm'algyax as a polysynthetic language is discussed, then in §4.5 criteria for identifying polysynthetic languages are applied to Sm'algyax; findings are summarised in §4.6.

The territory of the Tsimshian on the northern Pacific coast of British Columbia encompasses the tidal section of the Skeena River, reaching inland as far as Terrace, and the coastal islands between Dixon Entrance and the Milbank Sound. Their neighbours to the north and northeast speak Nisga'a and Gitksan respectively. These languages are also members of the Tsimshianic language family (discussed in §4.1). To the west, speakers of Haida occupy the Queen Charlotte Islands, while to the south and southeast are speakers of various languages of the Wakashan family. See Map 1.

View of Kitkatla, British Columbia from the water, 2008

At this time Sm'algyax is spoken by Tsimshian people living in the villages of Lax Kw'alaams, Metlakatla, Kitkatla, Hartley Bay and Klemtu, Kitsumkalum and Kitselas and New Metlakatla in Alaska. It is also spoken by people living in the towns of Prince Rupert and Terrace, and further afield in Prince George and Vancouver a few speakers can also be found. See Map 1 and Map 2.

## 4.1 Linguistic affiliations

Sm'algyax is also known as Coast Tsimshian in anthropological and linguistic literature. I refer to the language as Sm'algyax because this is the way the language is named by all members of the Tsimshian community.[8] Although the name 'Coast Tsimshian' has been used to avoid confusion within the literature, Tsimshian people

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8. Within the Tsimshian community the spelling of the language is Sm'algyax in accordance with the practical orthography (see Chapter Seven). Throughout this book I use Sm'algyax which is consistent with the English orthography.

do not use it. Many members of the Nisga'a and Gitksan nations object to being lumped together with the Tsimshian people when the word is used as an umbrella term.[9] Members of each community, Nisga'a, Gitksan, and Tsimshian identify themselves, and are recognised provincially and federally, as distinct First Nations of Canada.

This differentiation was not fully recognised in the early anthropological or linguistic literature. For example, Boas (1916), in his book *Tsimshian Mythology*, treats all three groups as belonging to the Tsimshian 'tribe'. and distinguishes them from the Haida and Tlingit tribes as comprising the peoples of the Northern group of North Pacific cultures (1916:43). The practice of referring collectively to the languages and peoples of the Nass and Skeena Rivers as 'Tsimshian' has been particularly persistent in the anthropological literature (cf. Seguin 1984:ix and Miller 1997:xiii). The current practice in linguistics is to refer to the language family as Tsimshianic (beginning with Tarpent 1983).

## 4.1.1 TSIMSHIANIC INTERNAL RELATIONS

The identification of all the branches of the Tsimshianic language family has been a slow process. Dorsey (1897:277) concurred with Boas (1888:231) in considering that there was a distinction within Tsimshian between Tsimshian (proper, i.e. Sm'algyax) and Nass-Gitksan; the latter including Nisga'a and Gitksan. Later, in his grammar (Boas 1911 a:287), Boas recognised Nisga'a, Gitksan, and Tsimshian as separate varieties. As Rigsby (1986:6) notes, Boas' use of the terminology 'language' and 'dialect' is different from the way these words are usedtoday. Boas uses the term language to refer to the common ancestor (i.e. Proto Tsimshianic), and the term dialect to refer to languages descended from it (that is, Tsimshian, Nisga'a, and Gitksan in Boas 1911). In other words, Boas' treatment of the branches of the Tsimshianic language family identified by the turn of the century is consistent with today's analysis because it recognises three distinct varieties with a common ancestor.

The connection between Nisga'a and Gitksan first observed by Boas (1888) was recognised for many years (see Rigsby 1967, 1970, 1975), but Rigsby (1986:6ff) reexamines the question in the light of the various ways the terms 'dialect' and 'language' are used in linguistic literature and concludes that it is appropriate to identify Nisga'a and Gitksan as separate languages. This is also in keeping with community perceptions and language practices (Rigsby 1986:11).

A fourth member of the Tsimshianic family, Sgüüxs (or Southern Tsimshian) was first noted by Dunn (1976). According to Dunn (1976:63), Sgüüxs shares a high percentage of cognates with Sm'algyax but its phonetic inventory is most similar to Gitksan. At that time Dunn noted that there were only two families of Sgüüxs speakers: one in Hartley Bay and another in Klemtu. There is now only one fluent speaker, living in Klemtu. Other families who once would have been identified as Sgüüxs speakers have been absorbed into the Heiltsuk community at Klemtu (see also discussion at the end of §2.1.2).

## 4.1.2 TSIMSHIANIC WIDER RELATIONS

In 1915 Sapir first reported an intuition that Tsimshian(ic) was a member of the Penutian language family (letter to Kroeber December 1915 cited from Golla 1984:201). In an article in the Encyclopaedia Britannica (1929), Sapir presented a proposal for classifying many languages north of Mexico which included Tsim-

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9. As Rigsby (1986:11) notes, Sm'algyax 'real language' is also used by the Nisga'a and Gitksan to refer to their languages. Despite the fact that this is also a term used to designate all three languages, it is preferred by Tsimshian people and accepted as a legitimate name for their language by members of the Nisga'a and Gitksan nations. The crucial difference is no doubt that this term was applied to the language by the speakers themselves.

shian(ic) within the Penutian language family. Sapir prefaced his classification with the comment that it was intended to be suggestive. However, as Campbell (1997:76) notes, the hypothesis given by Sapir quickly attained the status of gospel.

Although Sapir had access to Boas' published descriptions of the Tsimshianic languages (Tsimshian and Nisga'a) and had been able to work with speakers of Nisga'a who came to Ottawa in order to press their claims for land rights (Rigsby 1986:27, Tarpent 1997:67), he apparently had no data for Gitksan and obviously lacked information on Sgüüxs. Thus the observation (that Sapir was just as happy as anyone to make) that a great deal of proof was yet to be found for a Tsimshianic-Penutian connection has been long standing (Campbell 1997:70, Mulder 1994:5, Rigsby 1986, and Tarpent 1997:67).

One reason a satisfactory demonstration of the Tsimshianic-Penutian connection has proved to be elusive is the lack (until more recent times) of reasonably comprehensive descriptive data. Of the authors who have addressed this question, only Tarpent (1997) has made use of modern reliable materials on all four Tsimshianic languages. The writings of Sapir (1921, 1929) and Hymes (1957, 1964) predate all publications except Boas' grammar, while later authors tend to make use of only some of the available material (for example DeLancey et al 1988 do not make use of any of Tarpent's publications).

The most extreme example of this kind of poor use of material is the reaffirmation of the Tsimshianic-Penutian connection by Greenberg (1987). The evidence that he cites for this connection is slim (32 cognates in a list of 288 sets of cognates for the Penutian family). Furthermore, there are a number of problematic entries within this list. For example, the Sm'algyax words *yooks* 'wash' and *lo'ik* 'mud' are both re-transcribed with the vowel *a* in Greenberg's list (*jaks* and *laʔk* respectively) so that the length distinction is lost. The word *alubaan* 'run quickly' is rendered *ulloban* by Greenberg and included as a possible cognate meaning 'run' with Nez Perce: *welw,* Maidu: *welw*, and North Sahaptin: *wile*. The morphological structure of *alobaan* [*alo-baan* 'openly-run'] does not support this connection. Other errors include *saga* 'wish', which is either *hasax* or *asax*, and the form *paʔlkpaʔk* 'wash' which is unattested in Sm'algyax vocabularies.

As Greenberg distinguishes between Tsimshian proper (meaning Sm'algyax) and Nass (presumably Nisga'a), these errors cannot be explained by a conflation of the two languages. Furthermore, as Greenberg does not list one Tsimshianic publication in his bibliography, there is no way to reconstruct his findings. A more thorough assessment of Greenberg (1987) is given in Campbell (1988). Campbell's criticisms about the quality of Greenberg's data and his methodology are equally relevant to the Tsimshian(ic) material.

Other more recent authors to have addressed the question include Silverstein (1969, 1979) and DeLancey, Genetti & Rude (1988). The main difficulties with these works as answers to the Tsimshianic-Penutian hypothesis are that they do not provide comprehensive evidence, even as a collection, and that they sometimes make odd use of data. For example Rigsby (1986:29) observes that the clause level syntax discussed by Silverstein as evidence for the connection can in fact be used as evidence against the Penutian hypothesis because it is highly divergent from the typical Penutian patterns. Sapir recognised this difficulty and accounted for it by arguing that Tsimshianic syntax had been influenced by the Salishan and Wakashan languages.

DeLancey, Genetti & Rude (1988) present a number of lexical sets in an attempt to link Sahaptian-Klamath-Tsimshian, all members of Sapir's 1929 Penutian family. Campbell (1997:320) considers that there is much more work to be done if such a connection is to be proven using this approach. Like Tarpent (1997:67) I have concerns about DeLancey et al's use of Tsimshianic data. For example the Sm'algyax form *ksa-buu* 'out-blow' has been listed in the 'blow' set with Nez Perce: *sepuu* and Sahaptin: *sabuu*. However, given that the stem is in fact *buu* 'blow' and the prefix *ksa* is highly productive, its relevance to the set is in fact somewhat remote. Also

problematic is the authors' use of the term 'Tsimshian' (which appears to be used with each of the meanings identified in §4.1) in addition to the terms Coast Tsimshian, Nisgha, Nass-Gitksan, ProtoTsimshian, and Tsimshianic.

The first comprehensive work by a Tsimshianic researcher on this subject is Tarpent (1997). Her argument benefits from her long experience with Nisga'a and more recently Sgüüxs. Just as important, Tarpent makes use of data she has reconstructed for Proto-Tsimshianic as well as data from all four Tsimshianic languages. She also examines a wide range of other Penutian languages, including: Alsea, Cayuse, Chinook, Coos, Costanoan, Kalapuya, Klamath, Maidu, Miwok, Molala, Nez Perce, Northern Sahaptin, Siuslaw, Talkema, Wintu, and Yokuts.

Tarpent provides evidence in the form of lexical sets which are arranged according to phonological patterns from across the Penutian language family. Morphological patterns are also addressed at some length. In seeking to address the question 'from the Tsimshianic side', Tarpent's research redresses the balance for quality and comprehensive data which has otherwise been somewhat lacking in the literature on the Tsimshianic-Penutian hypothesis. Questions relating to the syntactic characteristics of the Tsimshianic family and their similarity to neighbouring languages, and some reasonable hypothesis about the historical movements that left the Tsimshianic languages far to the north of other Penutian families, have not yet been addressed convincingly.

## 4.2 Overview of Sm'algyax Grammar

Basic word order in Sm'algyax is VSO, although it is unusual for both arguments to be represented by full NPs. The language has a number of polysynthetic traits including the use of noun incorporation, the presence of adverbial elements within the verb complex, and the use of derivational processes in the construction of clauses (see §4.4), and shows a mix of head and dependent marking patterns.

Sm'algyax generally marks case according to the ergative/absolutive pattern. This is apparent in the bound pronouns (with ergative and absolutive forms) and in the dependency markers (where NPs headed by proper nouns have different forms for the ergative and absolutive). The aspect of the clause has some bearing on the argument marking patterns, non-perfective clauses are straightforward in their case marking but perfective clauses show some deviation from the basic pattern.

The basic clause has the following slots:

>   (Topicalised NP) **Predicate** (NP) (NP) (PP)

The predicate may stand alone as a complete clause. The predicate includes the following slots:

>   (CI) (T/A) (-$PR0_1$-) (DISC) (MOD/LOC=) V (-PERF) (-PR02)

| CI | clause initial form (coordinators, subordinators, and forms marking clausal negation) |
|---|---|
| T/A | tense/aspect marker (*nah* 'past'; *nah ła* 'recent past'; ø 'non-future'; *dm* 'future'; *ła dm* 'near future'; *ła* 'imperfect'; *yagwa* 'continuous') |
| $PRO_1$ | bound ergative pronoun (prefixed or suffixed to a neighboring form) |
| DISC | discourse marker (*al* 'emphatic to clause initial forms'; *di* 'contrastive focus'; *dzi* 'indefinite predicate'; '*ap* 'emphatic to predicate' and *wil(a)* 'manner focus'; and the topic markers: *int*, and *t'in*) |

MOD/LOC    modifier/locative (proclitics to the verb encoding manner, quality, location, orientation, and so on)

V          verb (or other stem) acting as predicate

PERF       perfective suffixes

PRO2       bound absolute pronoun suffixes

Noun phrases are readily identified in Sm'algyax. Their structure is as follows:

-DM (POSS)- (QUANT) (ADJ) (MOD/LOC) N (POSS PRO OR POSS NP) (DEM)

DM         dependency marker (see below)

POSS       possessive marker na- proclitic to NP

QUANT      quantifier/number word

ADJ        N or V acting as modifier in NP

MOD/LOC    modifier/locative

N          noun

POSS PRO   pronoun marking possessor

POSS NP    NP indicating possessor

DEM        demonstrative

Prepositional phrases contain a preposition and an NP.

Grammatical relations in Sm'algyax are coded by the bound pronouns and dependency markers. Where case is marked, it follows an ergative/accusative pattern. Dependency markers are described in more detail at the end of this section.

Clauses are either perfective or non-perfective; the aspect of the clause may be read from the argument markers or from the perfective suffixes that occur between the verb stem and the absolute bound pronouns.

Verbs in Sm'algyax fall into the following transitivity classes:

**intransitive (active) (ViA):** refer to activities. Examples include: *baa* 'run'; *gyiinɫ* 'cry uncontrollably'; *goydiks* 'come'; *miilk* 'dance, play'; and *yeltk* 'return'.

**intransitive (stative) (ViO):** these verbs refer to states or qualities. Many descriptors, coded by adjectives in other languages, are stative verbs in Sm'algyax. Examples include: *bübinuusk* 'be stubborn'; *gyeps* 'be high'; *gallet* 'be strong PL'; *hani* 'be thin'; and *laaltk* 'be slow'.

**extended intransitive (i) (ViSPE):** extended intransitive verbs in class (i) take an additional argument in a prepositional phrase. The additional argument may be an NP, as is the case for the following verbs: *adziksagoot* 'be proud (of)', *amahiduu* 'have a good reputation (for)', *a̱x'a̱xɫk* 'arrive (at) PL', *ayawaal* 'be talented (at)', *baxyaa* 'walk up (to)', *hooksk* 'be with'; or it may be a clause, as it is for: *alx* 'be brave (to)', *ayaaltk* 'be fortunate (in)', and *baas* 'be afraid (to)'.

**extended intransitive (ii) (ViSE):** these verbs have an argument marked in the role of S and also take a sentential complement as a second argument. The second argument is not syntactically marked, and is related to the main clause by parataxis only. Examples include: *aba̲'a̲sk* 'be anxious (to)'; *alaays* 'be lazy (to)'; *daya* 'say (direct quote)'; *gyelwulks* 'feel (that)'; *ha'1igoot* 'think (that)'; and *hasa̲x* 'want (to)'.

**transitive (VtAO):** these verbs take A and O arguments. Examples include: *aadzax* 'reach across to'; *be'a̲kl* 'tear (bark) off (a tree)'; *daaltk* 'meet' *dakł* 'wrap'; *dibaa* 'run with' ; and *goo* 'go to'.

**extended transitive (VtAOPE):** these verbs take a third argument in a prepositional phrase. The additional argument encodes goals, instruments, and benefactives. Examples include: *dzeex* 'share out'; *eets'* 'fry in'; *gwinsgüü* 'lie close to'; *gyep* 'dip water for'; and *galiis* 'transfer to'.

There are three classes of ambitransitive verbs in the language. Verbs that may take different argument patterns without the use of derivational morphology include the following:

**intransitive active (ViS$_a$) → intransitive stative (ViS$_o$ ):** *betsk* 'arrive, be placed'; *gyiitk* 'swell, be swollen' *p'oo* 'be breaking', 'be broken'; and *xsp'o'onsk* 'crackle'.

**intransitive active (ViS$_a$) → transitive (VtAO):** *aaw* 'cry, cry over'; *gaapk* 'scratch, scratch something'; *gox* 'nod, peck'; and *ksiwox* 'dream, dream that'.

**intransitive stative (ViS$_o$) → transitive (VtAO):** *gol* 'be spilt, spill something'

Sm'algyax uses dependency markers for coding argument marking on full NPs. Dependency markers indicate dependency relations between constituents whether at the level of the word, phrase, or clause. The dependency markers are always phonological suffixes. In (4.1) the dependency marker -a appears between the predicate *ksuk'wisk'was* 'be broken' and the common noun S argument *'niksuniiskw* 'window':

**(4.1)**  *Ksuk'wisk'was**a***            *'niksuniiskw*

*ksu-k'wis-k'was=**a***            *'niksuniiskw*

out-break.PL=**DM**            Window

'The window is broken.'

In a sentence such as (4.2), the common noun dependency marker appears before both the A *haas* 'dog' and the O *duus* 'cat' arguments. The dependency marker here is showing the dependency between the NP and the predicate *libilitwaaltk* 'be enemy of'. The dependency marker for the O NP appears as a suffix on the A NP.

**(4.2)**  *Libiltwaaltgid[a*            *haas][a*            *duus]*

*libiltwaaltk-t[=a*            *haas][=a*            *duus]*

be.enemy.of-3O=DM            dog][=DM            cat]

'Dogs are enemies of cats.'

Because the dependency markers are phonologically suffixes but grammatically more like phrasal affixes (occurring at the left-hand boundary of the phrase; see Stebbins 2003), they are generally known as connectives in the Tsimshianic literature. In most cases they anticipate a syntactic dependent although in some cases

they anticipate a head. The forms and functions of the dependency markers are shown in Table 4.1. Phonological processes sometimes mean that the dependency marker does not appear.

| Form | Host | Function |
|---|---|---|
| -m | verb preceding incorporated noun | marks noun incorporation |
| | lexical modifier preceding head in NP | marks compounding |
| -a | lexical modifier preceding head in NP | marks modification of head N in NP |
| | head N and demonstrative in NP | marks demonstrative as part of NP |
| | possessed noun preceding common noun possessor | marks common noun possessor |
| | verb or noun preceding A/S/O common noun NP | marks common noun S/A/O NP |
| -s | possessed noun preceding proper noun possessor | marks proper noun possessor |
| | verb or noun preceding S/O proper noun NP (non-perfective clauses) | marks proper noun S/O NP |
| | verb or noun preceding proper noun NP (perfective clauses) | marks proper noun A NP |
| -t | verb or noun preceding proper noun NP (non-perfective clauses) | marks proper noun A NP |
| | verb or noun preceding S/O proper noun NP (perfective clauses) | marks proper noun S/O NP |

Table 4.1: Dependency markers in everyday Sm'algyax

Let us examine the use of the dependency markers as argument markers (A/S/O) in more detail. As examples (4.1), (4.2), and table 4.1 indicate, common nouns heading NPs in the roles of A/S/O invariably take the dependency marker -*a*. There are two patterns for marking the proper noun dependency markers. They are shown in Table 4.2:

| Role | Non-perfective | Perfective |
|---|---|---|
| A | -*t* | -*s* |
| S/O | -*s* | -*t* |

Table 4.2: Proper noun dependency markers (A/S/O) in everyday Sm'algyax

Note that there is a 'switch' between the pattern of marking ergative and absolutive arguments in the perfective and non-perfective aspect; such that the pattern of argument marking in the non-perfective aspect is opposite to the pattern in the perfective.

In (4.3), in the perfective aspect, the A 'Nadine' is marked by the dependency marker -*s*, and the O 'Isabelle' is marked by the dependency marker -*t*.

| **(4.3)** | *Niidz[as* | *Nadine][t* | *Isabelle].* |
|---|---|---|---|
| | *niits[=s* | *Nadine][=t* | *Isabelle]* |
| | see[=DM | Nadine][=DM | Isabelle] |

'Nadine saw Isabelle.'

Example (4.4) is perfective and uses the dependency marker *-t* for the S argument, while (4.5) is non-perfective and uses the dependency marker -s for the S argument.

**(4.4)**

| *K'waatgit* | *Milly* | *a* | *spa̲gaytg̲ang̲an.* |
|---|---|---|---|
| *k'waatk=t* | *Milly* | *a* | *spa̲gaytg̲ang̲an.* |
| be.lost=DM | Milly | PREP | forest |

'Milly was lost in the forest.'

**(4.5)**

| *Aka* | *xsteltgas* | *Sally* |
|---|---|---|
| *aka* | *xsteltk=s* | *Sally* |
| NEG | be.noisy=DM | Sally |

'Sally is not making a sound.'

Example (4.3) showed the proper noun dependency markers for A and O arguments from the perfective series. Example (4.6) is in the non-perfective aspect and shows the proper noun dependency marker -t for the A argument 'Rita' (the dependency marker -a for w*a̲s* 'blanket' does not appear on Rita because her name ends in a vowel):

**(4.6)**

| *Yagwat* | *dzapd[it* | *Riita][* | *wa̲s]* |
|---|---|---|---|
| *yagwa-t* | *dzap-d[=t* | *Riita][* | *wa̲s]* |
| CONT-3A | Make-3O[=DM | Rita][ | blanket] |

Rita is making a blanket.' [Mulder 1994:64]

Finally, the predicative dependency marker -s for proper noun O arguments in non-perfective clauses is shown in (4.7):

**(4.7)**

| *Adat* | *ts'iin[s* | *Lori]* | *a* | *naüüsgit* |
|---|---|---|---|---|
| *ada-t* | *ts'iin[=s* | *Lori]* | *a* | *na-üüsk-t* |
| and-3A | squirt[=DM | Lori] | PREP | POSS-stink-3POSS |

'And squirted Lori with its smell.'

## 4.3 Sm'algyax Part of Speech Inventory

This section provides a summary of the Sm'algyax form class inventory. The distinction between lexical and grammatical classes is introduced here, then the form classes are presented in the next sections. Words, clitics, and affixes are treated in tum. They are organised as follows: lexical words (§4.3.1), grammatical words (§4.3.2), clause initial clitics (§4.3.3), noun phrase initial clitics (§4.3.4), lexical clitics (§4.3.5) and affixes (§4.3.6). Stebbins (2003) discusses the theoretical basis and provides criteria for distinguishing between words, clitics and affixes in Sm'algyax.

In developing a set of criteria for distinguishing the parts of speech in Sm'algyax, I began with an initial distinction between lexical and grammatical classes. Lexical classes in Sm'algyax include the open classes of nouns, and verbs, as well as the semi-closed classes of adverbs, quantifiers, modifiers, and locatives. Grammatical classes include the closed sets of clause initial clitics, dependency markers (also called 'connectives' in

the Tsimshianic literature), several sets of pronouns, demonstratives, prepositions, negatives, and tense/aspect markers.

In this respect, it is useful to review the criteria used by Givón (1984) for lexical and grammatical classes. Overall he identified lexical classes as encoding lexical meaning because they refer to semantically richer, more complex concepts, while grammatical classes encode discourse functions or propositional information which is semantically bleached and reflects syntactic, rather than cultural, values. This corresponds with a tendency for grammatical forms to be both shorter and more phonologically dependent than lexical forms. These criteria are summarised in Table 4.3.

| Characteristic | Lexical forms | Grammatical forms |
| --- | --- | --- |
| Phonological size | large | small |
| Stress | stressed | unstressed |
| Semantic size | large | small |
| Semantic detail | specific (enriched) | generic, classificatory (bleached) |
| Class size | large | small |
| Class membership | open | closed |
| Morphemic status | free | bound |
| Function | code lexical meaning | code discourse function |

Table 4.3: Lexical vs. grammatical classes (adapted from Givón 1984:49)[10]

These criteria are useful for distinguishing between lexical and grammatical classes in Sm'algyax.[11] However, it is important to note that the majority of form classes in Sm'algyax exhibit a subset of these properties. In particular, the phonological characteristics of form classes in Sm'algyax differ from Givón's expectations as they include lexical forms that are phonologically dependent (clitics and affixes) and grammatical forms that are phonologically independent (words). It should also be noted that the lexical classes in Sm'algyax are 'open' to varying degrees. For example, whereas nouns and verbs are readily derived and borrowed, the modifiers and locatives are more like closed classes.

### 4.3.1 LEXICAL WORDS

Four classes of lexical words may be identified in Sm'algyax: verbs, nouns, adverbs and quantifiers. Each class is illustrated in the following paragraphs.

Verbs form a large open class, and members may be subdivided according to their transitivity see §4.2. The class of verbs includes descriptors such as colour terms, which occur in many languages as a distinct class of adjectives. Clauses in Sm'algyax consist minimally of a verb complex. The following example shows the verb *dik* 'wake someone up'. The other element in the verb complex is the tense/aspect marker *dm* 'future'; the arguments are coded by dependent pronouns:

---

10. Givón contrasted 'lexical words' with 'inflectional morphemes' (Givón 1984:49). The distinction between inflectional and derivational morphology is not always clear cut. In this analysis I have focused instead on the general distinction between lexical and grammatical classes.
11. Czaykowska-Higgins (1998) in her analysis of Moses-Columbia Salish also distinguishes between lexical and grammatical dependent morphology.

**(4.8)**   *Nm*                      *digin*

     *n-dm*                     *dik-n*

     1A-FUT                    wake.up-2O

     'I'm going to wake you up.'

Nouns and verbs may both be used predicatively. Nouns are distinguished on the basis of their lack of inherent transitivity (Sm'algyax has a set of derivational suffixes that are used to modify the transitivity of the stem, see Stebbins 1999:146ft) and their association with nominal rather than verbal morphology (see Stebbins 2003).

Noun phrases may contain a number of elements. The head of the NP in the following example is *awta* 'porcupine'. The modifier clitic *ɫgu* 'little' and the attributive verb *gwe'a* 'be poor' also precede the head noun within the NP. Note that the NP is preceded by the dependency marker *=sga* which indicates that the little porcupine is a definite, absent, referent in the role of an absolutive argument. The NP is shown in square brackets in (4.9):

**(4.9)**   *Ada*        *ɫa dm*        *dzak[sga*        *ɫgu*        *gwe'am*        *awta]*

     *ada*         *ɫa dm*        *dzak[=sga*       *ɫgu*        *gwe'a=m*       *awta]*

     and          near.FUT       die[=DM          little       poor=DM        porcupine

     'And poor little porcupine was about to die.'

Demonstratives (§4.3.2), quantifiers (see below in this section), and locatives (see §4.3.5 and §4.3.3) also occur within the NP.

Many of the meanings coded by adverbs in other languages are expressed using modifier proclitics in Sm'algyax (see §4.3.5 and §4.3.3). As a result, the class of adverbs in Sm'algyax is fairly small. Adverbs either modify the verb or give information about the time of an event. Adverbs are the only independent words that can occur between the tense/aspect marker and the verb within the verb complex (see §4.2), as in (4.10).

**(4.10)**   *Ła dm*        *gyik*        *miiga*        *maay*

     *ɫa dm*        *gyik*        *miik=a*       *May*

     near.FUT       again        ripe-DM       berries

     'The berries are going to be ripe again'

Adverbs of time form a subclass and can be distinguished by their appearance at end of the clause:

**(4.11)**   *Dm*        *liimigat*        *Samson*        *dzigits'iip.*

     *dm*         *liimi-gat*       *Samson*        *dzigits'iip*

     FUT         sing-EVID        Samson         tomorrow

     'It is said Samson will sing tomorrow.'

Quantifiers and numerals share the property of occurring in NPs before the head noun. The following example contains the quantifier *txa̱'nii* 'all' between the verb and the noun:

**(4.12)** *Łooda*      *txa̱'nii*      *gyet*

        *łoot=a*      *txa̱'nii*      *gyet*

        respect=DM      all      people

        'Respect all people'

Quantifiers and numerals occur in complementary distribution. Numerals may also be used predicatively. Like other languages of the Pacific Northwest, numerals in Sm'algyax have variant forms depending on what is being counted. The following sentence shows the numeral *txa'alpxsgn* 'four long objects' occurring within the NP (cf. *txaalp* 'four', the general term):

**(4.13)** *Gyiigu*      *txa'alpxsgn*      *gant'amiis*

        *gyiik-u*      *txa'alpxsgn*      *gant'amiis*

        buy-1A      four.long      pencil

        'I bought four pencils'

## 4.3.2 GRAMMATICAL WORDS

The grammatical words identified for Sm'algyax include the following closed classes: demonstratives, independent pronouns, prepositions, nominal conjunctions, interjections, and interrogatives. An example of these categories and a brief description of the distribution of each is given below.

Demonstratives occur at the end of the NP. They are always preceded by a dependency marker. The following example shows the demonstrative *gwii* 'that':

**(4.14)** *Gwishalaayt*    *gap*    *di*    *dzaba*    *hana'a̱ga*    *gwii*

        *gwishalaayt*    *gap*    *di*    *dzap=a*    *hana̱'a̱x=a*    *gwii*

        dancing.blanket    really    CF    make=DM    woman=DM    that

        'That woman is really making a dancing blanket'

Demonstratives may also be used adverbially (see (4.21) for an example).

Independent pronouns form complete NPs in Sm'algyax. They are often used contrastively, and tend to appear at the beginning of the clause as topics. The pronoun *'nüüyu* is shown in (4.15):

**(4.15)** *'Nüüyu*    *int*    *sgaaẅ*    *goo*    *wila*    *hawt.*

        *'nüüyu*    *int*    *sgaaẅ*    *goo*    *wila*    *haw-t*

        I    TOP    disagree    what    MF    say-3A

        'I disagree with what he said.'

There are two sets of independent pronouns: those for core grammatical roles and another set for obliques (including indirect objects). The obliques are distinguished in the first and second person only (the third person pronoun is invariantly *'niit*, or dp *'niit* in the plural). Oblique pronouns only occur in prepositional phrases. (4.16) shows the oblique pronoun *k'wan* 'you':

**(4.16)**

| T'amiisa'nu | da | k'wan |
|---|---|---|
| tiamiis-'n-u | da | k'wan |
| Write-PREF-1S | PREP | you |

'I'm going to write to you'

Prepositional phrases in Sm'algyax contain referents in roles such as source, goal, instrument, benefactive, location and time of event. There is a general preposition *a* (see (4.21)) and a small number of preposition + dependency marker forms that code the type of noun (proper noun *das* versus common noun *da* (see (4.22), (4.23), (4.30)) (see Mulder 1994:46ff for details). As example (4.16) shows, the oblique pronouns take the common noun preposition *da*. The next example shows that the third person *'niit*, like proper nouns, takes the preposition *das* (see also (4.22)):

**(4.17)**

| Gyiloom | dza | xbagaa | ła'at | das | 'niit. |
|---|---|---|---|---|---|
| gyiloo-m | dza | xbagaa | ła'at | das | 'niit |
| don't-2a | INDEF | take.away | ball | PREP | him |

'Don't take the ball away from him.'

Nominal conjunctions, like prepositions and dependency markers, distinguish between proper and common nouns. The conjunction *dis* is used to conjoin proper nouns while the form *dił* is used for common nouns.

**(4.18)**

| Niidzu | Terry | dis | Perry. |
|---|---|---|---|
| niits-u | Terry | dis | Perry |
| see-1A | Terry | and | Perry |

'I saw Terry and Perry.'

**(4.19)**

| K'odzu | hałoom | dił | ha'liplee |
|---|---|---|---|
| k'ots-u | hałoo-m | dił | ha'liplee |
| cut-1A | material-1PL.POSS | and | tablecloth |

'I cut our material and the tablecloth (at the same time).'

As the free translation in (4.19) indicates, conjoined NPs are understood to be simultaneously affected by the predicate. If this reading is not possible, the clause conjunction *ada* is used instead. The NP may be the only element present in the coordinated clause.

**(4.20)**

| K'odz-u | hałoom | ada | ha'Iiplee. |
|---|---|---|---|
| k'ots-u | hałoo-m | ada | ha'liplee |
| cut-1A | material-1PL.POSS | and | tablecloth |

'I cut our material and (then) the tablecloth.'

Interjections in Sm'algyax are able to stand alone as utterances. They include expressions for internal states (ee 'Oh! I just remembered ...'), responses to external stimuli (*aaw* 'ouch!', *la* 'Oh! That reminds me ... '), commands (*gyikw ah* 'Do it again!', *ndeh* 'Get out!') and the words *oo* 'yes' and *ayn* 'no'.

Interrogatives occur clause-initially in questions and may also be used in declarative clauses for indefinite NPs. Interrogatives include *awil goo* 'why', *goo* 'what', *naa* 'who', and *nda* 'where, when, how'. (4.21) shows the interrogative *nda* 'when':

**(4.21)**

| Nda | dm | daawłn | a | doosda? |
|-----|-----|--------|---|---------|
| nda | dm | daawłn | a | doosda |
| when | FUT | be.gone-2s | PREP | over.there |

'When are you going over there?'

### 4.3.3 CLAUSE INITIAL CLITICS

Clause initial clitics are unstressed and 'lean' prosodically on the following lexical word. They include: clausal negatives, tense/aspect markers, clausal conjunctions, subordinators, and a range of discourse markers. Clause initial clitics in Sm'algyax occur before the predicate. In the following paragraphs the functions of each of these classes is described briefly, and an example is given.

Clausal negatives include *ałga* 'not', *akadi* 'never, not at all', *ał* 'no', *gyiloo* 'stop, don't' (see also (4.17)), and *ha'wika* 'never'. The following sentence contains the negator *ałga* 'not':

**(4.22)**

| Ałga | ndm | k'yilamt | sa | hana'a |
|------|-----|----------|----|----|
| ałga | n-dm | k'yilam-t | da | hana'ax |
| NEG | 1A-FUT | give-3O | PREP | woman |

'I won't give it to the woman.'

Tense/aspect markers include: *nah* 'past' (4.23); *nah ła* 'recent past'; ø 'non-future' (4.12), (4.13), (4.20); *dm* 'future' (4.21), (4.25); *ła dm* 'near future' (4.10); *ła* 'imperfective' (4.30); *yagwa* 'continuous' (4.6). The following example contains *nah* 'past':

**(4.23)**

| Nah | 'makdm | ksaa | da | lax | aat. |
|-----|--------|------|----|----|----|
| nah | 'mak-t-m | ksaa | da | lax | aat |
| PAST | catch.fish-PERF-1PL.A | shark | PREP | on | net |

'We caught a shark in (our) net.'

Clausal conjunctions include: *ada* 'and' (4.9), (4.13); *da* 'then' (4.30); *da'al* 'but' (4.24); *ada wil, da wila, da la* 'and then' and *'yagay* 'instead':

**(4.24)**

| Łgu | Hayda | 'yuuta | gwa'a | da'al | aam | wila | Sm'algyaxt. |
|-----|-------|--------|-------|-------|-----|------|-------------|
| łgu | Hayda | 'yuuta | gwa'a | da'al | aam | wila | Sm'algyax-t |
| small | Haida | man | this | but | good | MF | Sm'algyax-3S |

'This young man is Haida but he speaks good Sm'algyax.'

Subordinators include: *a* 'while'; *a dm* 'in order to, so that'; *ami* 'if (not expected)'; *asi* 'while'; *awil* 'because' (4.25); *dzida* 'when, if'; *dziła* 'when'; *dzinda* 'when'; *gan* 'that's why, therefore'; *opdza* 'lest'; *ts'u* 'although'; and *wil, wila* 'that'. The following example shows *awil* 'because':

**(4.25)**

| Dm | max-du | waadza | gwa'a | awil | nłut'akt |
|----|--------|--------|-------|------|----------|
| dm | max-t-u | waats=a | gwa'a | awil | nłut'ak-t |
| FUT | put.away-PREF-1A | watch=DM | this | because | look.after-3O |

'I will put the watch away because (I) look after it'

Discourse markers include: *al* 'emphatic to tense/aspect marker'; *di* 'contrastive focus' (4.14), (4.27); *dzi* 'indefinite predicate'; and *wil(a)* 'manner focus' (4.24). When the discourse markers *al* or *di* are present in a clause initial clitic they may carry stress. The topicalisers: *int* (4.15), (4.26), and *t'in* (*t'in* is more archaic) are included here as a subclass. They contain the form *in* and a third person dependent pronoun as either a prefix or a suffix, resulting in the forms *t'in* and *int*. The topic marker is not analysed as containing a third person dependent pronoun by modern speakers. Topicalisers occur when an argument NP is moved to the first position in the clause.

| **(4.26)** | *Betty* | *int* | *k'yilam* | *da* | *k'oy.* |
|---|---|---|---|---|---|
| | *Betty* | *int* | *k'yilam* | *da* | *k'oy* |
| | Betty | TOP | give | PREP | me |

'Betty is the one who gave (it) to me.'

### 4.3.4 NOUN PHRASE INITIAL CLITICS

Noun phrase initial clitics include the possessive marker and the dependency markers. They occur on the boundary of the NP and are phonologically dependent on some neighbouring form. These clitics were discussed in §4.2.

The possessive marker precedes the possessed NP (4.27) while the possessor NP or a possessive pronoun follows. The possessive pronoun is shown in (4.20). Example (4.20) and the following examples also show that the possessive marker is not always present in modern Sm'algyax. This is probably the result of reduction (because of influence from English) of what was originally an alienable/ inalienable distinction, where *na=* occurred on alienably possessed forms.

| **(4.27)** | *Nawaaps* | *Dzogmtse'iks* | *di* | *wil* | *ksa'waatgu* |
|---|---|---|---|---|---|
| | *na=waap=s* | *Dzogmts'eiks* | *di* | *wil* | *ksa='waatk-u* |
| | POSS=house=DM | Dzogmtse'iks | CF | MF | out=be.from-1S |

'I come from Dzogmtse'iks' house.'

| **(4.28)** | *Gol* | *waabs* | *Harry* |
|---|---|---|---|
| | *gol* | *waap=s* | *Harry* |
| | tumble.down | house=DM | Harry |

'Harry's house tumbled down.'

Dependency markers precede NPs, possessor nouns and demonstratives. Possessive dependency markers mark possessors; predicative dependency markers mark S, A, and O arguments. In example (4.28) the *=s* is a possessive dependency marker. It precedes the possessor Harry and indicates that the possessor is a proper noun. In the everyday style of Sm'algyax dependency markers always distinguish between common nouns and proper nouns. Common nouns are always marked with the dependency marker *=a*. (Phonological rules mean that if the host of the dependency marker *=a* ends in a vowel or a sonorant, the dependency marker does not appear at surface level. For this reason the NP *waabs Harry* 'Harry's house' (4.28) is not introduced by a dependency marker on *gol*.) Proper nouns may be marked with either *=t* or *=s*. The distribution of the predicative dependency markers depends on the role of the NP and the aspect of the clause; see Stebbins (forthcoming-b) for more details. Attributive dependency markers *=a* and *=m* precede the head noun if another lexical word occurs in the NP. The dependency marker *=m* is also used in noun incorporation.

### 4.3.5 LEXICAL CLITICS

There are two types of lexical proclitics in Sm'algyax: modifiers and locatives. There is generally a distinction between the forms occurring on nouns and those occurring with verbs. Their distribution is discussed in detail and a complete list of forms is given in Stebbins (1999). In this section I give an overview of the internal structure of each of these classes.

The modifiers that occur on verbs include manner, quality, aspectual, participant, and orientational modifiers. Note that although there are some examples of lexicalised words containing modifiers, the lexical clitics are not derivational. An example of a manner modifier *banm=* 'pretend' is given in (4.29) and an aspectual modifier *sa=* 'punctual' is shown in (4.30).

**(4.29)**   *Banmxstooga*              *łguwoomłk.*

         *banm=xstoox=a*            *łguwoomłk*

         pretend=sleep=DM          child

         'The child is pretending to sleep.'

**(4.30)**   *Ła*        *gyilksax̱łgu*          *da*       *sagyeks.*

         ła        *gyilks=a̱xłk-u*         da        *sa=gyeks*

         IMPF      back=manage-1S        then       punctual=be.calm

         'When I made it home, it calmed down.'

Adjectival modifiers are a small set including the forms: *aam-* 'good', *k'aba-* 'little PL', *łgu-* 'little', *müs-* 'red', *su-* 'new', *'wii-* 'great, *'wuta-* 'great PL'. See (4.24).

Locatives may be classified according to their distribution (with nouns, or verbs, or with both). The locatives occurring with verbs cover the following semantic fields: reference to relevant geographic features (e.g. *dzagm=* 'from the water to the shore'); relational direction (e.g. *gwin=* 'towards'); and relational position (e.g. *'li* 'on'). See (4.27) and (4.30) for examples. Locatives occurring with nouns always code position. They are often lexicalised as part of words. For example *t'm=* 'on' appears in many body part words: *t'mlaani* 'neck (on=nape)', *t'mgaws* 'head' (on=hair).

### 4.3.6 AFFIXES

Affixes in Sm'algyax may be divided into derivational and inflectional sets.

Inflectional affixes include a range of inflectional and reduplicating strategies for plural formation, evidentials, possessive pronouns, and irrealis markers (see Stebbins (1999) for details). Aspectual suffixes require more study but see Stebbins (forthcoming-b) and references there.

Derivational affixes are lexical prefixes that form new words, often with a change in the class of the stem; that is, they carry significant additional semantic information (e.g. *gwis-* 'blanket or clothing' derives *gwis'nap'a'ala* 'button blanket' from *'nap'a'ala* 'button' (see also *gwishalaayt* 'dancing blanket' (4.14)).

### 4.3.7 SUMMARY

The most basic distinction in this analysis of Sm'algyax form classes is between lexical and grammatical forms. Further distinctions have been made according to the function and distribution of particular forms. As the following table shows, the lexical classes include words, clitics and affixes, as do the grammatical classes.

| | Lexical Classes | Grammatical Classes |
|---|---|---|
| **Words** | Verbs | Demonstratives |
| | Nouns | Independent Pronouns |
| | Adverbs | Prepositions |
| | Quantifiers | Normal conjunctions |
| | Numerals | Interjections |
| | | Interrogatives |
| **Clitics** | Modifiers | Clause initial clitics |
| | Locatives | Noun phrase initial clitics |
| **Affixes** | Derivational prefixes | Dependent nouns |
| | | Aspectual suffixes |
| | | Number marking morphology |
| | | Irrealis markers |
| | | Evidentials |

Table 4.4: Sm'algyax form classes

## 4.4 Polysynthesis in Sm'algyax

The remainder of this chapter considers the linguistic typology of Sm'algyax, in particular examining the status of Sm'algyax as a polysynthetic language. Polysynthetic languages are loosely defined as "languages in which verbs are built up of many parts, such that a single verb often performs the same expressive function as a whole sentence in more familiar languages" (Baker 1996:vii). When thinking of polysynthetic languages, examples such as the following from Bella Coola come to mind:

**(4.31)**   *Mntsk-lqsak-m-ts*

count-finger-PROG-1SG

'I am counting on my fingers' (Fortescue 1994:2602)

**(4.32)**   *Dm*          *g̲axswiidis'nm*

*dm*          *g̲a-x-swiidis-'nm*

FUT          PL-consume-candy-1PL.S

'We'll have candy later.'

This is in fact an example of N to V derivation. The prefix *x-* is used to derive verbs 'consume N' from nouns. A sentence with two full NPs is shown in (4.33):

**(4.33)**   *Sayüüs*              *Marjorie*      *łioon.*

*sa-yüü=s*            *Marjorie*      *łioon*

PUNCT-hide=DM    Marjorie      fried bread

'Marjorie hid the fried bread.'

In fact, the presence of two full NPs is unusual, particularly in conversation. Sentences such as (4.34), containing two dependent pronouns, are more common:

**(4.34)** | *N* | *siipnsm* |
| --- | --- |
| *n* | *siipn-sm* |
| 1.A | Love-4.PL.O |

'I love you.'

Sentences (4.33) and (4.34), and (4.35) below, are quite typical in Sm'algyax discourse and do not particularly give the appearance of polysynthesis:

**(4.35)** | *K'waantu* | *nagaaydmts'a̱gu.* |
| --- | --- |
| *k'waan-t-u* | *na=gaaydmts'a̱x-u* |
| lose-3O-1A | POSS=cap-1POSS |

'I lost my cap.'

In the light of this data, it is worth examining the typology of Sm'algyax in greater depth. The following section attempts to quantify the degree of polysynthesis in Sm'algyax using a list of criteria provided by Fortescue (1994).

## 4.5 Criteria for assessing polysynthesis in Sm'algyax

In order to ascertain whether or not Sm'algyax is a polysynthetic language, some criteria for identifying polysynthetic traits needs to be established. A number of authors have noted that noun incorporation is a characteristic of polysynthetic languages (Baker 1988:77-78, Mithun 1984:890, Sadock 1980:300). However, it is not possible to use noun incorporation as the sole basis for identifying a polysynthetic language because there are polysynthetic languages which do not use the process (de Reuse 1994:2843, Fortescue 1994:2600). The reverse is also true: there are languages that are not polysynthetic which exhibit noun incorporation (see Mithun 1984:853 on Lahu for example).

Fortescue 1994 has noted that within the class of polysynthetic languages there is a great deal of variation. Since it is not possible to identify a polysynthetic language on the basis of one particular characteristic alone, Fortescue (1994:2601) identifies the following as traits that are likely to cluster in polysynthetic languages:

**a.** noun stem incorporation within the verbal complex (also of adjectival stems within nouns);
**b.** a large inventory of bound morphemes (suffixes or prefixes) hand in hand with a somewhat limited stock of independent stems;
**c.** derivational (word-formation) processes productive in the formation of individual sentences, the verbal word being a minimal sentence (this can include shifts back and forth from nominal to verbal and the reverse within a single word);
**d.** pronominal marking of subjects and objects or other core actants on verbal forms (so-called 'polypersonalism') and of possessors on nominal forms;
**e.** integration of locational, instrumental, and other adverbial elements into the verbal complex as affixes (including auxiliary-like pre- or postverbs);
**f.** many potential 'slots'. relatively few of them obligatory, fillable with specific (semantic) types of morpheme;

**g.** productive morphophonemic processes resulting in several allomorphs (phonological shapes) for both lexical stems and bound morphemes;

**h.** nonconfigurational syntax (relatively free word order)

**i.** head- (or double-) marking type inflection

<div align="right">

**Fortescue 1994:2601**

</div>

Fortescue suggests that where there is a cluster of these properties in a language it may reasonably be called polysynthetic. He characterises all polysynthetic languages as sharing:

> *an entanglement of derivational and inflectional elements, such that morphemes having*
> *a bearing on sentential syntax may be packed deep within the complex word and cannot*
> *simply be peeled away leaving the derived core of the word behind.*

<div align="right">

**Fortescue 1994:2601**

</div>

Each of the traits associated with polysynthesis are examined below in relation to Sm'algyax.

## 4.5.1 NOUN STEM INCORPORATION WITHIN THE VERBAL COMPLEX

In Sm'algyax, the noun which is incorporated into the verb loses its referential value and does not function as an argument in the clause. Instead, the semantic value of the noun is used to narrow the scope of the verb. Thus in (4.36) *wüdzii* 'caribou' is not used to refer to any particular entity but rather to indicate what type of hunting is taking place.

**(4.36)**

| *Yagwa* | *suwiliinsgmwüdziis* | *Dzon* |
|---|---|---|
| *yagwa* | *suwiliinsk-m-wüdzii-s* | *Dzon* |
| CONT | hunt-DM-caribou-DM | John |

'John is caribou-hunting' [Dunn 1979:610].

The incorporation of adjective stems within nouns is identified as a secondary type of incorporation by Fortescue (see above). (4.37) is fairly typical of the use of a modifier word in a noun phrase in Sm'algyax. Like the incorporation of a noun into a verb complex, the function of the modifier in a noun phrase is to narrow the scope of the noun. In this case *hana'a* is used to denote a 'doe'.

**(4.37)**

| *Stuul* | *hana'am* | *wan* | *nłguułkt* |
|---|---|---|---|
| *stuul* | *hana'a-m* | *wan* | *n-łguułk-t* |
| accompany | woman-DM | deer | POSS-child-3POSS |

'The doe had a fawn with her.'

The use of *-m* for both of these cases in Sm'algyax suggests that there is a unity of function between the two. Thus Sm'algyax makes use of both kinds of incorporation identified by Fortescue.

## 4.5.2 A LARGE INVENTORY OF BOUND MORPHEMES

As the discussion in §4.3 shows, Sm'algyax has a reasonably large inventory of bound morphemes, especially if the clitics (as phonologically bound morphemes) are included. The lexical clitics and derivational affixes of Sm'algyax play a significant role in the language. While I would hardly say that Sm'algyax has a limited stock of independent stems, it is certainly the case that the bound morphemes make a crucial contribution to the lexicon.

The process of creating new words using derivational prefixes has been identified as a type of incorporation by de Reuse (1994:2847). Using the Tsimshian(ic) language family as one of his examples, he claims that although the difference between incorporation via affixing and incorporation via compounding are not clearly distinguished in the literature, these must be two distinct processes as both are available in a language such as Sm'algyax (de Reuse 1994:2844).

Unfortunately, de Reuse does not give examples of this affixation process in a Tsimshianic language. However, he does provide an example from Comox (a Salish language):

**(4.38)**  *ʔáxɬaɬtʃ*

*ʔáx-ɬaɬ-tʃ*

hurt-throat-1S

'My throat hurts.'

De Reuse notes that in this construction the lexical suffix *-ɬaɬ* 'throat' is suffixed to *sáj-* to form the stem *sájɬaɬ* 'throat' in the equivalent sentence made without incorporation:

**(4.39)**  *ʔax*        *tə*        *tⴀsájɬaɬ*

*ʔax*        *tə*        *tⴀ-sájɬaɬ*

hurt        DET        1POSS-throat

'My throat hurts.'

The above sentences from Comox both contain a noun-like suffix incorporated into a verb stem. The formal difference between the independent stem and the lexical suffix used in the incorporated clause is evidence that incorporation through affixation is different from incorporation through compounding. There is in fact no comparable data in Sm'algyax. Where nouns are incorporated into verb stems in Sm'algyax, they are not phonologically reduced. Examples (4.40) and (4.41) both contain the noun stem *dzaam* 'jam'. In (4.40) the stem appears in the derived verb *si-dzaam* 'make-jam', whereas in (4.41) it occurs as the O NP.

**(4.40)**  *Dm*        *ho'yim*        *sidzaam*

*dm*        *ho'y-m*        *si-dzaam*

FUT        use-1.PL        make-jam

'We use it to jam-make.'

**(4.41)**  *'Ap*        *luk'wil*        *ts'maantu*        *dzaam*

*'ap*        *luk'wil*        *ts'maant-u*        *dzaam*

really        very        like.taste-1A        jam

'I really like jam.'

The prefixes deriving nouns are more closely analogous to the data from Comox. They use reduced forms of nouns to derive words in which the semantic scope is limited by the meaning of the prefix. Example (4.42) shows the noun *waap* 'house' used as the S NP. Example (4.43) shows the related derivational prefix (conventionally written as a separate word), the phonologically reduced form 'building, room'.

**(4.42)**  *Gayaak*  *wilgyeda*  *waap*

*gayaak*  *wilgyeda*  *waap*

grey  be.colour  house

'The house is grey.'

**(4.43)**  *Eets'm*  *yee*  *nah*  *g̲abu*  *da*  *wap̲*  *txoox*

*Eets'-m*  *yee*  *nah*  *g̲abu*  *da*  *wap̲*  *txoox*

fry-DM  salmon  PERF  eat-1A  PREP  house  eat.PL

'I had fried salmon at the restaurant.'

Although it is difficult to see how Sm'algyax is analogous to Comox in terms of noun incorporation into verb stems, it is certainly the case that there is a large set of derivational morphemes in Sm'algyax and that these often involve the use of a noun stem in a verbal word.

### 4.5.3 DERIVATIONAL PROCESSES PRODUCTIVE IN THE FORMATION OF INDIVIDUAL SENTENCES

Derivational processes are productive in the formation of individual sentences in Sm'algyax. A good example was given in (4.32) containing the derived verb *xswiidis* 'eat candy'. A second example using the derivational prefix *si-* 'make' is given in (4.44)

**(4.44)**  *Yagwa*  *si-ts'ooxsag̲ama'asu*

*yagwa*  *si-ts'ooxsag̲ama'as-u*

CONT  make-knitted.slippers-1S

'I am knitted-slipper-making.'

Individual sentences also comprise the verb, dependent pronouns and proclitic modifiers. This is shown in (4.45).

**(4.45)**  *Agwilyaan*

*agwil-yaa-n*

aside-walk-2S

'(You) step aside.'

The fact that derivational processes are used productively in the formation of individual sentences in Sm'algyax occasionally led to confusion during the dictionary project. Members of the Dictionary Committee were collectively focussed on the identification of words. There were times when the form in question, while acceptable in the sentence for all the consultants, did not qualify in their minds as a 'word'. The derived word *xswiidis* 'eat candy' is one such case. This form is not included in the dictionary because it does not have word status; i.e. it has not been lexicalised.

Words containing prefixes and lexical clitics are lexicalised to varying degrees. Examples of words containing the locative proclitic *l̲ax-* which have been listed in the dictionary (e.g. *l̲axt'aa* 'island') show that lexicalisation occurs quite frequently with locatives. A few examples from the dictionary are given below:

> l̲axha (n) *in the air; heaven; weather* G̲oł wila waal laxha? *What's the weather like?* VARIANT:
> laxha

l<u>a</u>xmoon (n) *on the sea* MORPH: l<u>a</u>x-moon *on-salt*

l<u>a</u>xyuup (n) *ground; land* Heelda lis'yaan da nl<u>a</u>xyuubu. *There are a lot of minks on my trapline.*

The following example contains the derivational prefix gwün- a causative, as well as the derivational prefix *sü-* 'make'. Both of these prefixes are attached to the intransitive stem *yeⱡk* 'smooth, polished' to create the ditransitive verb 'cause someone to polish or shine something':

**(4.46)**  *Gwünsiyeⱡk*          *nag<u>a</u>ts'ooxs*        *dp*      *awaan.*

        *gwün-sü-yeⱡk*        *na-g<u>a</u>-ts'ooxs*       *dp*      *awaan*

        cause-make-polished   POSS-PL-shoes      PL      there

        'Tell those people to shine their shoes.'

This example clearly shows that speakers of Sm'algyax do make use of derivational processes in the formation of individual sentences.

### 4.5.4 SINGLE VERBAL WORD AS A COMPLETE SENTENCE

Another trait Fortescue identifies as relevant here is the ability of the verbal word to form a complete sentence on its own. He notes that this can include the use of a nominal to function as the verb in such a clause. Both of these phenomena are quite usual in Sm'algyax. The following example is a clause containing only a verb stem:

**(4.47)**  *Silamiilgi?*

        *sila-miilk-i*

        companion-dance-INDEF

        'Will you dance with me?

There are also examples of clauses containing only noun stems, and a modifier is often used to 'fit' them to their predicative function. In the following example the transitive verb *lisaaẅ* 'discuss' is overlooked in favour of *lisaaẅsk* 'discussion', which is generally thought of as a noun. However, the function of *lisaaẅsk* is predicative, i.e. it is being used as the verb in the clause. This is shown by the use of the temporal modifier *ḵ'a*. The first person dependent pronoun -*'nm* marks the S argument:

**(4.48)**  *Dm*        *ḵ'alisaaẅsg'nm*

        *dm*        *ḵ'a=lisaaẅsk-'nm*

        FUT        a.while=discussion-1PL.S

        'We will have a discussion.'

### 4.5.5 PRONOMINAL MARKING OF CORE ARGUMENTS ON VERBS AND OF POSSESSORS ON NOUNS

Part of the reason it is possible for speakers of Sm'algyax to produce single word sentences is because the language has an extensive system of dependent pronouns. Although not all languages which allow verb-only clauses require dependent pronouns, the presence of markers coding the referents in the discourse allows the speaker and hearer to track referents easily without using full NPs.

As shown in §4.2, Sm'algyax has pronominal marking for core arguments on verbs and for possessors on nouns. The following example shows that up to two arguments may be indexed on the verb:

**(4.49)**   *Dm*          *waalut.*

        *dm*          *waal-u-t*

        FUT          do-1A-3O

        'I'll do it.' [Mulder 1994:58].

An example of possessor marking on a noun is given in (4.50) (the proclitic *na=* is used at the beginning of possessive phrases):

**(4.50)**   *nagwismatiyu*

        *na=gwis-mati-u*

        POSS=garment-mountain.goat-1POSS

        'my mountain goat skin coat'

## 4.5.6 INTEGRATION OF ADVERBIAL ELEMENTS INTO THE VERBAL COMPLEX

A great many of the prefixes available in Sm'algyax are clitics that modify the verb stem. Sm'algyax also has 'auxiliary-like pre-verbs'; the tense/aspect markers described in §4.3.3.

In his discussion on the concept of the word in the languages of North America, Milewski (1967:59) characterises Tsimshian (Sm'algyax) as having 'weak word development'. He explains:

> *In Tsimshian and Nass [i.e. Nisga'a / Gitksan], although the syntactic groups have diverse structures just as in the Na-Dene languages, yet in each of those groups there is one expiratory stress with a culminant function i.e. defining the number of syntactic groups in the utterance.*
>
> **Milewski 1967:59**

This is in keeping with Boas' observations on the semi-dependent status of the proclitics:

> *Phonetically these particles are strong enough to form a syllabic unit, and they remain always separated by a hiatus from the following word. Most of them, however, have no accent, and must therefore be designated as either proclitics or prefixes.*
>
> **Boas 1911:295**

On the basis of the phonological evidence and the linear ordering of elements (see §4.2), it seems reasonable to conclude that adverbial elements do form a part of the verb complex in Sm'algyax. See Stebbins (2003) for discussion of the identification of words in Sm'algyax.

## 4.5.7 MANY POTENTIAL 'SLOTS' FILLABLE WITH SPECIFIC (SEMANTIC) TYPES OF MORPHEME

It is possible to develop a slot analysis for Sm'algyax. The main difference between Sm'algyax and other languages for which slot analyses have been produced is that in Sm'algyax the average number of slots filled in any one sentence is reasonably limited. In a language such as Navajo, due to the predictable distribution of the large number of morphemes which may be present, it is useful to set up tables since they can be used to predict the placement of morphemes within a verb (Young & Morgan 1987:37-38). The data for Sm'algyax is less complex. A typical clausal ordering was shown in §4.2.

Some of the resultant orderings are shown in the following examples. Example (4.51) shows that independent adverbs (e.g. *luk'wil* 'really') precede modifiers (e.g. *aam* 'good, well') that occur as clitics on the verb stem:

**(4.51)**  *Luk'wil*      *aamdzabn,*        *Terri.*

    *luk'wil*      *aam=dzab-n*        *Terri*

    really       well=make-2A      Terri

    'Very well done, Terri.'

The first clause in (4.52) shows that the clause initial negative occurs left-most, followed by the dependent pronoun (in this case *m- -sm* the second person plural circumfix) and the tense/aspect marker, while the second clause (*dmt gyiinsm* 'they serve you') shows that some dependent pronouns (e.g. *-t* 'ergative third person') also follow the tense/aspect marker:

**(4.52)**  *Ałga*      *mdmsm*          *ga̱ba*        ksgoogm      *googa*

    *Ałga*      *mdmsm*          *ga̱p=a*       *ksgoox=m*     *goo=ga*

    NEG       2-FUT-PL        eat=DM       first=DM      thing=DEM


    *dmt*         *gyiinsm*

    *dm-t*        *gyiinsm*

    FUT-3A       share.food-2PL.O

    'Do not eat what they bring you first.'

Example (4.53) shows the ordering of the clause initial conjunction *da wila* 'and the n' and the locative *dza̱gm* 'ashore':

**(4.53)**  *Da wila*      *dza̱gmyeltgis*          *dp gwa'a*

    *da wila*      *dza̱gm=yeltg=s*         *dp gwa'a*

    and then      ashore=return=DM        they

    'And then they returned to shore.'

Example (4.54) shows that the emphatic *di* is ordered after the tense aspect marker:

**(4.54)**  *Nah*      *di*       *sidaawyu*       *ksit'a̱x'oogm*       *dzapan.*

    *nah*      *di*       *sidaaw-u*       *ksit'a̱x'oog=m*      *dzapan*

    PAST      EMPH      freeze-1A        orange=DM          Japan

    'I froze some Japanese oranges.'

Example (4.55) shows that the indefinite discourse marker *dza̱* occurs after the clause initial negative *gyiloo* 'don't' and the dependent pronoun *m* 'second person singular':

**(4.55)**  *Gyiloo*      *m*       *dza̱*         *goot.*

    *gyiloo*      *m*       *dza̱*         *goot*

    NEG         2A       INDEF       go.to-3O

    'Don't go there.'

Finally, in (4.56) the aspectual modifier _k'a_ 'for a while' is shown following the clause initial conjunction ada 'and':

**(4.56)** _Ada_       _k'at'aat_

_ada_       _k'a=t'aa-t_

and       for.a.while=sit-3S

'And he sat for a while.'

Overall, the dependence of the proclitics on the verb stem or tense aspect markers in Sm'algyax seems to be a reflection of their phonological status. Sm'algyax is therefore amenable to a 'slot' type analysis.

## 4.5.8 PRODUCTIVE MORPHOPHONEMIC PROCESSES

Fortescue refers here to the characteristic of pervasive allomorphy for both stems and affixes which is present in some polysynthetic languages. A limited number of productive morphophonemic processes may be observed in Sm'al gyax; however, they do not result in large numbers of allomorphs in the language. Two morphophonemic processes can be identified in Sm'algyax. They are vowel harmony in derivational prefixes, and stem final lenition which sometimes occurs with affixation.

Pronunciation of unstressed vowels in derivational prefixes is influenced by the first sound in the following syllable. This pattern is not apparent in Boas' (1911) description as he represented all unstressed vowels using a schwa. Because the orthography lacks a schwa, writers are forced to nominate a particular vowel in all cases. Writers are generally able to make a choice for a particular vowel based on their intuition about its shape, and their choices are more or less consistent on an individual basis (see §9.2.1). This process is evidence for allomorphy in some derivational prefixes.

The second morphophonemic process which results in allomorphy is the alternation between voiceless and voiced stem final obstruents, depending on the voicing of the first segment in the suffix. This is discussed in §9.2.2. This alternation only changes the voicing of the final segment of the stem when it is a voiceless obstruent. Although this process applies to a great many lexical stems in Sm'algyax, it results in only one additional allomorph for each word. Furthermore, since it is only the final consonant that changes through this process, the appearance of the stem is not greatly affected.

Overall, productive morphophonemic processes are a trait that Sm'algyax does not exhibit strongly. While in other languages, for example from the Iroquoian language family (Fortescue 1992:242), the stem as well as the affixes can change shape considerably, making the listing of items in a dictionary problematic, such Variation is not observable in Sm'algyax.

## 4.5.9 NON-CONFIGURATIONAL SYNTAX

Fortescue briefly characterises non-configurational syntax as involving "relatively free word order" (1994:2601). Baker, in his discussion of polysynthesis, identifies the following as classic properties of non-configurational languages:

> _any NP can be omitted; NPs are freely ordered with respect to each other and the verb;_
> _some discontinuous nominal expressions are allowed._

**Baker 1996:41**

Baker (1996:17) proposes that all 'true' polysynthetic languages fill the argument roles sub-categorised for by verbs (in his terms theta roles) with agreement morphemes and lexical roots. The description is intended to account for two characteristics Baker associates with polysynthetic languages: namely, noun incorporation and non-configurationality. Non-configurationality in Baker's terms includes freedom of word order, 'argument drop', and the existence of discontinuous expressions.

The criteria offered by Baker for identifying polysynthetic languages, namely that a verb's arguments may be filled by agreement morphology or lexical roots (even if incorporated), do not have as much to do with the word order properties of a non-configurational language as they do with the practice of marking arguments on the verb using dependent pronouns.

In this respect Sm'algyax does seem to meet Baker's criteria at least in general terms, since dependent pronouns and bound lexical roots (incorporated nouns) can fill the theta roles of the verb. In the following example, the dependent pronouns *-t* 'ergative third person' (which is affixed to clause initial negator) and *-t* 'third person absolutive' (which is affixed to the verb) stand for the A and O arguments required by the verb *'nax'nuu* 'hear'.

| **(4.57)** | *Akadit* | *'nax'nuu-t.* |
|---|---|---|
| | *akadi-t* | *'nax'nuu-t* |
| | not-3A | hear-3O |
| | 'They didn't hear it.' | |

Example (4.58) shows that incorporated nouns can fill the argument roles of the verb. In this case the di-transitive verb *k'yilam* 'give' should have three arguments: A, O and IO. Noun incorporation has meant that one argument *xwaal* 'gifts' is incorporated into the verb. As a result the verb only requires two external arguments: an A argument *Jack* and an O *Alex*.

| **(4.58)** | *Jack* | *int* | *k'yilam* | *xwaals* | *Alex* |
|---|---|---|---|---|---|
| | *Jack* | *int* | *k'yilam=m* | *xwaal=s* | *Alex* |
| | Jack | TOP | give=DM | gifts=DM | Alex |
| | 'It was Jack who gave gifts to Alex.' | | | | |

Although there are a number of examples from Sm'algyax that appear to meet Baker's criteria, there are also a number of counter-examples. Firstly, there are cases in which both the dependent pronoun and the full NP occur. In the following sentence the dependent pronoun *-t* is coreferential with the noun *łoomsk* 'respect':

| **(4.59)** | *Łoomsk* | *dm* | *ma**ł**dm* | *da* | *ng**a**kłguum* |
|---|---|---|---|---|---|
| | *łoomsk* | *dm* | *mał-**t**-m =m* | *da* | *n=g**a**-kłgüü-m* |
| | respect | FUT | tell-**3O**-IPL.A | PREP | POSS=PL-children-1PL.POSS |
| | 'We will have to tell our children about respect.' | | | | |

Secondly there are cases in which no dependent pronoun occurs. Absence of a dependent pronoun does not indicate the presence of a zero pronoun as there are no zeros in the Sm'algyax pronominal system. In the following sentence the A argument is not coded in the main clause:

**(4.60)**

| *Yikyeenk* | *anaay* | *ga̲l'naga* | *doot* |
|---|---|---|---|
| *yikyeenk* | *anaay* | *ga̲l='nak=a* | *doo-t* |
| mouldy | bread | too=long=DM | keep=3O |

'The bread will go mouldy if you keep it too long.'

These latter two possibilities do not appear to fit particularly well with Baker's criteria for polysynthesis (i.e. non-configurationality). Baker (1996:18&36) acknowledges that this characterisation of polysynthesis is significantly narrower than most people intend by the term. Like Baker, Fortescue also identifies free word order as a characteristic of non-configurational languages.

The word order for Sm'algyax is VSO. However, there are many occasions on which the A, S, and/or the O are not present in the clause. Furthermore, there are a number of frequently used processes that allow for different word order, including topicalisation (AVO, OVA, SV) and noun incorporation (V[O]S). The methods for altering the basic word order in Sm'algyax involve syntactic processes, and have specific discourse functions (i.e. they are not pragmatically equivalent to the VAO / VS word order).

Word order within phrases is quite fixed. Sm'algyax does not show any ability to allow discontinuous nominal expressions. Given that the characteristics identified as relevant to non-configurational languages by both Baker and Fortescue are not clearly present in Sm'algyax, it is not possible to characterise Sm'algyax as a non-configurational language.

## 4.5.10 HEAD- (OR DOUBLE-) MARKING INFLECTION

Both Fortescue (1994:2601) and Baker (1996:25) note the correlation between polysynthesis and head-marking languages with reference to Nichols 1986. In this paper Nichols (1986:64) notes that polysynthetic languages are associated with the property of head-marking. She lists a number of criteria that can be used to ascertain whether a language is head- or dependent-marking.

With regard to Sm'algyax, we can observe the following head-marking properties:

**Possessive phrases** which are head marked take a pronominal affix that indexes the possessor on the head noun (Nichols 1986:59). There are two patterns for possessive phrases in Sm'algyax. In one, the possessor is marked on the head noun (*buuts* 'boots') using a dependent pronoun (*-u* in (4.61)).

**(4.61)**

| *Gügüül* | *nabuudzu* |
|---|---|
| *gügüül* | *na=buuts-u* |
| search.for | POSS-boots-**1POSS** |

'Look for my boots.'

In the other pattern, the head noun takes the possessor as a dependent using one of the possessive dependency markers. The possessive dependency marker (*-s* in (4.62)) is syntactically dependent on the possessor N (*meli* 'Mary'). This is the dependent-marking pattern:

**(4.62)**

| *G̲axsayba* | *naga̲lg̲ans* | *Meli.* |
|---|---|---|
| *g̲axsayp=a* | *na=g̲alg̲a=s* | *Meli* |
| arthritis | POSS=hips=**DM** | Mary |

'Mary has arthritis in her hips.'

**Adpositional phrases** in Sm'algyax change their form depending on the characteristics of the noun which is dependent on them. The following examples show the preposition for common nouns *da,* and the preposition for proper nouns *das.* Examples of head-marking (cf Nichols 1986:60) include:

| **(4.63)** | *Dm* | *txaks=t'aa'nu* | ***da*** | *l<u>a</u>x* | *ha'liwaalxs.* |
|---|---|---|---|---|---|
| | *dm* | *txaks=t'aa'n-u* | ***da*** | *l<u>a</u>x* | *ha'liwaalxs* |
| | FUT | down=sit-1S | **PREP** | on | floor |

'I'm going to sit on the floor.'

| **(4.64)** | *Sagayt* | *heelda* | *gaaydmboosn* | ***das*** | *Charlie.* |
|---|---|---|---|---|---|
| | *sagayt* | *heelda* | *gaaydmboosn* | ***das*** | *Charlie* |
| | together | many =DM | hats | **PREP** | Charlie |

'A lot of hats belong to Charlie.'

**Attributive phrases** show the pattern of using an attributive dependency marker (*-m* in the following example), which is syntactically dependent on the head noun (*h<u>a</u>'<u>a</u>x* 'goose'). This is the head-marking pattern (cf Nichols 1986:60):

| **(4.65)** | *Ts'maatga* | *ts'lm'm<u>a</u>'<u>a</u>m* | *'h<u>a</u>'<u>a</u>x* |
|---|---|---|---|
| | *ts'maatk=a* | *ts'lm'm<u>a</u>'<u>a</u>m* | *'h<u>a</u>'<u>a</u>x* |
| | taste.good=DM | roast=DM | goose |

'Roast goose tastes good.'

**Clause relations** in Sm'algyax, like the possessive phrases, have head-marking if dependent pronouns are present or dependent-marking if full NPs with dependency markers are present (cf Nichols 1986:61). The following example shows a case in which only dependent pronouns occur. They are found in the verb complex (cf. §4.2):

| **(4.66)** | *Sgüü* | ***dmt*** | *ho'on**t*** | *da* | *ł<u>a</u>'<u>a</u>sk.* |
|---|---|---|---|---|---|
| | *Sgüü* | *Dm-**t*** | *ho'on-**t*** | *da* | *ł<u>a</u>'<u>a</u>sk* |
| | must | FUT-**3A** | fill-**3O** | PREP | seaweed |

'She was supposed to fill it with seaweed.'

Example (4.67) shows the use of the dependency markers when full NPs are present (cf. §4.2):

| **(4.67)** | *Waalms* | *dm* | *ts'apdeksg**a*** | *ts'ikts'iiks* | *Roy.* |
|---|---|---|---|---|---|
| | *waalms* | *dm* | *ts'apdeksk=**a*** | *ts'ikts'iik=s* | *Roy* |
| | maybe | FUT | get.towed=**DM** | car=DM | Roy |

'It looks like Roy's car will be towed.'

**Relativisation** in Sm'algyax is dependent-marked since the head noun of the relative clause is deleted from the relative clause (cf Nichols 1986:62). In the following example, the head of the relative clause is *nadaalat* 'her money' and the relative clause is *nah k'waatgit* 'which she lost':

**(4.68)**

| 'Waatga | nadaalat | | nah | k'waatgit. |
|---------|----------|---|-----|-----------|
| 'waatk=a | na=daala-t | | nah | k'waatk-t |
| be.found | POSS=money-3POSS | | PERF | lose-3A |

'Her money, which she lost, is found.'

**Subordination** is dependent-marked since main clauses are distinguished from subordinate clauses by the clause initial form (cf. Nichols 1986:63). In the following example, the subordinator *dziła* 'when' occurs at the start of the subordinate clause:

**(4.69)**

| T'uksooyn | | g*a*deelpk | dziła | betsg***m***. |
|-----------|---|-----------|-------|------------|
| t'uks=ooy-n | | g*a*deelpk | dziła | betsk-***m*** |
| in.the.water=throw-2A | | anchor | when | arrive-**1PL.S** |

'Throw the anchor over when we get there.'

Table 4.5 summarises the head- and dependency-marking patterns in Sm'algyax:

| Construction | Dependency Type | Marking Type |
|--------------|-----------------|--------------|
| Possessive Phrases | dependent pronouns | Head |
| | full NPs | Dependent |
| Adpositional Phrases | - | Head |
| Attributive Phrases | - | Head |
| Clause Relations | dependent pronouns | Head |
| | full NPs | Dependent |
| Relativisation | - | Dependent |
| Subordination | - | Dependent |

Table 4.5: Head-and Dependent-marking characteristics in Sm'algyax.

As the table shows, three out of four phrase level dependency types are head-marking while clause relations may be either head- or dependent-marked. Sentence level dependencies (e.g. relativisation and subordination) are dependent marked.

There seems to be a cluster of dependent-marking at the sentence level and stronger head-marking tendencies at the phrase level. At the clause level, relations may be either head- or dependent-marked. The relationship between phrases, clauses and sentences, and dependency-marking types is shown in Figure 4.1. This indicates that Sm'algyax shows a mix of head- and dependent-marking patterns.



phrase level ⟷ clause level ⟷ sentence level

head-marking ⟵ ⟶ dependent-marking

Figure 4.1: Head- and Dependent-marking in Sm'algyax.

## 4.6 Summary of polysynthetic traits in Sm'algyax

Sm'algyax shows many of the morphological properties found in polysynthetic languages. These include: the use of incorporation; large sets of bound morphemes; the use of derivational processes in the creation of clauses; and the use of dependent pronouns. Sm'algyax also shows a number of the morpho-syntactic properties associated with polysynthetic languages including the use of the verbal word as a complete sentence; the incorporation of adverbial elements into the verb complex; amenability to a slot analysis; and some head-marking patterns. There are two traits commonly associated with polysynthetic languages that are not evidenced in Sm'algyax. The first is the case of complex morpho-phonology. Sm'algyax has only limited morpho-phonology. The second case is non-configurational syntax. Insofar as non-configurational syntax refers to the property of having free word order, Sm'algyax cannot be called a non-configurational language.

Below is a table summarising the discussion of the previous sections.

| Polysynthetic trait | Degree in Sm'algyax |
|---|---|
| Incorporation (§4.5.1) | Sm'algyax uses both types of incorporation identified by Fortescue (1994:2601). |
| Many bound morphemes (§4.5.2) | Sm'algyax has around 100 bound morphemes in its lexical classes as well as dependent pronouns. |
| Derivational processes in clauses (§4.5.3) | Derivational processes are frequently used in the creation of clauses. |
| Verbal word as complete sentence (§4.5.4) | Verbal words are possible as complete sentences. |
| Pronominal marking (§4.5.5) | Dependent pronouns generally occur in the absence of a full NP. |
| Adverbial elements in verb complex (§4.5.6) | The majority of adverbial elements are clitics which are phonologically dependent on the verb. |
| 'Slots' (§4.5.7) | Sm'algyax is amenable to a slot analysis. |
| Allomorphs (§4.5.8) | Sm'algyax does not exhibit complex morphophonology. |
| Non-configurational syntax (§4.5.9) | Changes in the basic VAO order are possible but are syntactically and pragmatically marked. |
| Head-marking inflection (§4.5.10) | Head marking is most common at phrase level; dependent marking is most common between clauses. |

Table 4.6: Polysynthetic traits of Sm'algyax.

Overall, it seems fair to characterise Sm'algyax as polysynthetic to a fair degree. The verb complex carries a great deal of other lexical information, including modifier and locative clitics and dependent pronouns. The fact that the additional lexical information occurs as clitics rather than as affixes, indicates that the dependency on the verb stem is syntactic and phonological rather than morphological. This suggests that Sm'algyax is less polysynthetic than some other languages.

This idea is supported by a number of other intermediate or negative results when comparing Sm'algyax to Fortescue's criteria. These include: the alternation between head-marking patterns (with arguments appearing as dependent pronouns) and dependent-marking patterns (with full NP arguments); the absence of non-configurational characteristics; and the absence of complex morphophonology.

## 4.7 Conclusion

This chapter has provided information on Sm'algyax from a genetic and typological perspective. The language is more widely known as Coast Tsimshian in the linguistic and anthropological literature and is spoken in the Pacific Northwest of Canada. Sm'algyax is a member of the Tsimshianic language family. Genetic affiliations were discussed in §4.1. Other languages in the family are Nisga'a (Nass), Gitksan, and Sgüüxs (Southern Tsimshian). The first two were treated as related dialects (Nass-Gitksan) by Boas (1888), but have long since been identified as separate languages (Boas 1911). Sgüüxs was first identified by Dunn in 1976.

An overview of the grammar was provided in §4.2. Basic constituent order is VAO, or VS, with topicalised NPs occurring in first position. Sm'algyax generally marks case according to the ergative/absolutive pattern. This is apparent in the bound pronouns (with ergative and absolutive forms) and in the dependency markers (where NPs headed by proper nouns have different forms for the ergative and absolutive). A part of speech inventory was given in §4.3.

The status of Sm'algyax as a polysynthetic language was discussed in §4.4-4.6. Sm'algyax has a number of polysynthetic characteristics, including the use of noun incorporation, large numbers of phonologically bound morphemes for lexical terms, and the use of derivational processes in the production of clauses (in addition to the creation of new words). In a few other respects, Sm'algyax differs from typical polysynthetic languages. The language does not have non-configurational characteristics; word order within phrases is fixed and the movement of phrases is restricted; and it has a mixture of head- and dependent-makring. There are a small number of frequent morpho-phonological alternations, rather than a really complex system of morpho-phonology.
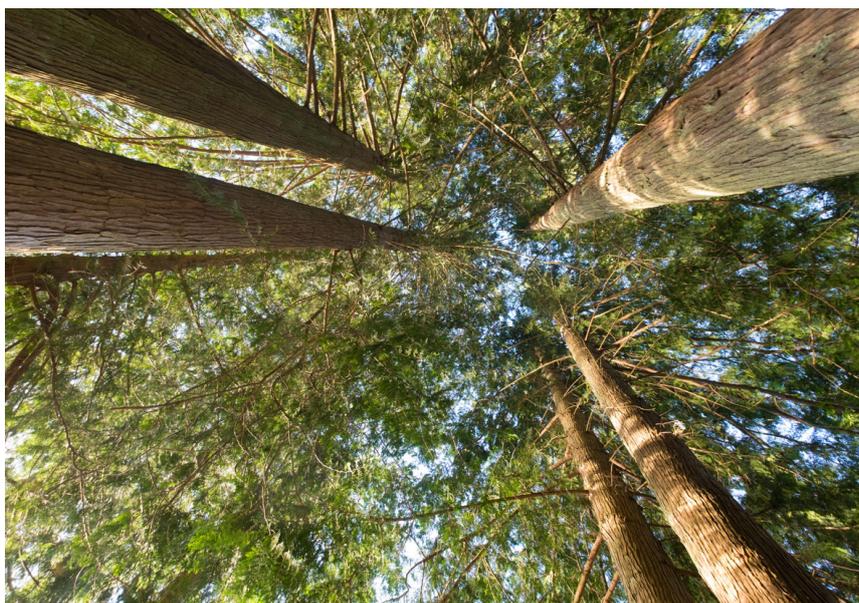


Looking up, Western Red Cedars (Thuja Plicata), Keats Island, British Columbia, 2017

# Part Three:
# Community directed language documentation in practice
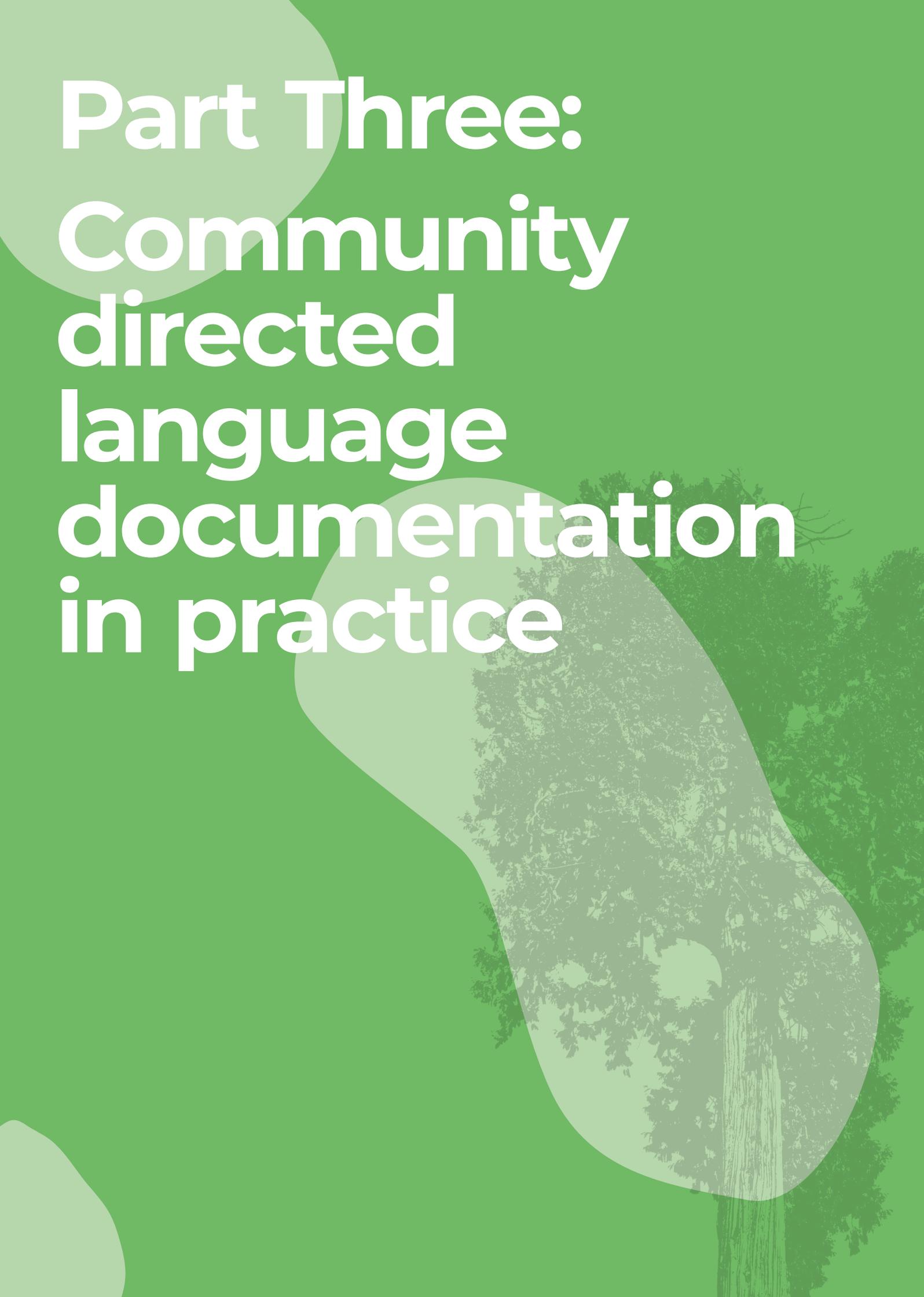
**The process of community directed language documentation inevitably involves the resolution of numerous practical issues regarding the analysis and representation of the language. These cannot necessarily be predicted before the process is underway. However, there are a number of themes that recur in discussions of language revitalisation. These include: the development of a written standard; the design of pedagogical materials; modernisation of the lexicon; the status of dialect differences; and the role of semi-speakers within the speech community.**

From the perspective of community directed language work, the processes that are used to address these issues are as important as the content of the decisions that are finally made. The chapters in this section outline a number of issues that arose during the Sm'algyax dictionary project. The chapters describe the processes used in addressing or identifying these issues in addition to presenting the eventual response we made to them. In some cases analytical frameworks were developed to provide greater clarity about particular issues.

In Chapter Five particular attention is paid to the tensions involved in addressing the needs of language communities as well as linguists in the design of the dictionary. The model that was developed for the SLD is described, and example entries are provided. The stages involved in developing the dictionary with the Tsimshian community are discussed.

Chapter Six examines processes of lexical expansion in the Tsimshian community and addresses concerns community members have about the significance of loan words from English. Word formation using Sm'algyax morphology is discussed, and the concept of lexicalisation is used to describe the process of dispersing words through the community. It is the promotion of new words among speakers rather than the production of new words per se that is restricting lexical expansion in the Tsimshian community.

Chapter Seven discusses a range of issues associated with developing adequate English glosses in the SLD. The challenges posed by cultural differences, reflected in the vocabularies of English and Sm'algyax, are discussed in relation to the idea of semantic equivalence.

Chapter Eight sets out criteria for dealing with homonymous and polysemous forms in Sm'algyax. Using these criteria it is possible to identify a number of one to many relationships between lexical forms, grammatical classes and/or lexical meanings.

Chapter Nine introduces the concept of orthographic depth as it provides a useful starting point for considering issues related to the development of spelling conventions for Sm'algyax. Morpho-phonology is also discussed in relation to the development of spelling conventions for the language.

Chapter Ten addresses issues relating to variation in Sm'algyax, which posed a number of interesting problems for the development of the SLD. Variation is considered through a discourse analysis approach and assessed in relation to its functionality.

# Chapter Five:
# Dictionary Design for the Sm'algyax Learners' Dictionary

## 5.0 Introduction

This chapter describes the design of the Sm'algyax Learners' Dictionary (SLD). It begins with a description of the community directed dictionary project that was run under the auspices of the Ts'msyeen Sm'algyax Authority in §5.1. This is followed by an overview of the practices of lexicography in §5.2. In §5.3 reviews of bilingual dictionaries prepared for endangered languages from the Americas in the International Journal of American Linguistics are surveyed in order to identify key issues in dictionary design. A summary is provided in §5.4. The design of the SLD is discussed in relation to these points in §5.5. The conclusion, §5.6, sums up the design principles that were developed in consultation with members of the Tsimshian community.

## 5.1 The Sm'algyax Dictionary Project

This project was begun outside of the Tsimshian community as the basis for my PhD dissertation. As we noted in Chapter Two, Sm'algyax has been the subject of research for over a century and a great deal of material is available (mostly through research collections and archives in British Columbia and the United States). I was able to produce the first draft of the dictionary independently, working from these sources. When I first appeared on the scene in Prince Rupert in the fall of 1996 I carried with me a draft of a dictionary I had prepared based on archival sources. It carried the title Coast Tsimshian Learners' Dictionary. The title alone marked me as an outsider and an academic. No one in the community calls the language Coast Tsimshian. This began my education in the sociolinguistics and politics surrounding Sm'algyax.

During the dictionary project I have worked in cooperation with, and under the direction of the Ts'msyeen Sm'algyax Authority. Building a working relationship with the Authority has been a long term process and, I believe, a very rewarding one. The Tsimshian Nation assumed the role of peak stakeholder in the research. This partnership has seen the development of linguistic materials that are accurate, comprehensive and relevant to language revitalisation efforts being carried out in the community today.

Over two field trips and the course of a year, members of the Tsimshian community and I got to know each other. For me this was a process of gradually learning how to function in the community as well as establishing personal and working relationships with a variety of people. I have been told that for the Tsimshian people concerned the process involved getting to know me and developing confidence in my ability to work respectfully with members of the community. Once these foundations were laid, we developed a shared vision of the learners' dictionary and a work plan for completing it. During this time, funding from within the Tsimshian Nation and the School District was sought and the project was discussed in a number of Tsimshian forums such as the Tsimshian Tribal Council.

Once the project had been approved by the nation at the annual Tsimshian Tribal Council Assembly in November 1997 and funding arrangements had been settled, work on the project began. Late that year I was

hired by the Ts'msyeen Sm'algyax Authority to act as project manager for the Dictionary Project with the title Technical Adviser and a Dictionary Committee of elders fluent in Sm'algyax and literate in the orthography was convened.

Between November 1997 and April 1998 my role involved conducting Dictionary Committee meetings, at which members of the Dictionary Committee evaluated the words listed in the draft dictionary. At these meetings suitable spellings were identified, translations were checked and additional words were included. These meetings made use of word lists arranged by semantic domain. I also spent a number of hours each week working with individual speakers, writing down example sentences for words in the dictionary. As well as the research work and administrative duties, I undertook a range of more political activities. These ranged from visiting villages in order to discuss the dictionary with elders, to speaking at meetings such as the Ts'msyeen Sm'algyax Authority and the Tsimshian Tribal Council Annual Assembly.

These politically focused activities were crucial to the acceptance of the dictionary by the wider Tsimshian community. As I note in §10.2, village rivalry is sometimes expressed through disputes about dialect differences. It was important that the dictionary was seen to be broadly representative and that I was seen to consult widely.

During the development of the dictionary project Tsimshian authority was established as primary. The authority of the university in relation to my research was not considered by the community at all. This impinged on my plan of study but the benefits to the project far outweighed the costs.

From the community's point of view the project respected Tsimshian authority about Sm'algyax (through the role of the Ts'msyeen Sm'algyax Authority in the project). The community had final say on the way their language was represented. Expending funds and effort on the dictionary was a way of reasserting Tsimshian authority over the language, as well as affirming its cultural value and promoting interest in and discussion about the language in the wider community.

From my point of view the support of the community transformed the project. It began as a somewhat dry task undertaken in isolation and relying on archival documents. After the Dictionary Committee was established, it became a dynamic activity involving a large number of colleagues. The data that was collected is much more representative of the community as a whole than anything I could have gathered using my own resources. And best of all the project has a far wider audience now than a solitary effort completed away from the community could have had.

The dictionary produced by this project is primarily intended for use in the Tsimshian communities as a resource for the Sm'algyax language programs, and for the community more generally. So that the dictionary is relevant to the current linguistic situation, new material as well as the works of previous linguists have been incorporated. The dictionary reflects the changes the language has undergone in response to the developments since contact with Europeans began, as they have been experienced by Sm'algyax speakers. Domains under-represented in previous works such as the domains associated with women's lives and work (e.g. food gathering and preparation) have also been expanded in the new dictionary.

One of the resources which has been developed in conjunction with this work is a corpus of example sentences in modern, everyday Sm'algyax. Because it will be used in the Sm'algyax Language Program, the dictionary has an encyclopaedic bias, and this information is largely contained in the example sentences. The software I have used (SHOEBOX) makes it possible to present example sentences in both English and Sm'algyax, although inter-linearised sentences cannot be printed at this time.

By May 1998 a new full draft of the dictionary was complete, including example sentences for about half the entries. Although only a short time was available to focus on collecting example sentences with members of

the dictionary committee (primarily in February and March 1998), approximately one thousand sentences were written. After May 1998 the dictionary went through a long process of revision. More example sentences were added and the spellings and translations of words were refined. These corrections and additions were sent to Australia so that I could add them into the database. In early 2001 final camera ready copies of the dictionaries were prepared.

In the end five versions of the dictionary were prepared: adults' Sm'algyax – English and English – Sm'algyax versions, elementary versions Sm'algyax – English and English – Sm'algyax, and a thesaurus. The elementary versions of the dictionary are approximately two thirds of the size of the general dictionary. The material excluded from them was either deemed inappropriate for school children on cultural grounds (e.g. words pertaining to sex), or the words are lesser known or archaic so that most speakers are not confident to use them. Other 'higher order' information such as morphological analysis was also removed in order to produce a less complex, more accessible dictionary for younger readers.


# 5.2 Lexicography and the SLD

In lexicographic terms this project seeks to combine two very different types of dictionary: a learners' dictionary and a field dictionary. A learners' dictionary is usually considered to be a distinct, specialised work designed for language learners, whereas a field dictionary is a bilingual dictionary written for a minority indigenous language by a field worker. One of the most important aspects of this work has been to seek to reconcile these two types of dictionaries. Indigenous languages such as Sm'algyax rarely have dictionaries for specialist purposes such as learners 'dictionaries. Indeed they are fortunate to have accessible dictionaries at all. Since many of these languages are no longer learned as a matter of course as a child's first language, it is very important that dictionaries for these languages can be of use to learners. The following sections consider the received knowledge about general dictionaries (§5.2.1), learners' dictionaries (§5.2.2), and bilingual dictionaries (§5.2.3).

### 5.2.1 LEXICOGRAPHY

Lexicography is often defined as the identification and description of lexical forms (i.e. words) and their relationships with each other (see Landau 1989:5-6; Kipfer 1984:1; Svenson 1993:2). This lexical information is contrasted with encyclopaedic information. Encyclopaedic information is understood to refer to knowledge about the world, rather than knowledge about the lexicon.

Where an encyclopaedia is understood as a reference work containing information about topics, a dictionary is understood to contain information about words alone. Therefore the dictionary is frequently described as containing only material that is useful in conveying this information to the reader (see Landau 1989:5-6). As a result, some lexicographers have proscribed encyclopaedic information.

A certain amount of confusion about what properly belongs in a dictionary seems to exist thanks to the theoretical definition of the lexicon as an addendum to the grammar in linguistic theories such as GB (Al-Kasimi 1977:4). In these theories the lexicon derives its status from the lexico-syntactic information it contains, rather than from its semantic information. For theorists who are concerned with semantic information, the concept of the lexicon is extended to include signs that exist in paradigmatic relations with each other, though not necessarily to anything else (see Lyons 1977:204, cited from Haiman 1980:333). According to Lyons it is possible that "relations of sense can be established between words without knowing what they refer to".

In practical terms this description of relations between words produces very limited knowledge. As Haiman points out, the knowledge that A is a synonym of B amounts to very little without the additional knowledge of what A or B refers to. In any case, it is not appropriate to subject a dictionary to the same constraints as this theoretical construct called a lexicon. While this definition of the lexicon may be appropriate in these syntactic theories, it can be argued on a number of grounds that it is not appropriate as a definition for dictionaries intended for ordinary users.

The people who use dictionaries are not of the same order as the computers and theorists who use lexicons. In fact, the aims of these groups are fundamentally different. Lexicon writers/users are typically interested in formalising the relations between words, often for the purposes of (automated) natural language generation.

Dictionary users are quite able to generate natural language themselves, but require assistance to bridge the gap between their experiences in the world and their ability to express those experiences or to understand the expressions of others.

A more functional description would see the dictionary as a reference work that is designed to help the reader understand the meaning and appropriate uses of a word. A functional definition of a dictionary runs as follows:

> *A dictionary is a place where you can look up unknown words to find out what they mean and how to use them properly.*

Haiman (1980) contains a summary of the debate on the proscription of encyclopaedic information by philosophers and semanticists. He notes (1980:330) that the distinction between the dictionary and the encyclopaedia has been questioned by a number of linguists and philosophers. He argues that "the distinction between dictionaries and encyclopaedias is not only one that is practically impossible to make, but one that is fundamentally misconceived. Dictionaries *are* encyclopedias" (1980:331).

An important consequence of a functional definition of dictionaries is that encyclopaedic meanings must be included. A great deal of the information about the proper use of words is not revealed by their relations to other words, but in relation to culture. In order to use a word appropriately and to the best effect, a speaker must be able to use it in a way that corresponds to others' understanding of the word.

Haiman notes (1980:329) that the definition of *horse* in the compact Oxford English Dictionary (OED) is "a solid-foot perissodactyl quadruped (*Equus caballus*) having a flowing mane and tail, whose voice is a neigh. It is well known in the domestic state as a beast of draught and burden and especially for riding upon." Haiman has a couple of criticisms to make about the content of this definition. Firstly, he notes that a great many people do not know the word *perissodactyl*, but that this in no way impairs their ability to know and talk about a horse. He argues that if the purpose of a definition is to enable speakers to use words correctly, then the use of the word *perissodactyl* is redundant to the definition. Secondly, he notes that a good deal of information about horses which the English-speaking community find relevant enough to use as a source for idioms and metaphors is widely known to English speakers but lacking from the definition. For example, horses are large animals that eat quite a lot (*an appetite like a horse*), and they are not considered to be a source of food the way that cattle are (*so hungry I could eat a horse*).

In order to usefully accomplish its task of conveying information about the meaning and felicitous use of words, it seems appropriate for the dictionary to contain encyclopaedic, as well as linguistic, information. In order to convey the meaning of unknown words it may be appropriate to put in rather more contextual

information than is usually deemed necessary. For example, the following entry from the dictionary includes information about the method for gathering herring roe using a *galiilp*:

> g̲aliilp (n) rope; stick NOTE: *Used for holding kelp which are placed in the water during the herring run in order to collect xs'waanx. The kelp is strung together and weighed down with small stones on the ends.* G̲aliilp dm wil dp 'lii'yag̲a gyoost. We will hang kelp on the stick.

This is not defining information; it is encyclopaedic. While the difference between encyclopaedic and linguistic information is acknowledged by writers on dictionary making, the link between them (that is, the fact that different languages construct different worlds) is largely overlooked. (See Chapter Seven for more discussion on how this was managed in the SLD Project.)

One of the goals of this project is to preserve not only information about the structural properties of the Sm'algyax lexicon but to celebrate the world view it represents. For this reason large amounts of encyclopaedic information have been included in the dictionary, including recipes for traditional foods (for example, seaweed and smoked salmon) and explanations of culture-specific practices (such as feasting) and artifacts (particularly those connected with regalia).



Giant kelp (Macrocystis pyrifera)

The lexicon, perhaps more than anything else in language, reflects the culture of its speakers. As a description of the lexicon, the dictionary is both a storehouse of information on, and a representation of, a community of speakers. All dictionaries contain information about meaning and usage. The sum of a comprehensive collection of information about the meaning and usage of words is a very substantial document about the language and the culture of its speakers.

Several principles of educational psychology could usefully be applied to the construction of dictionaries as learning tools. Osborn, Jones & Stein sum up the relationship between text and learner in the following terms:

> *Some researchers have labelled a text that is well organized and readable as 'considerate' to its audience. An 'inconsiderate' text, by contrast, requires the reader to organize its content and establish relations between parts of its content; as a result readers are steered away from concentrating on the text's content. Several elements affect student comprehension of content; these include text structure, coherence, unity, audience, appropriateness, and graphics.*
>
> **Osborn, Jones & Stein 1985:12**

In the past this kind of knowledge has been applied to dictionaries in a very ad hoc manner, if at all. For example, school dictionaries are generally condensed versions of general dictionaries. Thorndike notes (1991:16) that this is in fact totally inappropriate. It produces inconsiderate texts. He compares the entry for *parapet* in several dictionaries. In the school dictionary the definition is "wall of rampet covering soldiers from attack; breastwork; low wall protecting the edge of a bridge, quay etc." In the largest of the dictionaries the same word is described in the following terms "consisting of alternate solids and open spaces, surmounting

the walls of ancient fortified buildings. At first purely a military feature. Afterwards copied on a smaller scale with decorative features as for churches" (Thorndike 1991:17). Only in the largest dictionary does a picture accompany the description. In the process of condensing the information for the school dictionary, many of the most relevant characteristics of parapets are lost, and the now incidental fact that it had a military origin is made the primary fact.

Thorndike has two responses to this. Firstly, concerning the school dictionary he argues that entries in dictionaries for younger readers must be expanded rather than condensed (even if this means many entries must be left out) because meaning is conveyed best by illustration and by definitions that explicate the normal usage so that the context can be used to teach meaning (1991:17). Secondly (and like the first point, this actually applies to all dictionary users), "in the discussion of any word we should try and use words which are in general commoner and more likely to be known than it itself is" (Thorndike 1991:19). If we agree to a functional definition of a dictionary which includes the idea that people use them in order to understand and learn to use new words, then anything that eases the learning process is appropriate. Thus, considerate texts are not only appropriate for young learners, they are necessary for all dictionary readers. This gives pictures and contextual uses and information a far more important place in the dictionary than they have traditionally been allocated.

Since dictionaries are used by people to find things out, any dictionary that errs on the side of brevity, while it may be a good record and description of the language, is hardly responding to the needs of its users. As Atkins notes, "if students use their dictionary carefully and intelligently and still make mistakes, then there is nothing wrong with the students. There is a good deal wrong with the dictionary" (1985:23).

## 5.2.2 THE LEARNERS' DICTIONARY

The special needs of language learners have been given some attention in lexicography. Learners' dictionaries are a relatively recent development in lexicography. These dictionaries are designed to aid second language (L2) learning in particular. According to Ilson (1985:2) a learners' dictionary should ideally "model the lexical competence of the adult native speaker". Kirkpatrick (1985:9-12) regards the following areas as of particular importance to second language learners:

**Pronunciation:** L2 learners are far more likely to require help with pronunciation. They do not have the benefit of native speaker intuitions about pronunciation and word stress, and are less likely to recognise 'new' words. Kirkpatrick argues for the use of the IPA as a guide to pronunciation, based on its wide acceptance.

**Definitions:** L2 learners need simpler definitions. Examples such as the definition of *horse* quoted above are clearly inappropriate for a learner of English. In an effort to meet this need, some dictionaries have nominated a defining vocabulary: a restricted list of words which may be used in definitions. While this is useful up to a point, Kirkpatrick notes that it is not always possible to restrict a definition to these terms without becoming obtuse.

**Senses, sub-senses, extended meanings, and figurative uses:** L2 learners are not able to interpret extended meanings intuitively in the way a native speaker may, so these meanings, as well as gradations of sense, must be stated explicitly.

**Function words (such as *in*):** while rarely problematic for native speakers for L2 learners, these words are particularly difficult. Furthermore, a definition of a function word does not supply the information a L2 learner requires (can you say *in the bookshelf?*). Kirkpatrick notes that example sentences are particularly helpful for showing how function words are used.

**Register and field labels:** L2 learners are effectively at the mercy of the dictionary when it comes to this information. After all, there is nothing intrinsically sloppy about a word like *ain't*; but a learner needs to know that this word belongs to the 'slang' register. In the same way the word *drop* with the meaning 'give birth to' can apply to animals but would not usually be used to refer to people.

Besides being explicitly addressed to a second language learner, the characteristic that most readily identifies learners' dictionaries is probably their copious use of example sentences. Unlike the citations given in reference dictionaries such as the OED, which are included as evidence for the legitimacy of a word, example sentences in learners' dictionaries are included in order to illustrate usage. Cowie (1978:129) is cited by Jackson (1985:58) as noting the following uses for example sentences in learners' dictionaries:

> *[They] indicate the syntactic distribution of words in their various senses ... throw light on the meaning of the words ... [and] encourage the learner to compose sentences which are lexically, as well as syntactically new ...*

Example sentences can also be used to illustrate the typical collocations a word enters into. Benson (1985:62) identifies two types of collocation in English: grammatical and lexical.

**Grammatical collocations:** often involve a verb and a preposition in English. Benson (1985:63) considers this combination to contain a structural relation between a lexical word which is most important and a function word or grammatical element which is subordinate to it. For example the combination of *abide* and *by, abide by*, is a grammatical collocation. These collocations recur in a regular manner. Their meaning is not idiomatic (cf. phrasal verbs below); however, they must be known in order to use a lexical word grammatically. It is important that this type of collocation is mentioned explicitly in the entry for the lexical word (in this case under *abide*).

**Lexical collocation:** Lexical collocations can refer to combinations of two lexical words (adjective + noun, noun + verb, verb + noun) of any frequency. In order to limit the lexical collocations to be included in a learners' dictionary to a manageable and useful number, Benson (1985:63-67) proposes that the following combinations receive particular attention in a second language learners' (English) dictionary:

NOUN + VERB: basic action (V) performed by N: *bells chime; blizzards rage.*

ADJECTIVE + NOUN: ADJ of the highest degree of N: *heinous crime, pure chance.*

VERB + NOUN: creation/activation (V) of N: *compose music, set a record.*

VERB+ NOUN: eradication/nullification (V) of N: *revoke a licence, break a /aw.*

IDIOMS: collocations whose meaning is not composed by the sum of its parts: *burn your bridges, hit the bottle.*

PHRASAL VERBS: are idiomatic in that they mean more than their parts, although they are probably better understood as borderline grammatical collocations or as multi-word lexemes: *put up (with)* 'accommodate', *dress down* 'criticise'.

Many of the considerations that learners' dictionaries take particular care over have been dealt with to varying degrees by general monolingual dictionaries. In most cases learners' dictionaries are innovative with respect to the thoroughness and consistency of their treatment of these categories. The truly innovative characteristic of learners' dictionaries has been the inclusion of example sentences not for mere illustration but as a guide to usage. Example sentences are also a good way to present words in context.

## 5.2.3 THE BILINGUAL DICTIONARY

Bilingual dictionaries were among the first dictionaries to be produced (AlKasimi 1977:1). Today however, while bilingual dictionaries continue to be produced in large numbers, they are considered to be a specialist type of work. Indeed a bilingual dictionary poses several problems not apparent in a monolingual dictionary.

Clearly, a reader consults a bilingual dictionary for somewhat different purposes than a monolingual dictionary. Typically the reader has proficiency in one language and is seeking to augment their knowledge about a second language, which they are not as well equipped to use. Atkins (1985:22) notes a strong preference among second language learners for bilingual dictionaries. By allowing students to make use of their first language they are able to access and interpret information quickly and simply. A good deal of hard work is taken out of the looking up exercise.

A great deal has been written on the construction of definitions for monolingual dictionaries (see especially Landau 1989, Chapter 4; Kipfer 1984:65-73). These discussions are concerned primarily with avoiding circularity and ambiguity. In terms of overcoming intercultural differences they have relatively little to offer.

Svenson (1993) is the only current author I have found who explicitly addresses the problems peculiar to bilingual dictionaries, and he does so only with reference to dictionaries that have large, stable populations of literate speakers for each language involved. According to Svenson, the primary task of the bilingual dictionary is to provide equivalents of the forms in two different languages. He identifies three types of equivalence (Svenson 1993:143-4):

> **Complete equivalence:** Terms are found to correspond in both reference and register. For example *goggle-box* and *Glotze* are the English and German words for television in an informal register. This type of equivalence may be many-to-one or one-to-many. In Australian English it is also possible to refer to the *tellie*.

> **Partial equivalence:** Register and reference are not equivalent in both languages; however, there is enough overlap that the meaning can be conveyed. For example, in German *fressen* only refers to the activity of eating by animals, and thus has more limited reference than the English word eat.

> **No equivalence:** This is understood to occur most frequently in relation to words for culture-specific concepts; however, other occurrences, such as *gemütlich*, a German word meaning something like *comfy* or *homely*, do arise.

The focus on equivalence between languages in bilingual dictionaries has lead one author to claim that bilingual dictionaries are in fact indexes based on monolingual dictionaries of the languages in question. Steiner (1989) reaches this conclusion by way of noting that bilingual dictionaries do not generally contain definitions of any kind. At most they may include guides to sense discrimination. Steiner (1989:255) concludes that a good translation requires the use of a bilingual dictionary to lead one to the right word, and the use of a monolingual dictionary, to ensure the choice and use of the word is correct. As users rarely do this in practice, Steiner's rec-

ommendation is that the extra grammatical, contextual, encyclopaedic, and graphical information users require should somehow be incorporated into the so-called index. However, he considers this solution to be unrealistic in terms of the size and complexity of the resulting dictionary, which he supposes would be unwieldy and hugely expensive.

As bilingual dictionaries for indigenous languages such as the Sm'algyax and a 'majority' language such as English have a particularly wide cultural gap to bridge, the provision of equivalents is not adequate because users do not have recourse to a monolingual dictionary. If the information is to be found, it must be in the bilingual dictionary. There will be a huge number of cases in which there is no completely equivalent term.

It is not unusual even for languages of communities with very similar cultures, and with shared pasts, to find that it is not possible to find equivalents of an L1 word in L2. The typical solution in a small bilingual dictionary is to simply list a number of near equivalents. Presumably the reader is expected to distil the 'true' meaning from this list. This seems to be somewhat in conflict with our definition of the function of a dictionary. In the absence of direct equivalents the use of definitions strikes me as a practical solution. Readers with expertise in their own language should be well equipped to figure out what word or expression to use. Definitions will frequently be required in bilingual dictionaries for indigenous languages in order to convey the sense of a word. For learners of the indigenous language, the definitions can be included in the dominant language.

Evans (1987) offers the following working practices for developing bilingual dictionaries for endangered languages:

**a.** simple English translation equivalents are given wherever possible ...

**b.** Greco-Latinate terms that neatly show a generality not captured by "plain English", or that are not widely known by potential dictionary users are given after the plain English definition ...

**c.** Expanded plain English definitions are used to give unified definitions of words whose various translation equivalents are so different that they are not clearly related to an outsider.

**Evans 1987:59-60**

A set of principles such as these represent a good working compromise between accuracy, elegance, and accessibility.

As it is virtually always the case that the reader will have far greater competency in one language than in the other, Svenson also distinguishes between active and passive users.

> *To a Swede who is translating, for example, from French into Swedish, information about constructions in the target language is of less importance than to a Swede who is translating in the opposite direction. The same thing applies to subject fields and style levels, as the user, with his [sic] native-language knowledge can often deduce this simply from the equivalents given in the dictionary.*

**Svenson 1993:11**

Translation into the speakers' primary language requires less information, because the construction in the unknown language is present in the text, and in Svenson's terms a passive dictionary provides enough infor-

mation. To translate into the secondary language, however, much more information is required. The reader needs information not only about the lexical equivalent of the original word, but also information about its use. Svenson suggests that 'constructional information' can be demonstrated using examples of sentences containing the word followed by their translation in the original language. He calls dictionaries that provide this information *active* dictionaries.

# 5.3 The bilingual dictionary for indigenous languages

Bilingual dictionaries for indigenous languages have fallen largely into two camps. There are 'field' dictionaries understood to be distinguished from other dictionaries because they are compiled by field workers rather than professional lexicographers. Furthermore, they are generally understood to be intended for the use of the field workers who compile them, as well as the local communities in which they work. There are also comparative dictionaries designed to help with the reconstructive work of historical linguistics.

By far the most relevant literature on the subject of bilingual dictionaries for indigenous languages is to be found in the reviews of new works published by various journals. In particular, *International Journal of American Linguistics* (IJAL) has had a large number of reviews of similar dictionaries over the last few years which are relevant to this project.

Several aspects of the dictionaries are consistently mentioned by reviewers. Concerning mainly linguistic matters (the subject of IJAL), the comments cover topics including: the audience, orthography, arrangement of words, the use of cross-referencing, the presentation of affixes and other morphology, the use and presentation of example sentences, the treatment of variants, and the semantic scope of the dictionaries. The reviewers' comments on these topics are outlined in the following sections.

### 5.3.1 AUDIENCE

The dictionaries under review are of two general types: those intended primarily for linguists (see Crawford 1989; Pitkin 1985; Zigmond et al. n.d.), and those intended primarily for the linguistic communities they represent (see Carlson & Flett 1989; Mattina 1987). Within each type are examples that attempt to be accessible for both groups (see Day 1995; Dunn 1978a; Callaghan 1987; Sylestine, Hardy & Montier 1993; Kimball 1994; White Eagle 1988).

Most of the comments concern works that appear to be biased towards linguists and are considered inaccessible to the lay person. Callaghan (1987) overcomes this problem (see Adams 1990:170) by including in the introduction sections aimed at each group. The use of the front matter as a place to provide explanatory information directed at non-technical readers is not uncommon (see also Carlson & Flett 1989; Kimball 1994; Sylestine, Hardy & Montier 1993). Of course this is only of value if the material in the body of the dictionary is also accessible for both groups (cf. Cook 1994 on the use of phonemic entries in Frantz et al. (1989)).

Several of the reviewers discuss the contents of the introductions in some detail. Many of the dictionaries include a section describing the grammar, spelling conventions, and stress marking system for the language. Complaints mainly concern materials that have not been treated consistently. For example, Cook (1994:80) notes that Frantz et al. (1989) include seven parts of speech in the introductory discussion, but actually use nine parts of speech in the text itself. Reviewers also note that other useful information to include in the introduction would be general information about the language (e.g. typological and areal information and a description of the speech community).

### 5.3.2 ORTHOGRAPHY

Closely connected to the issues caused by these dictionaries having two distinct audiences are issues relating to orthography. The needs of linguists (particularly for use in comparative studies) call for phonetic and morphological detail (see Cook 1994:79). On the other hand, native speakers require a practical orthography which provides only enough phonetic information as will be useful, and is generally a conventionalising force (see O'Meara 1993:110). Too much detail tends to obscure the information which is really useful for practical purposes (see Eastman 1982:733). An obvious solution is to give both an orthographically conventional representation (as the head word) with a full phonetic representation following. As noted by Danziger (2000:144) conversion charts showing relationships between the orthography and more widely known systems are a useful strategy here.

For any language that has not previously been written the development of an orthography is a prerequisite for dictionary-making (see for example Sylestine, Hardy & Montler 1993). The situation is not necessarily any more straightforward for a language that has a body of written literature because there are typically variations in the use of orthographies and sometimes even competing orthographies which lexicographers must sort out when establishing the conventions to be used in the dictionary they are developing (see Costa 1996:419 on Day 1995).

### 5.3.3 ARRANGEMENT

Perhaps surprisingly, there has been some discussion of the arrangement of entries in field dictionaries over the past few years. This time-span appears to cover the demise of the phonetic style of ordering in favour of something approximating the Latin system. The main motivation for the change appears to be interest in making the dictionaries accessible to a wider range of readers (Hinton 1994:311; Galloway 1991:403). However, Mattina (1993:358) has noted that conventional ordering may come at the expense of phonetic distinctions. (For example, in the Nuxalk-English Dictionary the following order is observed: *t*, *tl'*, *ts*, *ts'*, *t'*; which obscures the fact that the digraph *tl'* stands for the fricative [t] while the other phonemes in the series are plosives.) A useful strategy for guiding readers through the dictionary is to print the full alphabet across the bottom of every page (see Taylor 1998 on Thompson and Thompson (1996)).

### 5.3.4 CROSS-REFERENCING

There are a couple of instances in which no English index is provided in the dictionaries under review. This causes real problems for the readers (O'Meara 1993:109-110), particularly in relation to polysynthetic languages. In general an English index is not sufficient for any type of language unless it is extremely comprehensive (Cook 1994:78). There has been a gradual move towards supplying English-vernacular sections which contain more detail than an index. This seems to have been a response to the needs of non-speakers or non-fluent speakers of the language in question (see Burley 1996:208 on Kimball 1994). In some cases the reader must still refer to the vernacular-English section for the complete information on each word (see Booker 1996:126 on Sylestine, Hardy & Montler 1993). In other cases complete information is given in both sections but the computer generated English-vernacular section is not as well ordered as it could have been (see Costa 1996:421 on Day 1995 where the English keyword has Abenaki entries underneath it, arranged alphabetically according to Abenaki rather than alphabetically according to the English translations of each Abenaki word).

### 5.3.5 AFFIXES AND MORPHEME BOUNDARIES

It is fairly common practice to list derivational and lexical affixes as main entries. Occasionally in highly polysynthetic languages the preferred strategy is to give many examples of words containing the root within a single

entry. Both strategies are used in Christjohn and Hinton 1996 (see Michelson 1998), Munro & Willmond 1994 (see Grant 1996:205), McGregor 1987 (see O'Meara 1993:111), and Hofling with Tescún 1997 (see Danziger 2000:143-144 who notes that the size of the dictionary is significantly increased because of this choice).

There is a general consensus among the reviewers that it is necessary to indicate morpheme boundaries, as well as distinguishing between inflectional and derivational affixes. There was some discussion about the treatment of analysed forms. Overall it is preferable to avoid using analysed forms for citation as this information may be distracting for non-linguists, especially at the look-up stage (see Miner 1993:225). It is easy enough to provide this information later in the entry to ensure it is available for readers. Listing analysed forms as head words may also lead to unexpected ordering of head words if the morphemic representation is different from the phonetic representation.

### 5.3.6 EXAMPLE SENTENCES AND GLOSSING

As well as providing 'real world' uses of lexical items, example sentences can contain cultural and ethnographic information. As such they form a significant corpus of natural language in the vernacular, which reflects the speakers' world view (see Miner 1993). Example sentences are also strongly advocated by Bartholomew & Schoenhals (1983) (this work is addressed to the field worker, rather than the lexicographer). The major strength of the dictionary by White Eagle (1988) was considered to be the fact that it was compiled by a native speaker, and that hundreds of example sentences were included by White Eagle to supplement the glosses (see Miner 1993.224).

There are two concerns relating to glossing. Firstly, the author of one dictionary (Mattina 1987) was reported to be concerned that the glosses are rather minimal (Galloway 1991:405). Galloway affirms the importance of creating the glosses in consultation with language consultants (1991:405). The second problem was that the English glosses potentially obscured the meaning of the inflected forms used in the citations (see Seiler 1993:355-6). The best solution for a dictionary must be accuracy over fluency, so that the meaning of a word is explicit.

### 5.3.7 APPROPRIATENESS

There are a number of issues concerning appropriateness which reviewers noted in passing. Information such as the marking of archaic forms was considered to be of value. However O'Meara (1993:109) points out that this information is only helpful if it is supplied consistently. Others noted that it was useful to identify borrowings but frequently observed that this was not done consistently (see for example Grant 1996:206). There were also a number of comments on the treatment of culturally sensitive words or domains. In general the feeling of the reviewers was that such information is worth including, but that it needs to be treated with care (Grant 1996:206).

### 5.3.8 SEMANTIC SCOPE

The inclusion of categories such as onomatopoeic words, neologisms, interjections, ethnobiologically specialised words, and names are particularly relevant in a learners' dictionary (see Hinton 1994, Danziger 2000, Mattina 1993). For native speakers or learners it is desirable to have good coverage of a wide range of areas. From a linguist's viewpoint, it is important that the lexical sets which are included are represented exhaustively, or at least as thoroughly as possible. In either case the ideal would be the same: an exhaustive document covering all possible fields.

## 5.4 Summary on bilingual dictionaries for endangered languages

At this stage it is possible to draw some general conclusions about the production of bilingual dictionaries for endangered languages. As was noted in §5.2.1 and §5.2.2, the most important characteristic of a dictionary generally, the thing that governs a dictionary's success as a teaching tool, is its accessibility to readers. For this reason, contextual info rmation, appropriate graphics, and simple design are highly relevant areas for consideration. Furthermore, technical information must be presented in a consistent manner that does not interfere with the coherence of the text as a whole.

Bilingual dictionaries for endangered languages strike me as suffering from some confusion about the needs of their users, which could be clarified using the concepts of active and passive use (defined by Svenson above). The reviews of dictionaries set out in IJAL over the last few years bear witness to this confusion (see for example reviews by O'Meara 1993, Cook 1994, and Galloway 1991).

Many dictionaries have no more than a basic English-vernacular index (many even omit the part of speech) to point the reader to information in the dictionary proper, which is sorted mostly alphabetically by the head word in the vernacular. This means that a learner can never find the information in the first place they look. At best they can find out where to go to find the information in the vernacular-English section. This stands in contrast to standard bilingual dictionaries where the English-vernacular section often contains additional information such as usage notes. While this solution is understandable in terms of limitations on the time and resources associated with these projects, it dramatically reduces the usability of the final product.

Many of the computer programs available these days that assist in producing dictionaries incorporate facilities for automatically generating finder-lists, or indexes, of this type (see for example Nathan & Austin 1992, Coward & Grimes 1995). These indexes are subject to the same criticisms which Steiner noted with regard to bilingual dictionaries in general. The entries are under-informative and they make the accessing of information at least a two step process. In fact, very often it is necessary to flip backwards and forwards in order to choose between several competing 'equivalents'. Because of these peculiarities of design, it is not unusual for communities to require instructional material or introductory lessons in the use of 'their' dictionary once it has been produced. Ideally any reasonably literate person should be able to use a dictionary. After all, it is (or can be) a looking-up exercise like any other (e.g. using a phone book). To make a dictionary for indigenous speakers less accessible then a general English dictionary seems particularly unfair as it alienates the speakers from a document about their language.

Many of the characteristics of a learners' dictionary can be usefully transferred into a bilingual dictionary which is intended as an aid in teaching an endangered language. If we recall the distinction made by Svenson between active and passive dictionaries, then learners' dictionaries can be understood as bilingual active dictionaries because they replicate native speaker competence in the target language. The purpose of these dictionaries is to record and make available information about the vernacular. Most importantly for the language communities, they are used as pedagogical tools by language learners. What is required then is an active dictionary of the vernacular with a vernacular-English section for interpretation of vernacular materials and an English-vernacular section for translation of English materials. English is present in the dictionary only to make information about the vernacular accessible.

# 5.5 The Sm'algyax-English dictionary

All of the issues discussed by reviewers for IJAL are relevant to the design of the Sm'algyax Learners' Dictionary. Because it is intended to be useful as a learners' dictionary, I have focused on making information as accessible as possible. For this reason the database contains detailed information on most items. As well as the general Sm'algyax – English and English – Sm'algyax versions, other types of dictionaries have also been derived from the database. For example, a dictionary that excludes the morpheme glosses and words which are culturally sensitive, has been produced for younger children in both Sm'algyax – English and English – Sm'algyax versions. A thesaurus for language teachers that contains relatively little explanatory information has also been produced. The thesaurus is intended to provide teachers with a resource of Sm'algyax words arranged by semantic domain for use in curriculum development. In the remainder of this section I will discuss how the relevant considerations identified in §5.3 have been dealt with in the current project.

### 5.5.1 AUDIENCE

As its title suggests, the Sm'algyax Learners' Dictionary has Tsimshian people who wish to learn Sm'algyax as its main target group. This dictionary has been designed explicitly for the Tsimshian communities, in consultation with a number of people including elders and potential users. Although information that is primarily of interest to linguists is included, this information does not have a priority in the design of the dictionary, and is consequently less prominent than is sometimes the case. For example, phonetic information is not given at this stage (although it will hopefully be included in later editions). This information can largely be extrapolated from the pronunciation guide which follows the main entry. The pronunciation guide uses the Practical Orthography (Tsimshian teachers felt that the use of the IPA was both difficult and off-putting) but also marks stressed syllables.

### 5.5.2 ORTHOGRAPHY

The choice of an orthography for the Sm'algyax Learners' Dictionary is relatively straightforward. The practical orthography used by Tsimshian language teachers is fairly well established in the Tsimshian community. There is a continuing problem with the development of competing orthographies (which are generally inconsistent in their treatment of Sm'algyax specific sounds) by members of the Tsimshian community. None of these systems are sufficiently widely known to be serious candidates for use in the dictionary. Indeed, by making the practical orthography accessible to a wider audience, the dictionary is intended to be an instrument for developing community support for the practical orthography. By using the dictionary it is possible for speakers to develop their skills as readers and writers in the practical orthography.

### 5.5.3 ARRANGEMENT

The dictionary is arranged in alphabetical order with non-roman graphemes in the practical orthography following their standard roman counterparts. The orthography represents sixty-five different sounds, using a combination of graphemes, digraphs and diacritics based on the roman alphabet. An early version of the dictionary listed each sound as a distinct unit in the ordering process. This strategy proved to be rather unwieldy, not least because it meant that there were sixty-five different elements in the ordering system. This made the look-up task more complex for readers who had to negotiate an intricate ordering of words.

The problem did not seem to be related to the consonant graphemes. Indeed, people generally felt that it was quite appropriate to treat related consonant graphemes distinctly in accordance with their phonemic status. Thus the ordering of the ejective /t'/ as a distinct grapheme <t'> after the non-ejective /t/ <t> did not seem to cause any particular problems.

However, the strict ordering of different vowel sounds did seem to be difficult for users to manage. Perhaps this is because people are used to the ordering of English vowels (in which sounds and spelling are frequently inconsistent but the ordering is invariant). This was certainly the case for the diphthongs that are not treated as separate graphemes for the purposes of ordering in an English dictionary. The treatment of diphthongs as distinct units in the ordering system was consequently not expected in the Sm'algyax dictionary. People habitually went to <o> in order to look up a word beginning with <oy> for example.

Difficulties also arose in cases where stress (or the lack of stress) changed a user's perception of vowel quality (see §9.2.1 for more discussion of spelling issues). In these cases users frequently had to look in two different places in order to find a word if they guessed the vowel length incorrectly. It was especially confusing to order the 'long a' words after the 'short a' words as this resulted in the following sequence which readers found very difficult to understand:

> 'naxnuu (v) *hear* 'Nax'nuuyu g̲alipliibit gyaatk. *I heard thunder last night*. 'Nax'nuuyuni? *Did you hear?* VARIANT: 'na̲x'nuu

> 'naa (n) *bait* Sgüü'nm gyiiga dm 'naayu dziła uum. I *have to buy my bait when we go fishing.*

It was clear that people didn 't conceptualise the vowels within words as digraphs which should be treated distinctly in the ordering in the dictionary.

This unexpected finding lead me to arrange related vowel sounds together as unitary sets, but to continue to list the consonants separately. This arrangement is a practical compromise between the simplicity required by users and the complexity arising from linguistic analysis. The following table lists all of the Sm'algyax graphemes in the order in which they are sorted in the dictionary. Vowels are ordered according to the sequence of letters they contain and glottal stops are ignored in the ordering system. This ordering applies to both word initial and word medial graphemes. For example, all the diphthongs beginning with *a* occur in the *a* section and the second letter in the digraph is treated as a separate unit for ordering (so that *abuu* 'some' appears well before *aw'aaws* 'curly hair').

| Location | Sm'algyax Letter | IPA symbol |
|---|---|---|
| a | a | æ |
| | a̲ | a |
| | aa | æː |
| | a̲a̲ | aː |
| | a'a | æ'æ |
| | a̲'a̲ | a'a |
| | aw | aw |
| | aaw | awː |
| | ay | ay |
| | aay | ayː |
| b | b | b |
| d | d | d |
| dz | dz | dz |
| e | e | e |
| | ee | eː |

Table 5.1: Ordering of Sm'algyax graphemes in the Sm'algyax dictionary

| Location | Sm'algyax Letter | IPA symbol |
|---|---|---|
| | e'e | e'e |
| g | g | g |
| gw | gw | gʷ |
| gy | gy | gʸ |
| g | g | G |
| h | h | h |
| i | i | i |
| | ii | iː |
| | i'i | i'i |
| k | k | k |
| k' | k' | k' |
| kw | kw | kʷ |
| k'w | k'w | kʷ' |
| ky | ky | kʸ |
| k'y | k'y | kʸ' |
| k̲ | k̲ | q |
| k̲' | k̲' | q' |
| l | l | l |
| 'l | 'l | 'l |
| ł | ł | ł |
| m | m | m |
| 'm | 'm | 'm |
| n | n | n |
| 'n | 'n | 'n |
| o | o | o |
| | oo | ɔː |
| | o'o | ɔ'ɔ |
| | oy | ɔy |
| | oy | ɔy |
| | ooy | ɔyː |
| p | p | p |
| p' | p' | p' |
| s | s | s |
| t | t | t |
| t' | t' | t' |
| ts | ts | ts |
| ts' | ts' | ts' |
| u | u | u |
| | uu | uː |
| | u'u | u'u |
| ü | ü | ɨ |
| | üü | ɨː |

Table 5.1 continued: Ordering of Sm'algyax graphemes in the Sm'algyax dictionary

| Location | Sm'algyax Letter | IPA symbol |
|---|---|---|
|  | ü'ü | ɨ'ɨ |
| w | w | w |
| 'w | 'w | 'w |
| ẅ | ẅ | ɰ |
| 'ẅ | 'ẅ | 'ɰ |
| x | x | χ |
| 'y | 'y | 'j |

Table 5.1 continued: Ordering of Sm'algyax graphemes in the Sm'algyax dictionary.

This system of ordering is shown in the following subset of entries from the 'A' section in the dictionary. Note that the <u>a</u> is ordered before *a* in the sequence *<u>a</u>pwilaawk*, *ap'ax* because they are treated as equivalent whereas the *p'* follows the *p* in the same set of words because they are treated as distinct graphemes for the purposes of ordering. Note also that the diphthong *aw* is incorporated into the order and is treated analogously to the non-diphthong sequence *a*, *w* in *awaa*.

> <u>a</u>pwilaawk [<u>a</u>p/wi/*laawk] (v) *knowingly* <u>A</u>pwilaawksa gwelkntga waap. *The house was deliber-ately set on fire.*

> ap'ax [a/*p'ax] (v) *remember* Ap'axdu wila loomt gyik'ooł. *I remember what we did years ago.* Łguksn'nm ap'aga goo siwaatksa k'üülda na'algyg<u>a</u>m. *I am unable to remember one word in our language.* PLURAL: a'ap'ax VARIANT: aap'<u>a</u>x

> awaa [a/*waa] (v) *next to; near; toward* Awaas dp Tami dm gooyu. *I'm going to Tami's*.

> aw'aaws [aw/*'aaws] (n) *curly hair* Luk'wil aw'aawsa gaws Emily. \xe *Emily's hair is very curly.*

## 5.5.4 CROSS-REFERENCING

This dictionary is an active dictionary of the Sm'algyax language. There are both Sm'algyax-English and English-Sm'algyax versions of the dictionary. Each section of the dictionary is complete in the sense that each section contains all the information for an entry that is included in the other section. Thus it should not be necessary for the reader to flip back and forth to find the information they need.

In practice this means that an entry in the English section contains a set of Sm'algyax equivalents, with the English translation of each equivalent following. While this may seem to make for a rather redundant repetition of information, the benefits to the reader are significant.

Consider the following case of many-to-one correspondences in Sm'algyax. *Swallow*, which has a number of meanings in English, is listed in the Learners' Dictionary (in the English-Sm'algyax section) in the following way:

> *swallow* g<u>a</u>dzeł (v) *swallow* <u>G</u>adzeła łgwoomłga daala. *The child swallowed a dime.* VARIANT: <u>k</u>'<u>a</u>daał.

> *swallow* habaxyaamsk (n) *swallow* NOTE: *Meaning, a type of bird.*

> *swallow up* k<u>a</u>ło'<u>a</u>t'<u>a</u>xk (v) swallow up <u>K</u><u>a</u>łot'<u>a</u>xga g<u>a</u>guum tsgah. *The seagull swallowed the herring.* USAGE VARIANT: k'<u>a</u>ło'<u>a</u>t'<u>a</u>xg-

> *swallow whole* łootx (v) *gulp; swallow whole*

This arrangement clearly saves the reader a good deal of time and effort. These entries include all the information available in the Sm'algyax-English section, which means that cross-checking is unnecessary.

### 5.5.5 AFFIXES AND MORPHEME BOUNDARIES

Sm'algyax has a large set of highly productive modifier proclitics. These proclitics are listed as separate main entries. In general, only affixes that are no longer productive are listed exclusively with the stems they take. Words containing these non-productive prefixes are included as entries.

Morpheme boundaries are clearly of interest to linguists in particular, although any reader with an interest in 'word building' may find information on derivational morphology worthwhile. Where possible morpheme boundaries are shown late in an entry. As the Tsimshian people require a dictionary that reinforces the orthographic practices that have been adopted over the past twenty years, it does not seem appropriate to give morphological analyses containing hyphenation as the citation forms.

### 5.5.6 EXAMPLE SENTENCES AND GLOSSING

Example sentences for the SLD were provided by a group of speakers over a number of months. This proved to be quite a time-consuming task as only a few of the consultants were really confident writers. Example sentences are now included for most of the words in the dictionary. The technology available at this time does not provide for glosses that are aligned with the Sm'algyax text. For this reason free English translations are given for the example sentences. Occasionally where the English translation misses something significant in the Sm'algyax sentence, additional information is provided in parentheses:

> gasgoos (v) *jump* NOTE: Plural. Sagagoosa 'nap'a'alas Lucy. *Lucy's button jumped* off (ie., fell off). SINGULAR: goos

### 5.5.7 APPROPRIATENESS

As Sm'algyax is really only beginning the process of standardisation, a great deal of variation with regards to the spelling and pronunciation of words still exists. The Tsimshian communities have elected to adopt a stance of tolerance and respect toward variation among speakers in spelling and pronunciation (see Seguin 1979:107). While seeking to further the process of standardisation, the Sm'algyax dictionary lists all known variants of a word, as well as any particular geographical associations they signal. The following entry accommodates the fact that speakers from Metlakatla, Alaska use *dzidaawł* in a different way from other speakers:

> dzidaawł (time adv) *later on*
>
> (time adv) *tonight* NOTE: *Metlakatla, Alaska dialect.* Dm sguul hukgalliimit dzidaawł. *The choir is going to practice tonight.*

Items are sometimes labelled archaic. This can be problematic in some cases where words which some speakers identify as archaic are still in use among other speakers. For this reason the use of this label has been fairly conservative. In general it marks words that most people agree are no longer in use. Much remains to be done on the development of register labels in the dictionary. In order to distinguish between homonyms in English, note fields containing short explanatory sentences have been used in preference to field labels because the language used in field labels (e.g. ornithological) is too opaque for many Tsimshian readers (see the examples in §5.5.4 above where the word for 'swallow (a type of bird)' has a plain language note to disambiguate its meaning).

The domains of words that require sensitivity in handling are clear and limited in Sm'algyax. Anything to do with sexuality, from body part names, to words for sexual activity, and so on, are avoided in mixed company, especially in public situations. Euphemisms have been identified in order to protect users from the embarrassment of inadvertently using loaded words.

> miis (n) milk NOTE: *A euphemism for breasts.* Heelda wil liks gyigyeda mi'is hooba k'abatgüüłk. *There are many different kinds of milk children drink.* VARIANT: *mi'is*

Taboo words are not generally identified as such. The reason for this is that unlike euphemisms, which are not always recognised by language learners (e.g. the English gloss for miis gives no indication of the other use of the word), taboo words are recognised by anyone knowledgeable about Tsimshian culture. That is, the taboo is a fact about the culture, not a fact about the language. Evidence for this claim comes from the fact that sexuality is a taboo for Tsimshian people regardless of the language they happen to be speaking. These words have been included in the full version of the dictionary but are not included in the dictionary intended for use in the school's language program. This reflects the preferences of the elders who contributed to the dictionary. They felt that it was not appropriate for these words to be used in the school dictionary, possibly because the classroom is a public domain.

### 5.5.8 SEMANTIC SCOPE

The first goal of this project was to provide more thorough coverage of domains that have not yet been explored by lexicographers of Sm'algyax. As stated earlier, these domains include the topics associated with women's lives and work such as child-raising and food gathering and preparation. Where possible I also sought to 'fill out' other domains (including names for household goods, types of buildings, and so on) to ensure coverage is as complete as possible.

Proper names of all kinds have been omitted from the dictionary. Personal names are associated with the system of hereditary naming by which individuals attain status within the Tsimshian community. These names are consequently owned by clans and held by individuals. Part of the preparation for acquiring the rights to a name is to learn about the significance of the name. There are cases in which the ownership of a name is under dispute. Given the political complexity associated with personal names, the Ts'msyeen Sm'algyax Authority concluded that such names were best left out of this dictionary.

Place names have also been omitted. There are two reasons for this. Firstly, another researcher has assembled a comprehensive list of Sm'algyax place names in conjunction with the treaty negotiations currently taking place (Susan Marsden pers. comm.). Perhaps at a later date this list might be included in the dictionary as a part of the end matter. However because Sm'algyax is used by fishers as a way of excluding non-Tsimshian fishers from cooperative fishing efforts, and because Sm'algyax place names often refer to resources that are plentiful at particular locations, its reasonable to expect that the Tsimshian community will choose not to make this information more widely available.

## 5.6 Conclusion

The SLD was prepared through a community directed project. The design of the dictionary was guided by the requirements and sensibilities of the elders who acted as consultants on this project. Their contributions to the design of the dictionary are summarised below:

- The use of the practical orthography rather than the IPA in the pronunciation guides.
- The ordering system which treats vowels and consonants differently to arrive at a manageable sequence in the dictionary.
- The inclusion of example sentences.
- The use of plain language in register notes.

Other sources for the design of the dictionary include characteristics that have been identified as strengths in other related types of dictionaries. Thought was also given to avoiding the short-comings identified by reviewers in IJAL.

At a later date it may be possible to include vernacular as well as English definitions of words, in the Sm'algyax-English section. However, in the first instance the committee concentrated on gathering example sentences from Sm'algyax speakers as these will be useful to all readers. Sm'algyax definitions of Sm'algyax words would be highly desirable as it would then be possible to produce a Sm'algyax monolingual dictionary for use by fluent speakers; however, this is a goal for the longer term.

The design of the SLD has benefited greatly from the community directed process. The final form of the dictionary was determined by the community through consultation. There were limits to the resources available for the project, so decisions about priorities within the project were necessary. The resulting text is maximally accessible to readers and particularly useful for language learners.

# Chapter Six:
# Lexical expansion in Sm'algyax

## 6.0 Introduction

The community directed approach used in the dictionary project ensured that issues identified within the community as relevant to the project could be addressed. This chapter discusses the issue of lexical expansion in Sm'algyax. During the dictionary project many Tsimshian people, both those who were fluent Sm'algyax speakers and those who were not, raised the subject of expanding Sm'algyax lexicon. Overall, there was a feeling that it was important to include new words in the dictionary. For fluent speakers this seemed to be related to their desire for an accurate representation of the language. For non-speakers it seemed to be related to their desire to learn to use Sm'algyax to talk about the everyday experience of their lives.

Past lists of Sm'algyax words have been based largely on *adawx*, traditional narratives that are part of Tsimshian oral literature. These lists generally have many more archaic words than speakers use in everyday conversation, and far fewer words relating to modern-day Tsimshian life. Thus, one area that received special attention during the dictionary project was the domain of words relating to the experience of Tsimshian people as they live today.

The lack of new words in previous lists, which was primarily a result of the methodology used in constructing those lists, had lead a number of Tsimshian people to believe that Sm'algyax was in fact deficient in words relating to the modern Tsimshian experience. This was considered to be a serious enough problem that people went as far as to suggest that a committee should be set up to oversee the expansion of the Sm'algyax lexicon in these domains. Given the highly politicised environment in which the dictionary project was taking shape, this suggestion seemed to merit careful consideration. This chapter is a discussion of the factors relevant to the development and support of new words in an endangered language such as Sm'algyax.

The consensus among the elders was that an overt and structured approach to lexical expansion in Sm'algyax was not the best idea. Fluent speakers were particularly concerned to show that they had the means to express themselves fully in the modern context using the morphological and lexical resources of Sm'algyax.

The suggestion of deficiency in the lexicon which the above proposal implied was not at all pleasing to many of them, nor were fluent speakers eager to take on an overt and socially sanctioned responsibility for developing new words. They were very well aware of the large number of potential pitfalls in such an undertaking (not least of which was the difficulty in negotiating village dialect differences relating to words which have recently been established in the community).

What this response suggested to me was that one aspect of the development of the lexicon, the ability of speakers to create new words, was intact within the population of fluent Sm'algyax speakers. In the first section of this chapter, I identify the numerous means for lexical expansion available to fluent Sm'algyax speakers in order to demonstrate that the linguistic mechanisms for lexical expansion are readily available and frequently used by the Sm'algyax language community.

Semi-fluent speakers or learners of Sm'algyax correctly perceived that they did not have the ability to use Sm'algyax resources in order to meet the demands of some modern situations and they noted that resources to

help them with this task were limited. Occasionally this inability was universalised to the language community more generally. This perception was reinforced by the section of the community of fluent speakers who have a highly conservative approach to the language and who neither engage in nor encourage the development of new words.

These factors suggested that the process of lexical expansion was not well supported by social mechanisms for dispersing and maintaining new words. I have labelled this process lexicalisation. This well established term is sometimes used to refer to the development of phrases and other larger, syntactic structures in the mind of a speaker as an unanalysed unitary form. In this chapter, I am using the term lexicalisation both to refer to the establishment of new words in the minds of individual speakers, and also, more importantly, to refer to the process of establishing new words in the shared conception of the language in the communal lexicon. Thus, the lexicalisation of words in the minds of individuals is a critical part of a much larger, social process in which a community of speakers comes to share the resource represented by a new word. See §6.4 for more discussion of lexicalisation.

In order to address the question of the productivity of Sm'algyax, §6.1 reviews the morphological processes available within the language for forming new words. Then, in §6.2, examples of code-copying from other languages are considered. These include global copies (borrowings) as well as examples of selective copying. In §6.3 the significance of code-copying for the vitality of Sm'algyax is discussed in more detail. Finally, in §6.4 the process of lexicalisation is considered and suggestions for fostering lexicalisation are given.

# 6.1 Lexical productivity in Sm'algyax

This section sets out the strategies for lexical expansion that are available to Sm'algyax speakers using the resources of the Sm'algyax lexicon and morphology. The productivity of these processes varies. The processes include: semantic changes (§6.1.1), zero derivation (§6.1.2), derivation (§6.1.3), compounding (§6.1.4), and clipping (§6.1.5).

### 6.1.1 SEMANTIC CHANGES

Semantic change includes shifts in denotation, narrowing, and broadening. Broadening and narrowing can be easily identified in cases in which the reference of a construction is significantly different from the meaning of its constituent parts. The Sm'algyax lexicon, with its fertile systems for derivation, is full of examples of this kind.

As an example of broadening, consider the word *hałoo* 'material, cloth, canvas, sail'. The etymology for this word is the instrumental prefix *ha-* and the stem *łoo* 'move quickly, especially with reference to a boat or car'. The occurrence of the word *hałoomboot* 'sail boat' reinforces the suggestion of the etymology that the original meaning of the word *hałoo* was a specific reference to a 'sail'. The modem use of *hałoo* to refer to large pieces of fabric of any kind is possible because the meaning of the word has broadened.

Narrowing is apparent in the modem use of the word <u>k'andzooł</u> which, in its broadest sense, means 'covering'; for many speakers this word has narrowed to mean only 'foreskin, prepuce'. The narrowing of the meaning is related to the fact that, with the second meaning, this word is used as a derogatory name among men.

The word <u>ganlumaaksa</u> 'washing machine' is an example of semantic shift its older meaning being 'washboard'. This word is made up of the prefix <u>gan</u>- 'means of' and the stem *lumaaks* 'wash clothes'. Since the meaning of <u>ganlumaaksa</u> is more literally translated as 'means of washing clothes'. it is easy to see how the term can be

applied equally well to either a washing machine or a washboard. As the technology associated with washing clothes has changed, so too has the reference for this word.

## 6.1.2 ZERO DERIVATION

Zero derivation is typically identified in cases in which the grammatical class of a word is changed without the use of a derivational affix. This seems to have been a highly productive process in Sm'algyax. There are a number of words with noun and verb meanings that may have developed through processes of zero derivation. This set would include the various meanings for *aks*, which include 'water', 'tide', 'drink', and 'be wet', as well as the nominal and verbal usages of *naks*, 'spouse' and 'get married'.

In cases such as these, in which the polysemy is clearly very old, diachronic evidence may suggest which was the original word class. More recent cases in which a word moves from one class to another generally contain a derivational suffix.

## 6.1.3 DERIVATION

Sm'algyax has both derivational prefixes and suffixes. As I noted in §8.3, it is generally much easier to characterise the function and meanings of the derivational prefixes. For example, the derivational prefix *ha-* is an instrumental which creates nouns out of verbs. It occurs in words that refer to the means used to accomplish the activity coded by the verb stem. The noun *hadal* 'weapon' is derived from the verb *dal* 'fight' in this way.

The derivational suffixes are also important in the creation of new words. Many words contain a derivational prefix that seems to be augmented by one of the suffixes. For example, the base *moon* 'salt' becomes *samoonsk* 'make salty'. The suffixes change the degree of transitivity of the stem. For example, the transitive verb *'woo* 'invite' is related to the noun *'wootk* 'guest'.

## 6.1.4 COMPOUNDING

Compounds in Sm'algyax are formed using the dependency marker *-m*. The following examples show the construction of the words 'steam train' and 'glasses':

**(6.1)**  *stimboodmgyilhawli*
       *stimboot-m-gyilhawli*
       steam.boat-DM-woods
       'steam train'

**(6.2)**  *wüliilmtgwah*
       *wüliil-m-tgwah*
       eye(s)-DM-glass
       'glasses'

## 6.1.5 CLIPPING

Clipping refers to the phonological reduction of a longer word so that its form contains only the main syllable of the original word. The stressed syllable comes to stand for the whole word. Semantic shift may often occur with forms which have been clipped. In this case the reduced form joins the lexicon as a distinct form from the original.

A possible example from Sm'algyax is the form *ga'nah* meaning 'mast', which is also listed in Dunn (1978) as *ganałoo: gan* is the derivationa1 prefix for long, hard, or wooden objects; and *hałoo* is the word for sail. It may be analysed as follows (the *h* is deleted):

**(6.3)**   *ganałoo*

      *gan-hałoo*

      long/hard-sail

      'mast'

## 6.2 Code-copying in Sm'algyax

The code copying framework developed by Johanson (2001) was introduced in Chapter Three to distinguish between structural changes in Sm'algyax due to contact with English, and social changes in the use of Sm'algyax within the Tsimshian community due to a societal shift to English. This framework is potentially empowering to communities as it provides a positive explanation for linguistic changes that have often inaccurately been associated with language death. Structural changes due to language contact are as much a feature of strong languages as of struggling ones.

In this model the dominant language is labelled the model code. The language that is being influenced is called the basic code. The model allows either entire units of the model code to be copied into the basic code (a process commonly known as borrowing), or selective copying (in which a single characteristic of the model code is copied into the basic code). Examples of selective code-copying from English phonology were provided in §3.3.

Global copying is often accompanied by adaptation (also called assimilation). Copies are adapted to fit into particular systems (phonological, morphological, and syntactic) of the basic code.

Evidence that global copies are incorporated into the basic code includes the use of derivational morphology from the basic code. The words *tea* and *coffee* are good examples of this kind. In Sm'algyax these words occur as *dii* and *kopii*. Both words may take the derivational prefix for receptacles *galm-*. Thus 'teapot' is *galmsidii* and 'coffee pot' is *galmsikopii*. In both of these cases the derivational prefix *si-* 'make, get, do' is also present. Furthermore, the word for a mug in Sm'algyax is *galmxkopii*. The middle morpheme here, *x-* is a derivational morpheme meaning 'consume, eat, drink'.

Examples of words copied into Sm'algyax from English that have undergone adaptation are listed below.

### A. PHONOLOGICAL ADAPTATION

One phoneme present in English which is not available in Sm'algyax is /r/. When an /r/ occurs in a word which is being copied from English, the adapted Sm'a1gyax version generally replaces the /r/ with either an /l/ or with ø. For example, Russian is rendered *Luusn* in Sm'algyax.

### B. ADAPTATION TO THE LEXICON

In the process of copying, the semantic scope of the term has been adapted to the lexical system of the basic code. An example of this kind is the word *watch* which was copied into Sm'algyax as *waats* with a broader meaning that includes the senses 'clock, watch, any timepiece'.

### C. GRAMMATICAL ADAPTATION

Number marking systems from the basic code may be applied to global copies from the model code. There are a number of ways to form plurals in Sm'algyax. These may be demonstrated using the English form *school* which has been copied into Sm'algyax in a range of ways. There is the verb *sguul* 'practice' which does not have plural morphology. Then there is a singular and plural pair of verbs which refer to the act of teaching: *sgu'unt* 'teach', and *siksgu'unt* 'teach.PL.O'. And there is a singular and plural pair which refer to the agent of teaching: *sgu'unsk* 'teacher', and *gasgu'unsk* 'teachers'.

It is clear that the plural morphology assigned to these Sm'algyax words is in accordance with the use of plural morphology in Sm'algyax more generally. Plural verbs often occur in Sm'algyax, frequently using processes of reduplication (whereas plurals never occur on verbs in Modern English), and plural nouns in Sm'algyax are increasingly likely to take the prefix *ga-* 'plural'.

## 6.3 Code copying and linguistic purism

The code copying framework clearly shows how English is affecting Sm'algyax. Examples in §3.3 relate specifically to phonology, and examples in §6.2 show how global copies are adapted to the basic code. Global copies are a part of the same process but are more readily identified by speakers as having an English source.

Clearly English is having an impact on Sm'algyax. Language change due to contact between languages is a widespread phenomenon and is distinct from processes of language shift. It is language shift not code-copying that poses a direct threat to the vitality of Sm'algyax. From the perspective of studies of language contact, the interaction between Sm'algyax and English is unsurprising. Whether or not such an impact is desirable from the perspective of the community is another issue entirely. Global copies are particularly likely to be rejected by linguistic purists because of their obvious connection to the model code. In this section I describe Sm'algyax speakers' attitudes to global code copying and consider their impact on the language more generally. In §6.3.1, the use of code alternation in preference to code copying is identified as a result of increasing awareness of the impact of English on Sm'algyax. In §6.3.2, the significance of these patterns is considered in relation to the vitality of the language more generally.

### 6.3.1 THE RISE OF CODE ALTERNATION IN SM'ALGYAX

A new phenomenon in the Sm'algyax community that developed in conjunction with increased awareness of the impact of English on the language was the rejection of copies from English. Words such as *kopii* and *suga* which were copied as nouns for 'coffee' and 'sugar' are treated by many speakers as impositions from English. These speakers prefer to alternate between English and Sm'algyax (inserting unadapted forms coffee and sugar into a Sm'algyax clause) rather than 'mixing' English into their Sm'algyax by using the phonologically adapted copies *kopii* and *suga*.

One context in which words are not rejected is where they have undergone morphological processes in Sm'algyax. Particularly in cases in which a copied word has subsequently been used in a compound, speakers seem to consider the copy as a legitimate part of the Sm'algyax lexical stock. For example, *siidzmwas* 'sheets' contains a phonologically adapted version of 'sheets' *siidz* which has been compounded with the Sm'algyax stem *was*, which refers to cloth garments or blankets.

Also consider the words for 'teach' *sgu'unt* and *sgu'unsk* 'teacher' which are based on the English word school. Speakers use the form *sgu'unsk* quite unselfconsciously, suggesting that they consider this to be a 'proper'

Sm'algyax word. Indeed, it functions like many other common Sm'algyax words with closely related noun and verb forms. It seems that the combination of phonological adaptation, and morphological patterning (of the noun/verb pair) have turned the copy into a 'true' Sm'algyax word. As such it is no longer considered by speakers to be the same as the English word.

Grammatical adaptation protects words by tying them into the Sm'algyax system, while semantic changes obscure their source. Phonological adaptation on the other hand simply makes words easier to say. If speakers are aware of standard English and adapted pronunciations then phonological adaptation is relatively easy to undo.

## 6.3.2 CODE COPYING AS AN ADAPTIVE MEASURE

Global code copying (borrowing) is a perfectly legitimate way of expanding the lexicon in any language. It is an indicator of the vitality and strength of a language when forms are copied from outside and adapted to fit into the existing systems (phonological, morphological, grammatical, and semantic) of the language.

In the case of Sm'algyax, the sociological factors which play a part in the drift from code copying to code alternation include a decline in the vitality of Sm'algyax, stigmatisation of copies form English, and an increased dependence on the English lexicon to meet communicative needs among less fluent speakers.

The growing awareness and rejection of borrowings in the Sm'algyax lexicon indicates that speakers are increasingly aware of the distinctive characteristics of Sm'algyax and English. Insofar as this serves to promote awareness of and pride in the uniqueness of Sm'algyax, it could be a positive thing. As I show in §6.4, language planners in other areas have taken this approach.

However, if the only result is a reduction in the overall number of Sm'algyax words, then there is no benefit for the language. If the current trend towards disregarding borrowings from English is set to continue in Sm'algyax, then extra effort must be made to replace these rejected words with newly created words using Sm'algyax lexical stock.

This sensitivity to and rejection of English sources in the Sm'algyax lexicon is an example of what Dorian (1994a) calls linguistic purism. Linguistic purism can pose a serious threat to the community life of a language. Dorian provides several examples from contexts in which languages are under threat including: Tiwi, Irish, Scots Gaelic, Nahuatl, and Cornish. In these situations, transmission of a language between one generation and the next may be hampered because of a preoccupation on the part of conservative speakers with particular syntactic constructions which new speakers generally do not learn, with forms borrowed from the dominant language, or with internal simplifications which may be examples of convergence.

These attitudes can work to restrict speakers' ability to respond to the changing needs of the community. Where this occurs, languages under threat face additional challenges from within. Although Dorian's comments below relate to Scottish Gaelic, they are also quite relevant to other situations:

> *in the case of Scottish Gaelic – with few country-wide communications links among speakers, with no generally accepted spoken norm, and with full literacy not yet widespread – language planning efforts have been limited, and have had correspondingly limited success. To be effective, coinage and semantic extensions both require the support of a lively broadcasting industry, educational system, and publishing industry...Speaker conservatism has usually been profound, and novel usages have been the object of derision and rejection.*
> **Dorian 1994a:487**

For words to become a part of Gaelic, or of any language, they need to be institutionalised, conventionalised, and lexicalised.

Picone (1994:267) suggests that increasing numbers of global copies in the lexicon is not necessarily a negative sign. Where it is part of an overall strategy of adapting the language to its new context, code copying may be useful in ensuring the survival of the language and reducing the cognitive load the use of both languages has for speakers.

Picone (1994:276ff) considers that in situations in which new speakers are not properly able to acquire vocabulary (because of incomplete language acquisition), or where vocabulary is no longer being lexicalised in an effective way, they will tend to create new forms which accomplish the communicative task even though the language does in fact have forms for the concepts in question. Then, due to the reduced size of the shared lexicon, it becomes difficult for learners to access material formerly shared by the community of speakers. This pattern results in the loss of words as the language is transferred from one generation to the next.

All this suggests that the most important aspect of language change associated with the lexicon in general, and with lexical expansion in particular, is the process of lexicalisation. It is necessary for words to be communally recognised as part of the language and for their status to be affirmed and demonstrated for their continuing existence to be guaranteed. The only way in which this can be accomplished is by using the words with other speakers and with learners.

The final section of this chapter considers attempts by speakers of other languages to expand their lexicons. Principles for lexical expansion from other languages are discussed with a view to the Sm'algyax situation.

## 6.4 Lexicalisation

As I suggested in the introduction, the issue is not whether Sm'algyax has the morphological resources to form new words. Rather it is after this process, when new words are being spread through the speech community, that the problems seem to arise. The process of lexicalisation, in which newly forged words are adopted by speakers as a group and by the language as a whole, has been less successful in recent times than in the past. The following sections consider patterns of codealternation which take over when lexicalisation fails (§6.4.1), and strategies used elsewhere to foster lexicalisation (§6.4.2), while strategies for fostering lexicalisation in endangered languages such as Sm'algyax are discussed in §6.4.3.

The term *lexicalisation* is used by grammarians to refer to a form that is no longer semantically interpretable as the sum of its parts. For example, Bauer (1992:561) notes that lexicalisation can be used to refer to "any deviation in word structure and/or meaning from what could be produced by synchronically productive rules." The term lexicalisation has also been used for larger syntactic units such as idioms. Pawley (1986) discusses the notion of lexicalisation in relation to linguistic usages up to the size of the clause. He is concerned with identifying expressions a lexicographer should include in a dictionary. The link between idioms and the concept of lexicalisation has lead to the suggestion in psycholinguistic literature that idiomatic expressions are stored in an individual's mental lexicon under the first word of the idiom (cf Burt 1992:583 & 597). As Burt (1992) demonstrates, experimental results do not support this claim.

Bauer (1992:562) claims that even words that can be analysed using productive rules in the language can be lexicalised. In other words, speakers 'forget' that a morphological process has taken place. The conventional form/meaning relationship associated with the word has been fixed so that it is considered to be a basic unit, like a stem.

The most useful conclusion is perhaps to say that lexicalisation is a diachronic process, and that particular linguistic units are at different stages of lexicalisation. Thus units which are conventional but not necessarily stored in the mental lexicon of individuals may be described as institutionalised. Possibly there is a relationship between the degree of lexicalisation and the syntactic complexity and size of an expression. It makes intuitive sense that idiomatic expressions may not necessarily reside in the mental lexicon along with nouns, verbs and so on. They frequently allow a certain amount of productivity. Consider for example the phrase "You bloody ____" in which various descriptors, both positive and negative, can be inserted. As Pawley notes (1986: 104) "features [which suggest a unit is lexicalised] applying to multi-word usages are not relevant to single derived words." Nevertheless, idioms seem to have special status for speakers. Experiments have shown that the figurative interpretation of an idiomatic string is consistently easier for subjects to access than the literal interpretation (cf Burt 1992:583).

For my purposes, the process by which new terms are incorporated into the lexicon will be called 'lexicalisation'. This is essentially a combination of the definitions made by Bauer and Pawley. Terms that have been lexicalised would be those with fixed meanings for members of the speech community.

The process of lexicalisation is especially important in understanding the Sm'algyax lexicon. As I noted in §4.4, derivational processes can be used in the creation of sentences in Sm'algyax. The 'words' created in this way are not always considered by speakers to be 'real words'. For example, the sentence in (6.4) contains the word *gaxswiidis* 'eat.candy.PL'. Even if the plural prefix is removed, speakers do not consider the 'stem' *xswiidis* 'eat candy' to be a form worthy of inclusion in the dictionary.

| **(6.4)** | *Dm* | *gaxswiidis'nm* |
|---|---|---|
| | *dm* | *gax-swiidis'nm* |
| | FUT | PL-consume.candy-1PL.S |
| | 'We'll have candy later.' | |

I suggest this is because the form *xswiidis* 'eat candy' has not been lexicalised. The large amount of derivational morphology available to speakers of Sm'algyax makes spontaneous and passing derivational constructions of this kind very frequent in discourse. It is not always the case that such words become part of the lexicon.

As a polysynthetic language, Sm'algyax approaches lexicalisation differently from English. While speakers of Sm'algyax can accept unlexicalised word forms as quite unremarkable in appropriate contexts, English speakers tend to have a strong sense of what counts as a member of the lexicon and what does not. Members of the second category are treated as novelties. For example, there is nothing intrinsically wrong with the word *sweeteater*. However, no English speaker would use it without being aware of its marked status as a nonce form. This is because it is absent from the lexicon.

The concept of lexicalisation is useful for understanding how new words are accepted into a language, and why Sm'algyax, in this case, is not perceived to be forming new words very well at this time.

### 6.4.1 LEXICALISATION IN SM'ALGYAX

As I claimed in the introduction, the difficulty speakers are currently having with the lexicon is not that they are unable to produce new words. Rather it is that the process of incorporating new words into the language across all the Tsimshian communities is not happening consistently and easily.

It should be remembered in this discussion that the villages of the Tsimshian were traditionally identified by dialect differences. In times past the use of a different form for a particular concept simply marked a speaker as being from a different place. For example, speakers from Hartley Bay and Lax Kw'alaams refer to 'crackers' (the kind that are sprinkled on soup) as *habhaap'sm anaay*, literally 'covers of bread', while speakers from Kitkatla use the word *gwüsgwasilsk* which appears to be related to words for blankets. Some speakers now consider that some forms for a particular concept may be incorrect (cf the discussion in §3.2).

This suggests that new forms are not being lexicalised successfully. Before turning to consider some strategies for fostering the lexicalisation of new forms, the following section considers the use of English words in Sm'algyax. The codealternation strategy avoids the problem of using unlexicalised Sm'algyax forms by using English forms. While this is a successful strategy for speakers it is a potentially damaging strategy for the language because the language relies on speakers using new words frequently for lexicalisation to take place.

It is interesting to note that many new words from the 1800s have been recorded and are widely used. Examples include: *manwo* 'battleship' (from *man o' war*), *gyudan* 'horse' (borrowed from Chinook), and *ha'liłaaks* 'smallpox' (INST-scabby.)

There seems to be a clear relationship between the decline of Sm'algyax in recent decades and the retardation of the process of lexical expansion. In the place of borrowing words, code-alternation has become a widespread strategy for supplementing the Sm'algyax lexicon. Code-alternation is a typical behaviour as one language expands at the expense of another (Picone 1994:274). In a situation in which virtually every Sm'algyax speaker also speaks English, and in which there is no conventional choice of a Sm'algyax term, speakers, particularly those who are conservative or less skilled, make the natural choice to use an already available English term.

For example, there are not yet any established words for devices such as computers, faxes, photocopiers, and videos. When a speaker refers to one of these items they tend to insert the English word into their sentence. Less skilled speakers are restricted by their inability to coin words which seem natural to fluent speakers because they do not have enough understanding of the derivational morphology. Very conservative speakers are reluctant to create new words to refer to these things. Instead, they say "We don't have a word for that". For some speakers the implication seems to be that incorporating a word for a non-traditional item into the lexicon diminishes the authenticity of the language as a whole.

Picone 1994 makes a case for the relationship between successful lexicalisation and language vitality. He compares the lexical vitality of Contemporary Metropolitan French, Malinche Mexicano, Louisiana French, and Oberwart Hungarian. He claims that languages that are adapting well to the pressures of a dominant language and culture with which they are in competition will copy many words and morphological patterns from the model code. The important thing is that these words or patterns are incorporated into the lexical machinery of the base code and serve to promote lexical productivity (Picone 1994:282). Where this is the case, the language is responding in a healthy way to the challenges of the changing environment.

The data I have collected suggests that there was a period spanning the tum of the previous century in which Sm'algyax was responding in this way. English forms were borrowed into Sm'algyax and adapted to the phonology and grammar of the language in a natural response to the changing needs of Sm'algyax speakers. Examples of words borrowed from English and fully incorporated into the Sm'algyax lexicon include: *liidzxk* 'read, count', *boosn*, 'American' (from *Boston* via Chinook Jargon), *dzapan* 'Japanese', *dzayna* 'Chinese', *buuts* 'boots', *guk* 'cooking', and *iis* 'yeast'.

The new trend of code-alternation is quite different both in its motivations and probable results. Picone notes:

*if speakers are resorting to code switching as the exclusive or near-exclusive strategy for lexicogenesis ... it contributes to the disuse of native materials and processes of L1 [i.e. Sm'algyax in this case] and promotes further shift. This obviously bodes ill for the continued vitality of the language ... to the extent that the native lexicon is bypassed in favour of switches from the dominant L2 code [i.e. English in this case], it reinforces the perception that L1 has lost prestige and adds momentum towards further shift.*

**Picone 1994:274**

In fact, the process of lexicalising words copied from English appears to be undergoing something of a reversal in recent times. That is, rather than using the assimilated Sm'algyax form of a word, speakers prefer to alternate codes, inserting the pure English form. As we noted above, older speakers are aware that words such as *kopii* 'coffee' and *suga* 'sugar' were used in the past but these days prefer to use the English forms of these words. This has resulted in a reduction of words in the Sm'algyax lexicon in favour of using code-alternation as a strategy for filling lexical gaps.

The process of rejecting English-origin forms that have been copied into Sm'algyax involves identifying an English cognate and deleting the form(s) from the Sm'algyax lexicon. When forms are deleted from the lexicon, the processes of code-copying and lexicalisation are reversed. The morphological and syntactic values associated with the word are lost and the form is no longer shared by the community as a Sm'algyax word.

Speakers seem to be sensitive to a certain amount of stigma associated with assimilated pronunciations of English words. This is certainly true within the dominant white community where 'Indian English' of all kinds can be a source of great entertainment. Speakers making the choice to alternate codes can avoid the stigma associated with heavily accented Tsimshian-English, and demonstrate their knowledge of, and aptitude for, English by pronouncing and using words 'properly'.

The result is a reduction in the lexical resources of Sm'algyax. There is also a trend towards code-alternation to English when speakers find themselves at a loss for a Sm'algyax word. In some cases it is likely that there is or was a Sm'algyax word available which is no longer remembered, but the English forms of words are used because they are often more available to speakers who use English more frequently. The concerns of members of the Tsimshian community regarding the state of the Sm'algyax lexicon are clearly well founded.

In the case of Sm'algyax, the sociological factors which play a part in the drift from borrowing to code-alternation (i.e. the decline in lexicalisation) include a decline in the vitality of Sm'algyax, stigmatisation of assimilated forms of English which are now associated with both Sm'algyax and English, and an increased dependence on the English lexicon to meet communicative needs.

## 6.4.2 LEXICAL EXPANSION IN PRACTICE

There are many case studies of language communities in which lexical expansion is managed to a certain extent by language academies. In this section, I outline some of the activities undertaken by language academies that could be used with a language such as Sm'algyax. The role of the academies differs from place to place as do their strategies. For example, the Danish Language Council (founded in 1955) spends a significant amount of its time monitoring the appearance of new Danish words (Jarvad 1990:42), using a corpus-based approach. To find new words the Council examines a wide range of Danish language publications and monitors the appearance of new words. This strategy for collecting new words is viable for languages that are published widely. It is not a particularly useful strategy for a language such as Sm'algyax in the short term while publications in the language are limited.

Some of the strategies outlined below are more prescriptive than the corpus-based approach used by the Danish Language Council. This is not because speakers of smaller, less standardised languages require extra guidance, but because it is more often the case that the task of filling lexical gaps and publicising new words tends to fall to a specific group of individuals. Unlike the Danish model, which is largely responsible for reporting changes, language academies for smaller languages are often given the responsibility of fostering change. In other words, they are responsible for ensuring lexicalisation takes place.

In many cases there has been a strong desire on the part of language planners to use forms and patterns found in the language in question for making new words. This is the attitude of Cerron-Palomino (1992), for example, who considers that what he calls 'nativistic resources' should be used as much as possible. Only when it is impossible to create words or expressions from the 'native lexicon' which are both clear and concise should one consider borrowing from another language, "especially if alternative loan words spontaneously admitted already exist" (1992:39).

This approach is unnecessarily prescriptive if the goal is simply to foster the continuing use and growth of a language. It is strongly puristic in its motivations. Cerron-Palomino considers Spanish loan words to be a problem for Quechua and Aymara languages. As the discussion on code-alternation and code-copying suggests, however, loan words from the dominant language are a potential, rather than inevitable, problem.

A less prescriptive approach would allow words which have been 'spontaneously admitted' by speakers whenever they arose, rather than allowing them only when there is no obvious way to make use of the 'native lexicon'. Naturally, a linguistically pure new word might also be generated spontaneously by speakers and these are perfectly useful too.

The spontaneous production of new words by speakers of the language is a sign of a healthy language. To avoid their new words for reasons of linguistic purity is counter-productive. This has been widely recognised by writers and translators of Persian, for example. In the 1970s the Iranian Academy of Language began to create new forms to use in areas that had undergone extensive cultural borrowing (such as technical and industrial developments, and changes in social structure and cultural practices). According to Modarresi (1986:2), 70% of the 2000 Persian equivalents suggested by the Academy were in general use in 1988. The main objections to the program of the Academy have been from writers and translators who argued that "the Arabic or even some of the English and French words which have been used, with high frequency, in Persian for centuries, should not be replaced by archaic forms of Iranian origin" (Modarresi 1986:3).

A similar disparity between the expectations of language planners and speakers has been reported for Hebrew (see Fainberg 1983). Many of the 'innovators and vocabulary elaborators' of Modern Hebrew have taken for granted the use of ancient forms of Hebrew or Aramaic. However, Fainberg reports on a study of the acceptance of new words promoted by the Academy of the Hebrew Language and finds that there is no preference among speakers for forms which are based on ancient Hebrew roots. Speakers also show no preference for short over long words. They did show a greater degree of acceptance for words in everyday use as opposed to specialist or literary terms. Fainberg notes that "words for everyday items are most needed and need provides an excellent incentive for acceptance" (1983:35). This suggests that in a strong language the lexicon tends to take care of itself. The most needed words are most likely to be lexicalised. One suspects that the source of the words, whether they are sanctioned by the Academy or not, is of little importance.

If new words are to be promoted by the Academy, Fainberg suggests that they "should be inserted into textbooks; they should be taught to teachers and opinion leaders; they should be used in daily papers, appearing in context, not just as lists of words; they should be used in any widely read publication ... [however] need and

want are probably the best 'diffusers'..." (1990:39). If intervention is going to take place in the development of the vocabulary of a language, then it seems that it is by using strategies such as these that most success will come. For languages with small populations and limited resources in particular, these kinds of behaviours are potentially far more constructive than quibbling over the choice between 'foreign' and 'native' forms.

One interesting set of guidelines for lexical expansion is given in Ndukwe (1982). In 1978 the government of Nigeria organised a terminology conference. The main focus for the conference was the concepts found in mathematics and in the biological and physical sciences which are taught in the first few years of primary school. Ndukwe (1982:144) reported that the following principles were given to delegates to guide them in forming new terms:

1. the process of naming an object is not the same as describing it.

2. a meaningless form is preferable to a form which already has a different meaning.

3. loan words should comply with the syllable structure and word formation rules of the borrowing language.

This set of guidelines is the most useful I have seen. It is neither highly restrictive (it excludes very few possibilities) nor is it highly prescriptive (speakers have a great deal of scope within these guidelines). To these principles I would add the following:

4. forms which have been created by the community should always be used where they are known to exist.

5. new forms should be widely used in public writing and speech in order to facilitate their acceptance by all speakers.

I suggest that Sm'algyax would be better served by an expanding group of speakers and writers skilled in using the resources of the language to expand the lexicon than by a list of suggested terms conceived in isolation. While a noninterventionist approach may appear to make few inroads in the short term, as far as lexical expansion is concerned, a certain amount of assistance may be given to the language by outside means.

### 6.4.3 FOSTERING LEXICALISATION

Although spoken and written language can play an equal role in lexicalisation, the appearance of words in print (which makes the word available to a much wider audience) can be a particularly effective means of lexicalisation.

Bernard (1992:83) notes that a grammar, a dictionary and the bible, the total literary stock of so many indigenous languages (even if they are great intellectual and organisational accomplishments in themselves), are far from adequate to guarantee the survival of a language. He argues that popular literacy is the most important type of material which can be produced in indigenous languages. Importantly, native speakers are necessarily the authors of these works which can range from private, informal letters to newspapers and books. It is in this fertile ground – popular literature – that languages and lexicons grow.

Bernard (1992:85) notes that a great many writing conventions must be established in order for people to write in their language. The conventions include not only rules for spelling, but also for punctuation, syllabification, possibly stress marking and (I might add) conventions about word boundaries. The Sm'algyax language has a long way to go if it is to become a widely written language. Like many other indigenous languages, Sm'algyax has an alphabet; however, conventions for using it are not widely understood within the community. See Chapter Nine for discussion of the development of the writing system.

It is hard to write without conventions and hard to establish or identify conventions without a body of literature to reflect on. Plenty of adults within the Tsimshian community would be happy, no doubt excited, to read materials written in Sm'algyax if they were available. As others have noted (see for example Bernard 1992:85) it is not necessary for a system to be particularly elaborate for readers' sakes, provided the readers know the language well in the first place. The difficulty is in establishing conventions that make it easy for people to write.

For new words to flourish, it is crucial that they are used reasonably often by a large proportion of the speech community. One of the best ways this could be accomplished for the Sm'algyax language would be the development of a Tsimshian literacy program, which would foster writing skills in the community. Public speaking is also an important way to promote new words. In both cases a corpus based approach could be used to ensure that new words are included in later versions of the dictionary.

## 6.5 Conclusion

According to speakers, Sm'algyax is not currently generating new words quite as fast as required and this has lead to the consideration of strategies for planned lexical expansion within the community. Because of the community directed approach the dictionary project followed, it was possible to identify and address this concern.

The morphological and syntactic machinery for word formation is available to speakers of Sm'algyax, and good speakers can and do introduce new words where required. Learners of Sm'algyax have a more limited ability, and a correspondingly limited tendency to use the resources of Sm'algyax in order to create new words. Word formation using the resources of Sm'algyax requires speakers with both confidence and a deep intuitive sense of the language.

Although it is possible to describe the expansion of the lexicon in terms of structural and semantic processes alone, other factors relating to the social nature of language are also relevant. Structural and semantic processes play a relatively small part in the introduction of new words into a language. It is in the area of dissemination, (i.e. lexicalisation) that the process of lexical expansion in Sm'algyax most clearly breaks down. Speaker attitudes and language viability are particularly relevant to the process of lexicalisation. Only when a form is lexicalised (that is, it becomes a widely recognised and used member of the lexicon), can it be said to have 'arrived'. Living languages exist in lively language communities.

# Chapter Seven:
# Representing Sm'algyax words through English

## 7.0 Introduction

This chapter addresses a range of issues associated with developing adequate English glosses in the SLD. There were two main challenges involved. Firstly, there were the challenges posed by cultural differences that are reflected in the vocabularies of English and Sm'algyax. The communicative problems associated with these differences are described in §7.1. Descriptive challenges arising from cultural differences are described in §7.2, and a case study of the effects of cultural differences between the Tsimshian community and Euro-Canadians is given in §7.3. The strategies we developed for managing these challenges are described in §7.4. In §7.5 the differences between Sm'algyax words and their potential English glosses are described in terms of equivalence. This provides a framework for representing the meaning of Sm'algyax words in English in the SLD.

## 7.1 The communicative interface

In §7.2 I will focus on the linguistic aspects of the interface between Sm'algyax and English. World view and culture will be discussed in relation to their significance for our understanding of the meanings of particular words. At this point I want to begin by considering difficulties which arise when members of different cultures meet during the course of their daily lives.

It has long been recognised that there are many areas of variation in communication quite apart from language per se. One useful summary of the aspects of communication which can differ from one group to another is given in Gumperz and Cook-Gumperz (1982). They include:

1. Different cultural assumptions about the situation and about appropriate behaviour and intentions within it.

2. Different ways of structuring information or an argument in a conversation.

3. Different ways of speaking: the use of a different set of unconscious linguistic conventions (such as tone of voice) to emphasize, to signal logical connections and to indicate the significance of what is being said in terms of overall meaning and attitudes.

**Gumperz & Cook-Gumperz 1982:12**

Eades (1991) discusses communicative strategies Australian Aboriginal people use in English which are relevant to other cases of cultural contact and language displacement. For Eades, the studies:

> *of communicative strategies in Aboriginal English are providing exciting evidence about the strength and viability of Aboriginal culture in a complex multicultural society.*

**Eades 1991:85**

She goes on to note that these persistent differences in language use which distinguish Australian Aboriginal groups have profound implications for crosscultural communication practices in areas such as education and the law in Australian society.

Ochs (1987) discusses differences in language socialisation patterns from a crosscultural perspective. In her material on Western Samoan communicative practices, she identifies fundamental differences between the language fostering practices of American white middle class care givers and Western Samoan care givers. Whereas American white middle class caregivers:

> *appear to compensate for what they perceive to be an inability of infants and small children to meet the informational and social needs of others, by carrying out a lot of this work themselves ... Caregivers in other societies have another way. The traditional Samoan way, for example, is to sensitize infants and young children early in life to the language and actions of others around them ... the child is given greater responsibility in producing a communicatively competent utterance.*

**Ochs 1987:310**

As these examples show, communicative differences are widespread crossculturally and can occur in any communicative sub-system of a society. Obviously no system is inherently better than any other. The perception that one system is better than another can arise among members of differing groups in cross-cultural situations. The real problem is not the conventions in either system, but the differences between speakers from different groups.

Misunderstandings about any of these systems of meaning which arise in intercultural interactions have the potential to cause difficulty (Eades 1991). They are a continual source of tension in Euro-Canadian-Tsimshian relations because although Tsimshian people have been compelled over the course of this century to adopt the English language, they have not adopted Euro-Canadian culture or Euro-Canadian world views. Thus, even when an exchange takes place in English, and especially when members of one group simply interpret the actions of members of the other group, misunderstandings abound.

## 7.2 Finding common ground

The dictionary project represented a significant departure from the usual communicative practices for the Tsimshian people involved. Because the project belonged to them and depended entirely on them for its success, the usual dynamics changed. Tsimshian people were the dominant partners in the project. I was the one who had to overcome the socio-communicative barriers. As I have noted, one of the most important tasks for the Dictionary Committee was to ensure that misunderstandings which had been recorded in previous works were corrected. Thus breakdowns in communication arising from mismatched schemas or a lack of common ground were treated as being of great importance and were addressed within the framework of Tsimshian culture.

My watchwords for the project became 'assume nothing'. Although I always sought to incorporate new information into existing schemas, I was also frequently required to rebuild entire schemas from scratch because of some new piece of information.

One case in which I had to keep revising my understanding of words as the Dictionary Committee gradually covered all the relevant material was the words which can be translated into English as 'strong'. Ultimately

there were six Sm'algyax words organised into this set which included a human – non-human distinction and words referring to weather and colour. As the various glosses show, English has other ways to refer to different senses of the word 'strong'; however, it was only over the course of time that the particular distinctions made in Sm'algyax became clear. The final set of terms we recorded are as follows:

> dooyxs (v) *strong; sound* NOTE: *Non-human subject*. Dooyxsa siboots Samson. *The boat Samson built is strong.* (v) dress warmly

> g̲atgyet (v) *strong* 'Ap sm g̲atgyeda l̲axhat gyatk. *There was a very strong wind last night.* USAGE VARIANT: g̲atgyed- PLURAL: g̲al̲let

> g̲atllet (v) *strong* NOTE: *Plural.* Sm g̲atlleda k'abał̲güüm hashaasa awaan. *Those little puppies are really strong.* USAGE VARlANT: g̲atlled- SINGULAR: g̲atgyet

> łaan (v) *darker; stronger* NOTE: *When referring to a colour, increased chroma and decreased value.* G̲ałłaan ma̲s'awsa̲ hana̲'aga gwii. *That woman's rouge is too dark.*

> ts'üü (v) *hard; heavy; strong* Nah luk'wil ts'üü baask. *It was blowing really hard.*

> yugyetk (v) *healthy; strong* Yugyetga naa int g̲aba n lp wineeyat. *A healthy person is one who eats his own food.* MORPH: yu-gyet-k *one.who.is-strong-DER* USAGE VARIANT: yugyetg-

This required conscious effort from all of us. In effect every new schema I constructed had to be checked with the consultants for correctness, and the results, while they usually showed obvious improvement, rarely arrived at clarity before we were all worn out.

Several of the meanings I discuss in this chapter required a number of attempts at understanding with as many as four or five speakers individually and on separate occasions. In practice this process was no different than any other kind of learning. The speakers were my teachers and my job was to learn about something new.

This was certainly the model that the consultants used. There was an expectation from them that my duties in writing the dictionary included not just, nor even particularly, learning the language (meaning acquiring fluency), but they did include learning what being Tsimshian 'meant'. I was exhorted by a variety of Tsimshian people to learn 'about the culture'. And, while this learning rarely occurred in the prescribed way - through explicit teaching about culture - it was indeed crucial to the success of the dictionary.

My experiences convince me that there is a strong if elusive tie between language, culture, and world view. It is a tie that allows for enormous richness in the intellectual and cultural life of a people. It binds them to their world and to each other but it also cordons them off from others. To approach meaning in language is to approach also culture and world view. To understand meaning in language is to be bound to the culture and world view of its speakers. It is the requirement that one relinquish one's own assumptions and submit to the perspective of others which challenges most.

## 7.3 Case study

During my stay in Prince Rupert I witnessed or heard about many difficult exchanges between Euro-Canadians and Tsimshian people. They often involved misunderstandings about motivations and different expectations about behaviour. It is easy to see how relations between the Tsimshian community and the Euro-Canadian community is strained when events such as the following are commonplace.

Consider for example the following exchange between a Euro-Canadian teacher and a Tsimshian parent in one of the schools in Prince Rupert. The teacher was objecting to the fact that the parent had removed her daughter from the classroom during lessons so that she could go to the hairdresser. Both parties were very angry during the exchange.

At the very least we can assume that the teacher was angry that the importance of school was being overlooked by the parent. The right of the parent to take her child out of school whenever she sees fit may also have been demonstrated a little too forcefully for the teacher's comfort. It is likely that the Tsimshian parent felt that the teacher was being very rude and unnecessarily confrontational. This is because Tsimshian people tend to avoid public conflicts of any kind, and if disagreement must be expressed directly to the person concerned, it will be done in a careful way with many hedges even if the angry party is quite convinced of his or her own rightness.

Unfortunately, the parent was probably not at all surprised by the tenor of the exchange because Euro-Canadians generally do not seem to be aware of the meaning of conflict and its proper resolution for Tsimshian people, so exchanges of this kind are not unusual.

The word for getting a haircut in Sm'algyax is *gweelka̱*. This is a version of the word *gweelk* 'burn'. The reason that the word for getting a haircut is related to the word for burn is that people traditionally burned off their hair as a sign of mourning. The girl who was removed from school was going to get her hair cut in preparation for the funeral of her grandfather.

Although there is clearly an historical connection between hair and mourning in Tsimshian culture which is still relevant today, the connection is not shared with Euro-Canadian culture. Interestingly, I never heard hair cutting being overtly associated with the public process of mourning. Nevertheless, there were many other occasions on which a Tsimshian person had a haircut that, looking back, probably coincided with a funeral. It seems to me that within the schema for mourning in Tsimshian culture hair cutting continues to have a meaningful place. However, it is not as explicit a meaning as it once was.

When I heard this story I was surprised to hear that the girl was in school that day at all. It is common practice in Tsimshian villages for the community to cease normal daily activities altogether when a death occurs. By sending her daughter to school for most of the day, except for the time when she was required as part of the preparations for the funeral the Tsimshian parent was making major concessions to the expectations of the school. The parent's anger was probably exacerbated by the fact that the concessions she had already made were being totally overlooked. In effect the teacher was insisting that the parent's compromise between Tsimshian and Euro-Canadian culture was unsatisfactory.

In the scenario I have outlined it is clear that more cross-cultural understanding might have saved the two parties from this conflict. Unfortunately, given the historical and political context of relations between Euro-Canadians and the Tsimshian in Prince Rupert, this was not the case.

Relationships between parents and schools are frequently strained. This situation has arisen in part from the residential school experiences of several generations of Tsimshian people and in part from the inability of teachers to accommodate cultural differences. Consequently, the personal common ground that would have been required for the teacher to be aware that there had been a death in the student's family would have been surprising had it existed. Secondly, without some inkling of the meaning of haircuts in the context of mourning and some recognition of the strong ties which join extended families in Tsimshian culture, the behaviour of the parent still would not have made any sense to the teacher.

If the teacher had been able to find her way into Tsimshian common ground during this incident, her response could have been very different. In the same way that her colleagues would have been strongly supportive of her and made a great deal of accommodation to her needs had, say, her husband died, she would have been able to appreciate and accept the behaviour of both her student and the student's parent.

## 7.4 Culture and translation in the Sm'algyax Learners' Dictionary

In this section I consider some of the cultural challenges involved in preparing the SLD. There were a number of tasks the committee set out to accomplish which were understood to be of fundamental importance for the dictionary project. Including example sentences and adding in new vocabulary were one major focus. It was also necessary that the words in the dictionary were reviewed to ensure that they were spelled correctly and translated appropriately. Neither of the latter two basic tasks turned out to be at all simple. The issues associated with spelling words are addressed in Chapter Nine. This chapter considers the difficulties associated with representing Sm'algyax words accurately and clearly in English.

A number of steps had to be completed before I was able to record an accurate and clear gloss for a Sm'algyax word. Firstly, I had to be taught the meaning of the Sm'algyax word so that it became a unit of meaning we all shared. After the group explained the word to me, I had to figure out how to represent the word in English. This task fell to me as the recorder and compiler of the group; however, I quickly learnt that the best approach was to offer a gloss to the group so that it could be edited by them. Too often it turned out that when we believed we did share a concept, my attempt at an English gloss suggested that I had in fact missed some crucial aspect of meaning and we had to explore the concept further. Eventually my strategy was to choose a key word or phrase which someone had used in the discussion as a gloss. This was generally satisfactory for everyone, although it must often have disguised the fact that I had not grasped the concept.

All the members of the Dictionary Committee were fluent English speakers. All of them were well aware of the limitations of my knowledge about Tsimshian culture and Sm'algyax. They considered their role in the committee to be twofold. Their primary responsibility was to ensure that the dictionary was accurate. However, since I was the person responsible for making changes to the dictionary database after the meetings, the committee members had to exercise some vigilance with regard to my understandings of Sm'algyax in order to ensure that the work was accurate.

### 7.4.1 MEANING AND SCHEMAS

In this context it is useful to consider the notion of schemas. Although it is not discussed in much detail in his book, I have taken this idea from Fauconnier (1994). In Mental Spaces, he develops a model of 'high level cognitive organization' which can be used to describe how it is that people are able to interpret language. He identifies lexical information among the types of information which assist an interlocutor in building up an understanding of the meaning of the discourse:

> *this [lexical] information structures the [mental] spaces internally by taking advantage of available prestructured background schemas. Such prestructured schemas can, however, be altered or elaborated within the constructions under way.*
>
> **Fauconnier 1994:xxiii**

I take this to mean that words are linked in the mind of the hearers to schemas which the hearers take into account when they interpret (build their model of) the discourse. It is also possible to modify the schemas

based on what is said during the discourse. Information can affect the schemas themselves as well as the models they are used to build.

Sweetser and Fauconnier emphasise that language and meaning are closely tied to our understanding of the world:

> *Far from being independent of experiential structure, syntax and grammar, as well as lexical choice, are centrally involved in expressing and constructing human understanding of the world.*

**Sweetser & Fauconnier 1996:8**

Rubba (1996) presents an interesting study of one set of schemas relating to culture and immigration shared by people living in the city of San Diego. Rubba notes that some of the 'knowledge' in the schemas is shared by larger groups of people (all Americans, all white people, etc.), while some is unique to individuals because of their particular life experiences (see 1996:240ff).

Clark (1996 :332) characterises the information people share about schemas to be their 'common ground'. In fact, he identifies two types of common ground: 'communal common ground' which is shared by cultural groups; and 'personal common ground' which is shared by individuals. Whereas personal common ground is established and expanded through shared history (e.g. we both know I have a sister called Sue), Clark characterises communal common ground as being more public in nature (e.g. we all know that cars go on roads). Thus two physicians can assume they share models of human anatomy, knowledge about disease, and so on. If they are also two Americans then they share a great deal more (1996:332). Clark concludes that "The more communities they establish joint membership in, the broader and richer is their communal common ground" (1996:333).

As an outsider trying to represent the Sm'algyax lexicon in a dictionary for English speaking learners, the idea that words are linked to conceptual schemas, and the idea that speakers seek and rely on common ground when they interact, were both useful and reassuring. Using these ideas, I can characterise my direct involvement in the dictionary project in 1997-1998 as being a process in which the committee and I worked together to establish the schemas they shared in my mind and subsequently in the dictionary.

Not only was a significant amount of what constitutes Tsimshian communal common ground incorporated into the dictionary during this process, but I personally was able to 'cross over' and share that common ground myself. The moments when I was able to do this not only gave me a great deal of pleasure (not unlike arriving at the top of a mountain, clearing the tree line and at last perceiving the view), but also served as confirmation to my teachers that we were collectively getting somewhere.

## 7.4.2 LEARNING TO SHARE MEANING

The extent of my success in understanding new concepts depended very much on the willingness of speakers to persist in the face of my repeated failure to grasp the point. In some cases we ran out of time and simply had to give up, at least for the time being. Since the goal of this exercise as one that includes acquiring a schema for a word similar to what Sm'algyax speakers have, I am reassured about my struggles because clearly the task was neither a simple nor well defined one.

There were a small number of words I struggled with for quite a long time. One example was the word ganaaxs. Our starting point for discussing the word was the entry in Dunn's Practical Dictionary which read in part:

g̱anaag, g̱anaag- n. f*oot or leg of a deer*; deer tracks... g̱anaaxs n. l*adder, steps*

After the first round of discussion we established that there were three meanings that should be distinguished in the dictionary, and which should be spelled differently in order to reflect this difference. At this stage the dictionary came to contain the following entries:

g̱anaaxs (n) *ladder; steps; stairs* VARlANT: g̱aneexs

g̱aneex (n) *hoof; hooves*

g̱aneexs (n) *animal tracks* VARlANT: g̱ageexs

The variant *g̱aneexs* was kept in the first record in order to allow for the fact that some people spelled the word 'ladder' with two e's. The usual policy was: to include variant spellings which were not clearly identifiable as belonging to a particular dialect, but which shared the same meaning within one record. In all honesty, the variant *g̱ageexs* was included because I didn't understand what else to do with it at that point.



British Columbia Wolf (Canis lupus columbianus), 2010

People had spent a great deal of time talking about tracks and hunting and had mentioned repeatedly that the word for hooves was *g̱aneex*. Clearly there was something more to be included about *g̱aneexs/g̱ageexs*; however, I didn't know what the point was. I discussed these words with a number of other people, including members of the committee individually over a period of several weeks. In general, the conversations established that the words *g̱anaaxs* and *g̱aneexs* were different but didn't clarify the meaning of *g̱ageexs*.

Finally, I described the history of my struggles with this word to a couple of speakers. It seemed that by giving a clear account of what I did and did not understand, we were able to identify the information missing from my model.[12] On the basis of this conversation, I was able to modify the dictionary entries to the following form:

g̱ageexs (n) *tracks* Akana saba nag̱ag̱aeexsa gyibaw. Y*ou can really see it's wolf tracks*. SEE ALSO: g̱aneexs *tracks of a hooved animal*.

g̱anaaxs (n) *ladder; steps, stairs* Aama ha'yin g̱anaaxsa awaan. *Stand that ladder upright*. VARIANT: g̱aneexs

g̱aneexs (n) *tracks* NOTE: *Of a hooved animal*. Aka nasaba nag̱aneexsa wa̱n. *No doubt, it's deer tracks*.

In the end, the crucial point was that *g̱aneexs* referred to the tracks left by hoofed animals, while *g̱ageexs* referred to other types of tracks, prototypically paw prints. For as long as we were focusing on the fact that these words meant tracks (a situation which probably arose because of the need to distinguish 'ladder' from 'tracks'), we were not able to identify the difference. Whilst my problem was essentially ignorance of the matter, the problem for the consultants was to figure out what it was that I needed to know.

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12. I had not done this earlier because in Tsimshian culture it is normal for the person in the role of 'learner' in any situation to minimise the display of any previous knowledge they have on a subject. When I inadvertently told what I knew (or thought I knew) about a topic the person often refused to continue the lesson or simply agreed with my assertions. This is a way of ensuring that the 'teachers ' are not put in a position where they will have to contradict someone. Since overt disagreements are strenuously avoided in Tsimshian culture, it is important to give teachers as much room as possible to make their point if one wishes to learn new information.

## 7.5 Equivalence

In order to avoid interference from English in considering Sm'algyax words, it was useful to explicitly consider relations of semantic equivalence between English and Sm'algyax. The notion of equivalence is from Svenson (1993:143-144) and was introduced in §5.2.3. Three types of equivalence were identified (Svenson 1993:143-4): complete equivalence (terms are found to correspond in both reference and register); partial equivalence (register and reference are not equivalent in both languages, however there is enough overlap that the meaning can be conveyed); no equivalence (occurs most frequently in relation to words for culture specific concepts).

According to Svenson, the primary task of the bilingual dictionary is to provide equivalents of forms in one language with forms in another. Differences between English and Sm'algyax are widely recognised within the Tsimshian community. Euro-Canadians who have lived for extended periods within the Tsimshian community and learned some Sm'algyax generally have a story about misunderstandings which arise because of confusion about the use of extended senses.

One such story involves *aks* 'water'. The story goes that the person involved was asked to get an elder "some *aks*". When the glass of water was duly supplied, however, it became clear that the elder was actually asking for some of the juices from the meat which had been prepared for dinner. What is especially interesting is that everyone else at the table (a group of Tsimshian family members) expected that the non-Tsimshian person would make this mistake and treated the event as a great joke. They were obviously aware of the differences in the scope of the words.

In the section on complete equivalence (§7.5.1) I discuss an example which originally appeared to be straight-forward correspondences but turned out to be a bit more complex because it had sense extensions which differed from English. In the next section (§7.5.2), I discuss the treatment of Sm'algyax words for which there are no English equivalents. Finally, I discuss examples where the reference is partially equivalent (§7.5.3).

### 7.5.1 COMPLETE EQUIVALENCE

Complete equivalence was identified in many cases, even if there was some difference in the full extent or the limits of the meaning of a word. Provided the central meaning was clearly similar in both English and Sm'algyax, a good gloss for the Sm'algyax word could be identified.

An interesting example is *maay*. In general this is translated as 'berry, berries'. It can, in fact, be used to refer to any kind of fruit in an extended sense. However, when I was checking to see whether or not I should include a note with *maay* along the lines of the one which appears for *aks*, people felt that it was better to add another entry for *maaya k'amksiwah* [berry white.person] which was to be glossed 'fruit'. A number of other compounds begin with *maay*, so that section of the dictionary is as follows:

> maay (n) *berry* Ał dm simaay'ni? *Are you going berry picking?*

> maaya k̲'amksiwah (n) *fruit* NOTE: *Refers to all fruit which is not native to the area.*

> maayag̲alipliip (n) *thunder berries; twisted stalk; small twisted stalk* Xsmismaasga maayag̲alipliip. *Thunder berries are reddish.* USAGE VARIANT: maayag̲alipliib-

> maayhagwilhuu (n) t*railing blackberry; rope berry*; Himalayan blackberry Ha'wikan di niił maaya-hagwilhuu. *I have never seen trailing blackberries.*

> maaya̲'ol (n) *bear berry* Ksa'ol int g̲aba maaya̲'ol. *Only bears are the ones who eat bear berries.*

> maaym sumeesk (n) *grapes; raisins* Ts'maatga mismaasgm maaym sumeesk. *Red grapes taste good.*[13]

Although *maay* carries the central meaning of berries, it is also used in the extended sense of 'fruit' in many more complex constructions.

## 7.5.2 NO EQUIVALENCE

Most problematic for the dictionary were cases in which there was no obvious English equivalent for a Sm'algyax word. Typically these cases involved words for highly culturally specific practices such as the conferral of chiefly names and the use of particular resource gathering technologies. In general, the strategy used in the dictionary project was to find some brief expression in English which conveyed at least some aspect of the word's meaning and gave the rest of the information which someone who did not speak Sm'algyax would require in a note field or through the example sentence. Examples include:

> wasga 'wah (v) get a name Di wasgu 'wah ła luulgyidm. *I got a name when we had a feast.*

> xsens (n) *prop* NOTE: *Refers to the stick used to prop up a deadfall trap.*

## 7.5.3 PARTIAL EQUIVALENCES

There were two types of partial equivalences which required discussion in the dictionary committee meetings. I have treated each set in turn. Firstly (A), there were cases in which the Sm'algyax word had a more specific reference than the possible English glosses, and secondly (B) there were cases in which the reference of the Sm'algyax word was more general than the possible English glosses.

## A. PARTIAL EQUIVALENCES: SM'ALGYAX MORE SPECIFIC

At times it is not easy to differentiate between Sm'algyax words with no English equivalent and Sm'algyax words with partial English equivalents, especially because the same strategy for providing glosses is used in either case. One criterion that can be used to make this distinction is that Sm'algyax words with partial English equivalents can generally be related to some English language concept even if a single word gloss is difficult to find. Examples include:

> ligi'alx (v) *leave in anger* Ligi'alga nagats'aaw nah sagaytwant. *Some people left during the meeting.* VARlANT: ligyi'alax

In this entry the example sentence provides important contextual information. In order to *ligi'alx* one must be departing from a situation in which a group of people are discussing something. *Ligi'alx* is an especially interesting case because the cultural meaning of walking out of a meeting for Tsimshian people, while not completely different from the Western meaning, carries about it a seriousness of intent and signifies a breakdown of relations which is not inherent in the Western understanding. By walking away from the discussion, a Tsimshian person signifies that they are not in agreement with proceedings and that they do not wish to engage in the process of bringing others around to their point of view. For this reason it is probably also reasonable to treat this as a Sm'algyax word without an English equivalent. Nevertheless Euro-Canadians and Tsimshian people all share a concept of 'walking away' from a situation which they cannot tolerate any more, and Tsimshian people who wish to learn Sm'algyax are generally well acquainted with this type of behaviour.

The example of *łmktii* 'opposite sex sibling' is interesting because it is a very straightforward case in which the reference is partially equivalent to English. Furthermore this is a fairly high frequency word, so learners

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13.    *Sumeesk* means 'homemade wine'. *Maaym sumeesk* refers to the fruit used in wine, i.e. grapes.

need to be able to make this distinction at an early stage. Instead of a two-way split between male and female siblings, Sm'algyax makes a three way split which is lexicalised in five ways.

> łgaawgi (n) *sister* NOTE: *Address, female speaker.* Goo di hawn, łgaawgi? *What do you say, sister?*

> łgaawk (n) *sister* NOTE: *Reference, female speaker.* Łgaawks Darlenet Velna. *Darlene's sister is Velna.* USAGE VARIANT: łgaawg VARIANT: łgaawlk

> łmktii (n) *brother; sister* NOTE: *Address and reference, speaker of the opposite sex.* Hoy łmktiiyu gaaydmsgyen da l<u>a</u>x xsoo. *My brother wears a rubber hat when he's on the boat.* VARIANT: łmkdii

> wegi (n) *brother* NOTE: *Address, male speaker*

> wek (n) *brother* NOTE: *Reference, male speaker.* USAGE VARIANT: weg- VARIANT: weky

Sm'algyax has lexical distinctions between same and opposite sex siblings, with different names for female or male same sex siblings and different forms for referring to and addressing same sex siblings. The forms for address and reference are clearly related. They are included in the dictionary because members of the Dictionary Committee treat them as distinct lexical items. Given the complementary distribution of terms for address and reference, it is easy to understand why speakers might see the words in this way. More importantly, learners need to be able to use these terms appropriately, so it made sense to include all five as separate entries in the dictionary.

The final example reflects a difference in the Tsimshian world view between land animals and marine animals which is not made in English. Although English speakers would probably not list seals or sea lions as prototypical 'animals', we would nevertheless include them in this category. In Sm'algyax, by comparison, seals and so on are explicitly excluded from the category of *yets'isk*.

Brown bear feeding on salmon

> yets'isk (n) *land animal* Heelda yets'isk da laxyuubu. *There are lots of animals on my trap line.* USAGE VARIANT: yets'isg- VARIANT: ye 'etsik

The example sentence for this entry points to one possible reason for this distinction. A great many types of land animals are hunted on trap lines. Seals and so on are hunted in quite a different way. One approaches them from a boat and dispatches them on the shore line.

That the shoreline is considered to be a distinct geographical sphere is reflected in the following entries:

> amgyiika (n) *shore life; seafood* Heelda da amgyiika. *There's lots of seafood.*

> hałgyiika (n) *beach* Nah txayaawkdu mełük a hałgyiika. *I took a pillow along to the beach.*

> gyilhawli (n) *in the hills; in the mountains; in the woods* Gyilhawli dm wil dp güüldm maay. *We're going to collect berries in the woods.* VARIANT: gyilh<u>a</u>li

In effect there are three geographic zones in the Tsimshian world: the water (which is subdivided in a number of ways), the shore, and inland areas. This distinction is reflected in the naming of super-categories for living

things, *yets'isk* 'land animals' versus *amgyiika* 'shore life'. The phrase *luwaalm ts'maks* 'things that live in the sea' is used to refer to fish, and so on.

This section has considered examples of Sm'algyax lexical items that have narrower references than their nearest English equivalents. The following section considers examples in which the Sm'algyax word encompasses a number of English equivalents, but where no broader reference is easily available in English.

## B. PARTIAL EQUIVALENCES: SM'ALGYAX MORE GENERAL

In a general way, the problem in this section and in (A) is the same. In both cases the task is simply to find ways to manage the mismatch between English and Sm'algyax lexical items. In both cases there is a certain amount of overlap between the Sm'algyax term and some words in English. This section considers examples in which the Sm'algyax term is more general than any potential English equivalent.

The approach for these items was a little different from that in (A) because it was not possible to use the strategy of giving more restrictive information about the proper use of the Sm'algyax word through examples or in a note field. Overall, the strategy here has simply been to list appropriate English words that happen to fall within the reference of the Sm'algyax word in question. Some examples follow.

> an'on (n) *hand; arm* Dza dak̲ɫn wil k̲'aa an'on. *Bandage your cut hand.* PLURAL: ga'an'on.

> asii (n) *foot; leg* Ɫan wila 'woomxsga asiiyu. *My leg is still aching.* PLURAL: g̲asasii VARIANT: asii VARIANT: sii

> ɫems (n) *affine; sister-in-law; brother-in-law; mother-in-law; father-inlaw.* NOTE: *Address and reference.* Nah siipga ɫemsu. *My mother in-law was sick.*

## 7.6 Conclusion

Community directed language work does not occur in a vacuum. There are practical and personal difficulties to overcome, many of them ultimately relating to cultural differences of some kind. These issues were discussed in general in §7.1, with an example from the preparation of the dictionary in §7.2 and an example from the wider community in §7.3. In §7.4 the descriptive problems in the SLD associated with cultural differences were described in more detail. Then, in §7.5 the notion of equivalence was presented as a framework for managing the translation challenges associated with cultural differences.

# Chapter Eight:
# Polysemy and homonymy in the Sm'algyax Learners' Dictionary

## 8.0 Introduction

The previous chapter discussed cultural issues relating to the representation of Sm'algyax words in English in the SLD. There, the meanings of words were discussed in terms of equivalence. In this chapter the formal relationships between senses are addressed. As with the topic of the previous chapter, the community directed approach strengthened this analysis by allowing in depth and on-going discussion with speakers about the issues involved. The strategies for distinguishing sense relationships that is developed here are intended to facilitate language learning by making distinctions between senses overt and by presenting material in the dictionary in consistent and predictable ways.

The polysemy continuum is introduced in §8.1. Criteria for distinguishing between polysemous and homony-mous forms are developed in §8.2 and sense extension is distinguished from polysemy in §8.3. Examples from Sm'algyax are given in §8.4. The final sections discuss two interesting side issues: the use of sense modulation as a strategy for lexical expansion in §8.5, and the underspecification of Sm'algyax verbs in §8.6.

## 8.1 The polysemy continuum

Polysemy and homonymy are related concepts. Both refer to lexical items which share the same form. Homonymy refers to cases in which the meanings associated with different uses of a form are distinct and unrelated. A good example of homonyms in Sm'algyax are the words *gyiik* 'buy' (V) and *gyiik* 'mosquito, fly' (N). Not only do these words have unrelated meanings, but they belong to different parts of speech (being a verb and a noun respectively). Polysemy refers to cases in which a relationship between the different meanings of a form can be identified. These may be relationships such as metaphor, metonymy, and so on (see also §8.1.2). An example of polysemy occurs between the meanings of *aks* 'water' and 'tide'.

In addition to polysemy and homonymy, a third type of form-meaning relationship is relevant to this discussion: sense modulation. Copestake and Briscoe (1995:18) give an example of sense modulation using the word *cloud*. In addition to the basic sense of 'mass of water vapour' they note that *cloud* can be used in col-locations such as dust cloud, cloud of smoke and cloud of mosquitos, none of which allow the basic sense of cloud 'mass of water vapour'.

Copestake and Briscoe note that such uses of a word require 'explicit contextual specification'. This suggests that the additional senses of a word that arise in this way are not cases of polysemy which are stored in the lexicon, rather they are creative uses of language made by speakers for particular communicative purposes. Minor variations in sense of this kind exploit particularly salient aspects of a word's meaning in a context which defeats other aspects of its meaning.

Linguists' understanding of polysemy informs their definition of homonymy and of other 'lesser' sense distinc-tions as a consequence. Some use the term polysemy to cover all kinds of relationships between identical forms

with variant meanings. Taylor (1995) characterises these relationships as occurring on a continuum:

> *the extreme ends of the polysemy continuum [are]: homonymy and contextual [sense]*
> *modulation. Between these extremes stand a whole range of examples where the different*
> *meanings of a word may diverge to a greater or lesser extent. But just as the phenomenon of*
> *polysemy itself is graded so too are the linguistic treatments of it.*
>
> **Taylor 1995:266**

The continuum could be represented on the following scale:



homonymy ⟷ polysemy ⟷ sense modulation

least sense relatedness ⟷ greatest sense relatedness
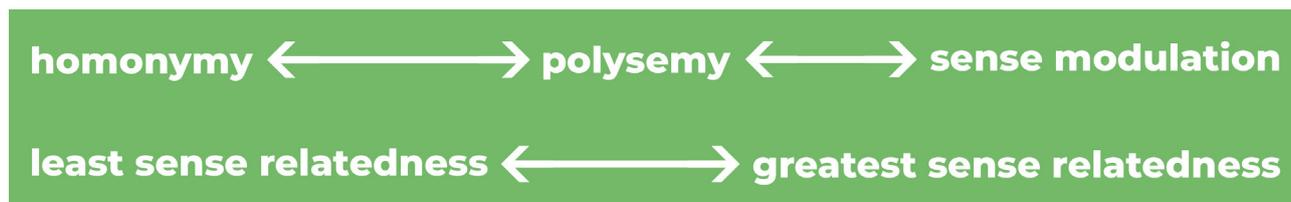
Figure 8.1: The polysemy continuum.

This gradation in relatedness of senses is reflected in different linguistic treatments of polysemy as Taylor notes. Differences among linguists can be related to the point at which a difference in sense is considered to constitute homonymy rather than polysemy at one end, and contextual modulation rather than polysemy at the other. The location of this point largely depends on the theoretical leanings of the linguist. In the following sections the relationship between homonymy and polysemy, and between polysemy and sense modulation, are examined in more detail.

Before proceeding to the main discussion, two initial points are discussed here. In §8.1.1, the concept of the lexeme is discussed. In §8.1.2, the notion of semantic relatedness is made more explicit. One important criterion which can be used in deciding the status of related senses on the polysemy continuum is the grammatical function of the words involved.

## 8.1.1 LEXICAL ROOTS IN SM'ALGYAX

One of the challenges in preparing a dictionary for a polysynthetic language is identifying what should be included as a 'headword'. As a polysynthetic language, Sm'algyax includes lexical proclitics expressing adverbial and adjectival meanings, and a large set of highly productive derivational prefixes as well as lexical roots which may act in a range of functions. All of these forms are of use to speakers in the formation of individual sentences, and as such, it makes sense to include all of them in the dictionary. In addition, the dictionary includes many idioms, either as headwords if the idiom seems to be fully lexicalised (in the sense of Pawley 1986), or as example sentences within the most relevant entry. Not all of the forms represented by headwords in the dictionary are relevant to the discussion of polysemy.

The proclitics and prefixes frequently have similar forms to each other or to lexical words but must be identified as distinct forms on the basis of their phonological status. Even if they clearly have related meanings, clitics and prefixes have totally different distributional possibilities to words (see Stebbins 2003), and so they are treated as different headwords. This reasoning is applied in the treatment of the different uses of *ga̱n(-)*, for example:

> ga̱n (n) t*ree; stick; wood* 'Wiileeksa 'wiiga̱n betsga da la̱x'oo dii. *There's a big tree standing on top*
> *of the hill*. PLURAL: ga̱nga̱n

ga̱n- (mod) *long; wooden* Luk'wil p'algya̱xsgm ga̱ngyiik. *Hemlock wood is very heavy.*

ga̱n- (der n) *cause of; means* 'Nii ga̱ndooya̱xsa booda lusga'ayee. *It's the bulkhead which makes the boat strong.*

These examples include the word *ga̱n* 'stick, tree, wood', the modifier proclitic *ga̱n-* 'long, wooden' (the word in the example sentence is *ga̱n-gyiik* wood-yew), and the derivational prefix *ga̱n-* 'cause of, means of' (*ga̱n-dooya̱xsa* cause-be.strong). As the dictionary is a pedagogical tool, it seemed especially important to make the phonological status of *ga̱n* 'stick, tree, wood', and *ga̱n-* 'long, wooden' clear. In any case these forms cannot be considered as a single lexeme as they operate at different levels of the grammar. The dictionary includes a preface that provides definitions for the parts of speech labels, explaining the functions of the different categories for readers.



Douglas Fir and Western Red Cedar, West Vancouver, British Columbia, 2018

As the discussion in §8.2 indicates, the line between homonymy and polysemy is closely associated with the concept of the lexeme. A lexeme is a theoretical concept that is intended to identify a set of relationships between inflected forms. Definitions of the lexeme reinforce the distinction between homonymy and polysemy, so that one is generally defined in terms of the other. In a language such as English, a lexeme is often defined as a form and its inflections (Lyons 1977:512f, Cruse 1986:76f). This forces the understanding that each lexeme is associated with a specific part of speech. Therefore polysemy must be defined as operating only within a particular part of speech. In a polysynthetic language such as Sm'algyax a definition of this kind is not particularly useful. Nouns and verbs are not strongly distinguished in Sm'algyax, although they can be identified (§4.2). Any lexical root may potentially be used in a range of functions. Verbs are also used to code core arguments. For example the following sentence contains the word *dzem* which is usually translated as 'boil something'. Here it functions as the head of the O argument:

(8.1)  *Asdigaa*          [*nadzemn*]ₒ
       *asdi=gaa*         *na=dzem-n*
       aside=take         POSS=boil-2POSS
       'Take your cooking off (the stove).'

Example (8.2) shows the quantifier *gup'l* 'two' acting as a predicate.

(8.2)  [*Lu=gup'l*]ᵥ      *ha'lilaałk*     *a*        *ts'm=wa̱p laałk*
       *lu=gup'l*         *ha'lilaałk*     *a*        *ts'm=wa̱p laałk*
       in=two            bed             PREP       in=hotel.room
       'There are two beds in the hotel room.'

Basing the distinction between lexemes on the inflectional paradigms that could attach to a stem would very quickly lead to a blow-out in the number of forms to be distinguished in Sm'algyax. The distinctions made on

these grounds could not represent anything particularly 'real' about Sm'algyax because they are not motivated on language internal grounds. The conventional definition of the lexeme imposes a more radical distinction on the Sm'algyax lexicon than speakers experience and that the behaviour of the lexicon itself suggests. In view of these complexities, this chapter is concerned generally with the semantic characteristics of lexical roots in Sm'alygax. The dictionary includes larger forms such as stems and idiomatic expressions, as well as smaller units such as inflectional affixes. All of these categories are potentially cases in which distinctions must be made between related and unrelated meanings. The principles outlined in this chapter apply in all cases (see §8.4.2 for an example involving inflectional morphology).

## 8.1.2 SEMANTIC RELATEDNESS

Concerning the notion of 'semantic relatedness' it is useful to identify both diachronic polysemy and synchronic polysemy. I am using the term diachronic polysemy to refer to semantic connections between words based on their shared history. A well known example from English is *port*. The use of this term as a name for a particular type of fortified wine goes back to its association with the city of Oporto in Portugal. For the average Australian English speaker there is no connection between PORT$_1$ 'fortified wine' and PORT$_2$ 'place where ships dock', even though, as Lyons 1977:550 points out, a case of sorts can be made for etymological relatedness between these terms. One of the difficulties in working on Sm'algyax is the lack of readily available materials from other languages in the family which could be used for comparison. Synchronic polysemy, on the other hand, is intended to refer to relations between meanings that are apparent to speakers. They may be based on a wide range of semantic relationships: anything from metonymy to physical similarity, figurative uses and metaphor. This approach is very much grounded in the practicalities of the Tsimshian situation.

One example from Sm'algyax involves the words * łbuun* 'whale' (N) and *łbuun* 'plenty' which functions as a quantifier. In this case, it is possible to postulate a relationship between the two meanings based on the fact that whales were used as food by Tsimshian people. Whenever a whale washed up near a village there was 'plenty' for everyone. As a folk etymology this has a certain appeal although no Sm'algyax speaker thought it had any validity. Whether or not these terms are etymologically related, I do not consider these words to be related senses because speakers do not report any sense that the words are related.



Humpback Whale Lobtailing, Queen Charlotte Strait, British Columbia, 2009

A case where there is identification of forms is shown with the word *gaxeex* 'surf foam' which is also used to refer to 'masses of white berry blossoms'. Interestingly, although there is a singular *xeex* 'surf foam', an analogous singular for 'berry blossom' is not possible. This type of sense relation seems like a lexicalised case of sense modulation. The metaphoric use of *gaxeex* 'foam' away from the context of the surf seems to have given rise to a new sense of the word. In this case the two senses of *gaxeex* are treated as polysemous because the relation between them was readily identified by speakers. These meanings are clearly related by metaphor.

## 8.2 Homonymy and polysemy

One criterion which can be helpful in distinguishing forms on the polysemy continuum is grammatical function. A number of authors have used this criteria as a way of distinguishing between homonymy and polysemy. The reasoning is that the different functions of a particular form indicate a disjunction which a unity of senses cannot overcome, making the analysis of homonymy inevitable.

Both part of speech categories and subcategories are used as evidence for polysemy or homonymy. Lyons (1977) makes a case for treating members of distinct subclasses as homonyms in an attempt to develop a more formal, syntactic basis for identifying different and putatively unrelated senses which could be labelled homonyms:

> *assume that the lexemes of the language are to be assigned to parts-ofspeech ... and to various subclasses of the parts-of-speech in terms of such distinctions as proper vs common and countable vs mass (for nouns) ... Given such a classification for all the lexemes in the languagesystem, we will say of any two lexemes, Li and Lj, that they are syntactically equivalent if and only if they belong to the same subclasses*

**Lyons 1977:555**

For example, the mass noun *port* 'a type of fortified wine' and the count noun *port* 'harbour' are not syntactically equivalent, since they belong to different subclasses of nouns (Lyons 1977:560).

Lyons goes on to note that this is in fact a very strong requirement. It results in a great many cases being identified as homonyms, even though they might show a clear relationship in meaning. For example, not only would this requirement distinguish the homonyms *can* 'be able to' (V) and *can* 'a kind of receptacle' (N), it would also treat the verb *can* 'put in a can or jar' as a homonym in the set (Lyons 1977:561). This analysis does not reflect the fact that the relationship between the first modal sense of *can* is unrelated to the other two senses, or that the senses of *can* which have to do with its receptacle meaning are themselves related.

Allen (1986) also uses formal criteria in his discussion of homonyms. For example, he claims that the two senses of want which occur in the sentences *His wants are few* and *He wants for nothing* are homonyms because the first is a noun and the second is a verb (1986:151). While Allen states that grammatical criteria are secondary to semantic content in deciding the degree of relatedness between forms, he nevertheless demonstrates a willingness to use this criteria in claiming that the two uses of *want* are homonyms because of their different part of speech memberships. Both Lyons' and Allen's use of grammatical criteria would result in a far greater number of homonyms being identified than if grammatical criteria were not considered.

In contrast, Wierzbicka (1996) uses grammatical criteria to argue for the existence of polysemy. She states that polysemy can be identified if there are clear grammatical differences between senses of a word. For example in Yankunytjatjara polysemy occurs between the meanings of 'think' and 'hear' in the word *kulini*:

> *these two meanings of kulini [THINK and HEAR] are associated with different grammatical frames, and so this verb is demonstrably polysemous*

**Wierzbicka 1996:26**

Like Lyons, Wierzbicka focuses on different subclasses for evidence about polysemy. Unlike Lyons, however, Wierzbicka concludes that different grammatical features at this level should be taken as evidence for polysemy rather than as homonymy.

Like Wierzbicka, Copestake and Briscoe (1995) argue that polysemy occurs even when the parts of speech are different.

> *It is important to distinguish putatively systematic or conventional polysemy from homonymy or unsystematic and idiosyncratic polysemy; the two familiar senses of* bank *as* '*financial institution' and 'raised earth' are homonyms, whilst the verbal sense meaning 'to put money in a bank' is polysemous with the financial institution sense. It seems plausible that this case of polysemy is an example of a systematic sense extension by which nouns denoting artefacts become verbs denoting a purpose to which those artefacts can be put ...*
>
> **Copestake & Briscoe 1995:15-16**

Although the grammatical frames of two verbal senses will have much more in common than the grammatical frames of a verb and a noun, this approach at least allows there to be a commonality between the words which belong to different parts of speech but are connected by zero derivation.

If differences in grammatical function are given greater priority than differences in meaning, the resulting analysis of homonymy and polysemy will not reflect the semantic relationships of many words. For example, the words *bank* 'place where money is traded' (N) and *bank* 'act of trading money' (V) would be treated as unrelated words even thought they are related by zero derivation: a commonplace relationship between nouns and verbs in English. For this reason it makes better sense to use semantic criteria as the primary means of identifying homonyms. Semantic criteria are generally adequate for the task because homonyms are associated with distinctive meanings.

Grammatical criteria are far more useful in deciding cases of polysemy. Following Wierzbicka (1996) and Copestake and Briscoe (1995), I have used grammatical criteria as a means of distinguishing between different polysemous senses of a word. In cases of polysemy, where differences in meaning are matters of degree, it is worth using both semantic and grammatical criteria in order to decide how terms should be treated.

Using these criteria, the analysis of the senses of the English word *can* would make a primary distinction between the modal *can* and the other senses. The modal *can* would be considered as a homonym of the receptacle senses of *can*. The two senses of can relating to its 'receptacle' meaning would be treated as polysemous, based on the fact that one is a noun and the other is a verb and the two are related by a regular process of zero derivation.

In order to avoid cases in which clearly related senses are not treated in a unified way, relatedness of meaning (or the lack thereof) forms the basis for distinguishing between homonymy and polysemy in the SLD.

## 8.3 Polysemy and sense modulation

The distinction between polysemy and sense modulation is a significant one for lexicographers. Whereas minor variations in the use of a word are potentially endless and cannot be dealt with exhaustively in a dictionary, there is an understanding that different (i.e. polysemous) senses of a word are significant and should be included in a dictionary. The way in which one draws a line between sense modulation and polysemy can therefore have significant consequences for the final form of the dictionary.

Allen (1986) recognises the lack of an upper limit on the possible interpretations of a word and the impossibility of treating every possible interpretation equally:

*it is presumptuous to place an upper bound on the total number of interpretations conceivable for any lexeme ... Consequently, it is uncertain that we could ever list all possible interpretations for every lexeme in the dictionary.*

**Allen 1986: 148-149**

This approach seems to treat anything to the right of the polysemy continuum as a case of polysemy. The possibility of categorising sub-senses together within particular senses is not considered. Allen presents the following set of sentences containing the word *lamb* to illustrate his point. He claims (1986:46) that since *lamb* as it appears in each sentence has a different reference it should be treated as a set of different, if relatable, lexemes.

**a.** The lamb gambolled in the field.

**b.** The dead lamb was being eaten by crows and maggots.

**c.** The lamb was stuffed and put into a museum.

**d.** These bones are lamb, goat and rabbit, but not human.

**e.** Lamb is my favourite meat.

**f.** My wife would prefer the lining to be lamb, because it's warmer.

**g.** We can't get the smell of lamb out of the car since we took the wretched animal to the vet in it.

**h.** There was a painting of a lamb on the butcher's shop wall.

**i.** The BBC archivist says he's got lamb on tape, but he can't do you the sound of a goat.

**j.** The lamb is a delightful animal to keep as a pet.

**Allen 1986:148**

This list includes a number of different uses of the word *lamb* including the '(live) animal' versus 'type of meat' meanings which could be treated as polysemous on analogy with *pig* and *pork*. All the other uses of *lamb* in Allen's example are closely related to the 'animal' sense of *lamb*.

Bierwisch (1983) overcomes this problem of 'no upper limit' to polysemy by proposing two levels of meaning. On the first level is the semantic form which is stored in the mental lexicon of the speaker, and which presumably would be listed in dictionaries. This semantic form is quite general in meaning and subsumes various more specific senses. These specific senses of words are not included in the mental lexicon. Rather, they arise at the conceptual level and depended for their existence on the context in which the word is used (see Taylor 1995, Schwarze & Schepping 1995, Pause, Botz, & Egg 1995).

Bierwisch's approach allows for far fewer polysemous senses by supposing that the senses that are stored in the lexicon are very general. As a result, (sub)senses of a word are generally examples of sense modulation. The line of demarcation between polysemy and sense modulation for Bierwisch is consequently quite a long way to the left on the polysemy continuum.

As Taylor (1995:267) points out, approaches of this kind, which generalise meaning to a greater extent, rather than identifying large numbers of specific senses, are of somewhat limited practical use. Dictionary users need information about the specific senses a word can have. The difference between *lamb* 'young sheep' and *lamb*

'red meat' is a useful one to include whereas the difference between *lamb* 'young sheep' and lamb 'picture of young sheep' (which Allen 1986:148 treats as having equivalent status as different senses) is of far lesser significance.

Although I accept that the reference of the word *lamb* in Allen's There was a painting of a *lamb* on the butcher's shop wall is not exactly the same as his *The lamb gambolled in the field*, they hardly seem to require treatment as different lexemes. The fact that the different reference for *lamb* in the first sentence is explicitly coded by the words a painting of suggests that the meaning 'two dimensional representation' is not an integral part of the sense(s) of the word *lamb* per se but a result of contextual specification.

One criterion which could be used to make a distinction between polysemy and sense modulation is the degree to which a particular sense is lexicalised, that is, the degree to which a particular sense is conventionally associated with the word. This would allow us to assert that the sense 'two dimensional representation of a young sheep' is not a polysemous form related to other uses of the word *lamb* because such a meaning is not a conventional use for the word *lamb* (hence the necessity of the contextual cue *a painting of a ...*).

This is compatible with the approach taken by Wierzbicka (1996:242), who considers polysemy to occur where there are clearly different senses but not where one observes sense extension. Thus it would be possible to distinguish *lamb* 'a kind of meat' which is a mass noun from *lamb* 'a baby sheep' which is a count noun on the basis of their different syntactic properties. The other senses of the word observed in the examples above would be treated as sense extensions of one of these two meanings.

Thus the subclass or class of words with related meanings should be taken as evidence for polysemy. Although the semantic class of a word and its association with a particular dialect group are not discussed in the literature, I have also used these classificatory possibilities in identifying polysemy (see §8.4.2). A lack of categorial distinctions, especially in cases in which explicit contextual modification is present, indicates that the meanings are related by the process of sense extension (see §8.4.3).

## 8.4 Sense distinctions in Sm'algyax

The polysemy continuum has proven to be rather difficult to divide in a principled manner. Arguments used by one author as evidence for homonymy are used by another as evidence for polysemy, and the same is true in distinguishing between polysemy and sense modulation. Nevertheless, a set of criteria for treating words with multiple senses has been used in the SLD. The conventions used for distinguishing homonyms from polysemous meanings and sense extensions is given in Table 8.1. The column labelled 'related meaning' refers to forms identified by speakers as being related (see also §8.1.2). The column labelled 'identical (sub)class' refers to cases such as *cloud of mosquitos* versus *cloud*, where both are count nouns. The following sections provide examples of some relevant cases.

| | Identical form | Related meaning | Identical (sub)class |
|---|---|---|---|
| **Homonymy** | ✅ | ❌ | ❌ |
| **Polysemy** | ✅ | ✅ | ❌ |
| **Sense Extension** | ✅ | ✅ | ✅ |

Table 8.1: Criteria for distinguishing homonymy and polysemy and sense extensions in the SLD.

### 8.4.1 HOMONYMY IN SM'ALGYAX

The incidence of homonymy in the Sm'algyax lexicon is quite low under the criteria outlined in Table 8.1. Out of around 3,600 entries in the SLD, only eighty-six are homonyms. There are two types of differences that I have treated as examples of homonymy in the SLD. As I noted in §8.1.1, identical forms with distinct phonological status (i.e. words, clitics and affixes) are treated as distinct lexemes.

Homonyms are also identified in cases in which there is no clear relationship between different senses which are associated with the same form. These represent the bulk of the examples. The two uses of the word *lis'yaan* are treated as homonyms in the following entries:

> lis'yaan (n) *boil; cyst* 'Naga akadi mootgał a lis'yaan. *A boil takes a long time to heal.*

> lis'yaan (n) *mink* Heelda lis'yaan da nlaxyuubu. *There are a lot of minks on my trapline.*

Some of these sets of words are likely to have arisen out of earlier sense extension; however, they no longer seem to be considered by speakers to have any semantic relationship to each other. For example the form *dap* has the senses 'liver' and 'measure'.

> dap (n) *liver* Ts'ma'antu na gaba dabm wan. *I like eating deer liver.*

> dap (v) *measure* Dabida sga'nak dm hasaxt. *They measure how much they want.*

Given the widespread use of internal organs as the locus of psychological phenomena, a relationship between these two words would not be surprising. However, synchronically they do not appear to have a close relationship, and for this reason I have treated them as homonyms. This has required particular care because the cultural values associated with some words can allow for relationships that a non-Tsimshian person would not be aware of.

### 8.4.2 POLYSEMY IN SM'ALGYAX

Words that have been treated as polysemous in the SLD are those with closely related meanings but different grammatical (sub)classes, or with related meanings that occur in different semantic domains.

A good example for the first category is the different functions that have been assigned to the dependency marker *-a* (traditionally called a 'connective' in Tsimshianic literature). In this case the different senses correspond to the different subclasses of connectives found in Sm'algyax:

> -a (CN) *predicative connective* NOTE: *Used with common nouns in the everyday style. Used with common nouns having an indefinite location in the high style.* Yagwa hadiksa sts'ool. *The beaver is swimming.*

> (CN) *possessive connective* NOTE: *Used with common nouns in the everyday style and with common nouns which have an indefinite location in the high style.* ... ndzoga 'wiileeksm t'aa. ... t*he edge of a large lake.*

> (CN) adverbial connective Wayi, sagal 'naga waalt ... *Well, they did this for a very long time ...*

Another example in which subclasses are associated with different senses of a form is the word *gadziks:*

> gadziks (v) *pour down* NOTE: *Of rain.* Gadziksa waas. *Pouring rain.*

> (v) *splash* NOTE: Meaning, splash someone or something.

In this case both senses are verbs. However, the first is an intransitive verb which takes rain as its (non-volitional) subject, while the second is a transitive verb which takes an agentive (though not necessarily volitional) subject. Although, as I argue in §8.6, transitivity does not seem to be the most useful way of categorising verbs in the SLD, the specialised meaning of the intransitive sense (only rain can g_adziks without an object) is evidence for polysemy. The difference in transitivity is the result of a more important difference in meaning between these senses. The different senses of *g_adziks* are reflected in their argument structures.

Many examples of this kind involve a nominal and a predicative use of a word related by zero derivation. The following entry for *p'ldzapl* is such a case:

> p'ldzapl (n) *toy* 'Ap smkwłikwłaxsa łguwoomłga nap'ldzaplt. *The child kicked his toy to pieces.*
>
> > (v) *play with* NOTE: *Of a toy.* Yagwa p'ldzaplda łgułguwoomłga sasoo. *The little child is playing with a rattle.*

A number of examples of polysemy in the dictionary cannot be analysed as belonging to different grammatical (sub)classes. Nevertheless, there are gradations of semantic relatedness that are useful to represent. These examples are treated as polysemous because the different senses are lexicalised, conventional uses of the word rather than context dependent sense modulations.

An example of this type is the form gyemk which has two nominal senses: 'heat, sun, moon' and 'month'.

> gyemk (v) *hot; bright; warm* G_al lugyemga ts'mwaaba gw_a'a . *This house is too warm.*
>
> > (n) *heat; moon; sun* Dalat doot da spagaytgyemk. *They lay them out in the sun.*
>
> > (n) *month* Gyemga gw_a'a dm wil goydiks waas. *That's the month the rain will come.*

The meanings 'heat', 'moon', and 'sun' share a close relationship and the specific reference must be determined contextually. This is an example of a lexeme with broad semantic scope: a topic discussed in more detail in §8.5. 'Sun' and 'moon' have also been lexicalised as *gyemgm dziiws* and *gyemgm aatk* respectively. In these compounds (making use of *dziiws* 'day', and *aatk* 'night'), contextual cues arising from sense modulation have been fused with the stem. The compounding shows that the form *gyemk* refers equally to 'heat', 'moon', and 'sun'. This shows that *gyemk* is a general term for a large celestial body and the light or heat it produces. To be more explicit overt sense modulation is required. In fact compounds encoding sense modulation have been lexicalised in this case.

Where the first set of nominal senses relates to celestial bodies and their products, the second sense 'month' is quite different, referring to units of time. These senses cannot be substituted for each other in Sm'algyax. This can be shown using the example sentences included above. The difference between (8.3) and (8.5) relates to the range of meaning possible for 'sun' and 'month' in Sm'algyax. Whereas 'sun' includes reference to light and heat cast by the sun and therefore includes a spatial reading, 'month' does not allow a spatial reading:

> (8.3) They lay them out in the sun.

> (8.4) *They lay them out in the month.

The same is true in the following cases: in Sm'algyax 'moon' does not include a temporal reading, only month does. (Note that this second pair may be possible in some languages – it is possible in a figurative sense in English.)

(8.5) That's the month the rain will come.

(8.6) *That's the moon [*gyemgm aatk*] the rain will come.

For this reason it makes sense to treat 'month' as a distinct sense with temporal but not spatial reference. The relationship between 'month' and 'celestial body' (in particular 'moon') is strong in Sm'algyax, so it would be misleading to treat the forms as homonyms.

Senses are also treated as polysemous where they are related to different dialects. This is shown in the following example for dzogmbaask a type of wind:

> dzogmbaask  (n) *onshore wind* G̲atgyetga dzogmbaask a sahgya'wn. *The onshore wind is strong today.*
>
> (n) *south wind* NOTE: *Kitkatla dialect.*

Three criteria for distinguishing polysemous meanings have been identified in this section. Difference in the grammatical class, semantic domain, and dialect group associated with related meanings all indicate that the relationship between two words is polysemous.

## 8.4.3 SENSE MODULATION IN SM'ALGYAX

As I noted at the end of §8.4.1, sense modulation can be a grey area for a nonnative speaker. The world view encoded in the first language tends to be inadvertently imposed on the second language, obscuring unity of meaning in some cases and overgeneralising in others. In general, in the SLD, closely related meanings which are possibly sense modulations have been listed as alternative glosses for particular senses.

Originally, the listing of various glosses which could reasonably be related to Sm'algyax words was a compromise between simplicity (definitions can be potentially unwieldy and are unusual in bilingual dictionaries) and accuracy (in many cases a single gloss cannot convey a word's meaning adequately).

One advantage of the way in which this bilingual dictionary has been organised is that the representation of minor differences in the use of a sense are included as a matter of course. The two senses in the entry for *sityaaw* illustrate this practice. This first sense pertains to the exchange of goods and services, especially money. The second concerns exchanges more generally, exchanges which may or may not involve reciprocation:

> sityaaw (v) *pay back; return; reciprocate*
>
> (v) *switch around; exchange; change* Dm silmgooyu g̲alm'wa'at nm da sityaawda gwüda'ats nah gyiigu. *I will go back to the store and exchange the coat I bought.*

In some cases, meanings I have treated as distinct senses could arguably have been treated as examples of sense extension. A case in point is the word saał̲k:

> saał̲k (v) *tender* Saał̲ga sami. *Tender meat.*
>
> (v) *fragile* Saał̲xbiisa wil ludo hoon. *The fish are in a fragile box.*

In this case it is possible that the meanings of the word *saał̲k* would be better treated as examples of sense extension. When this word was discussed by the dictionary committee one consultant gave the above example sentences in order to demonstrate the different meanings of the word. Perhaps there is a general meaning 'easy to break' which applies in all uses of the words *saał̲k*, and which is present in the above examples. There is no evidence for polysemy based on the words belonging to different subclasses as they are both intransitive verbs.

However, since a general sense was not indicated by any of the language consultants at the meeting, I opted for maintaining the distinction between these senses. Even if this does not accurately represent the scope of the sense of *saałk* it is useful for language learners to note the range of meanings it encodes.

In other cases, the Sm'algyax word has a special extended sense which is easy to explain. Many words for animals refer in the first place to fauna found on the territory of the Tsimshian. These words can be used in extended senses to refer to similar animals found elsewhere. For example, the word *gyibaaw* 'wolf' may also be used to refer to a coyote in appropriate contexts, presumably because both are examples of undomesticated dogs. Rather than including coyote as a gloss for *gyibaaw*, which would have been misleading given that this is not its usual use, this possibility is mentioned in a note:

> gyibaaw (n) *wolf* NOTE: *May also be used to refer to a coyote*. Ła k'a̲k'awtka gyibaaw. *The wolf is howling*.

## 8.5 Sense modulation and compounding

In this section I discuss in more detail the use of sense modulation as a strategy of lexical expansion in more detail. In these examples compounds originally used in sense modulation have been lexicalised as distinct words. Firstly, we will consider typical examples of compounding in which the sense of the stem is altered significantly by the modifier. One strategy for compounding in this way is to add a location to the stem. In this pattern the thing denoted by the stem is used analogously to refer to another, different, thing found in a different environment:

| Stem | Location | Compound |
|---|---|---|
| *gyibaaw* | *ts'maks* | *gyibaawmts'maks* |
| 'wolf | 'in.water' | 'eel' |
| *gaax* | *ts'maks* | *gaagmts'maks* |
| 'raven' | 'in.water' | 'black bass' |
| *stiimboot* | *gyilhawli* | *stiimboodmgyilhawli* |
| 'steamboat' | 'hills' | 'steam train' |

Table 8.2: Locational compounds in Sm'algyax.



Common raven (Corvus corax) illustrated by the von Wright brothers, c.1929

In contrast, the following nouns do not alter the basic sense of the stem; rather, the semantic scope of the compounded term is simply narrower than the basic noun. Modifiers in these compounds include locations, substances of composition, and particular characteristics.

| Stem | Modifier | Compound |
|---|---|---|
| *hałoo* | *gyemk* | *hałoomgyemk* |
| 'cloth, canvas, sail' | 'hot, bright, warm' | 'flag' |
| | *boot* | *hałoomboot* |
| | 'boat' | 'sail boat' |
| | *xsoo* | *hałoomxsoo* |

Table 8.3: Compounds based on narrowing general terms in Sm'algyax.

| Stem | Modifier | Compound |
|------|----------|----------|
|  | 'canoe' | 'canoe with sail' |
| *lii* | *gaayk* | *liimgaayk* |
| 'hair, fur etc' | 'chest' | 'chest hair' |
|  | *t'u'uts* | *liimt'u'uts* |
|  | 'bird' | 'feathers' |
|  | *yets'ik* | *liimyets'ik* |
|  | 'land animal' | 'fur' |
| *laawks* | *goom* | *laawksm goom* |
| 'light' | 'glowing' | 'gas lantern' |
|  | *gyelx* | *laawksm gyelx* |
|  | 'outside' | 'outdoor lantern' |
|  | *yeey* | *laawksm yeey* |
|  | 'fat' | 'candle' |

Table 8.3 continued: Compounds based on narrowing general terms in Sm'algyax.

In a number of cases it seems that there has been reorganisation of the lexicon in which one sense of a word with broad semantic scope has become primary so that the others may only be expressed using a related compound. This strategy was suggested but then rejected within the dictionary committee for the word *galipliip* 'thunder, cannon' which has been narrowed to *galipliip laxha* 'thunder in the air'.

One member of the Dictionary Committee felt that there should have been two entries for these meanings with the second *galipliip laxha* (literally: 'thunder in the air') being used to denote 'thunder'. This did not sit well with other members of the committee, who felt they would never say *galipliip laxha* in a sentence because the context would let you know which meaning was intended. Since *galipliip laxha* was apparently not a lexicalised form, I concurred that it should not be included, and felt that the fact that the meaning 'cannon' was the newer meaning meant that it should not be treated as unmarked unless there was a good reason to do so. The resulting entry is given below:

> galipliip (n) *thunder* Xstaamga galiliip. *Thunder makes a lot of noise.*
>
> (n) *cannon* K'yilamgas k'amksiwah 'wiigalipliip a sm'ooygit. *The Europeans gave the chief a big cannon.* USAGE VARIANT: galipliib- VARIANT: galapliip

In these examples the basic term refers to things introduced into the Tsimshian community after contact. The basic term is used in conjunction with a modifier to refer to the original but now less basic meaning of the word. For example the word anaay 'bread' appears in the compound anaaymbaalax 'ghost bread' (among others: see Table 8.4). This term refers to a large type of white fungus that grows on fallen logs. It has the appearance and something like the consistency of bread. Thus it appears as if the term anaay once referred to the fungus and now refers to bread, with the fungus as a related but peripheral meaning. Two further examples are given in Table 8.4.

| Stem | Modifier | Compound |
|------|----------|----------|
| *anaay* | *baalax* | *anaaymbaalax* |
| 'bread' | 'ghost' | 'ghost bread' |
|  | *eets'* | *eets'manaay* |
|  | 'fried' | 'fried bread' |
|  | *ts'maatgm* | *ts'maatgm anaay* |
|  | 'sweet' | 'sweet pastries' |
|  | *xoolgm* | *xoolgm anaay* |
|  | 'charred' | 'toast' |
| *miyuup* | *gyet* | *miyuubmgyet* |
| 'rice' | 'people' | 'wild rice, chocolate lily' |
| *duus* | *gyilhawli* | *duusm gyilhawli* |
| 'cat' | 'hills' | 'cougar' |

Table 8.4: Shifted stems and compounds in Sm'algyax.

Within the set of words with broad semantic scope are a number which have been partially grammaticalised. This has been a very effective way for the lexicon to deal with new domains which required rapid expansion after contact. I will limit the examples presented here to two forms: *waap* 'house' and *xsoo* 'canoe, boat'. Both words have developed phonologically reduced forms, *wap* and *saxs*, which serve to mean 'building, room' and 'vehicle' respectively. They seem to be developing into noun deriving prefixes along the lines of *gwis-* which is used to create words relating to blankets and clothing and which is related to the root *was* 'blanket'. For example the verb *miilk* 'dance' may be used to derive the noun *gwisamiilk* 'costume' (literally: blanket-dance). Several other examples are shown in Table 8.5.

| Basic noun | Derivational prefix | Stem | New noun |
|------------|---------------------|------|----------|
| *was* | *gwis-* | *miilk* | *gwisamiilk* |
| blanket' | blanket' | 'dance' | 'costume' |
|  |  | *ligisah* | *gwisligisah* |
|  |  | 'any day' | 'everyday clothes' |
| *waap* | *wap* | *laałk* | *wap laałk* |
| 'building, house' | 'building, room' | 'lie down' | 'hotel' |
|  |  | wan | wap wan |
|  |  | 'sit PL' | 'living room' |
| *xsoo* | *saxs* | *salooyk* | *saxs salooyk* |
| 'canoe; boat' | 'vehicle' | 'move' | 'truck, wheelbarrow' |
|  |  | *uumtxaw* | *saxs uumtxaw* |
|  |  | 'trawl for halibut' | 'halibut boat' |

Table 8.5: Derivational prefixes based on general nouns.

Finally, it is worth noting that lexical modification proceeds according to the logic of Sm'algyax. This was borne home to me when I was exploring the possibility of modifying a Sm'algyax word in order to refer to some article which had a specific name in English. The exchange that has stayed with me most clearly concerned the word *gant'miis*:

gant'miis (n) *pen; pencil; paintbrush* Kayla, k'agoo gant'miis da k'oy. *Kayla, please get me the pencil.*

I asked a consultant whether it was possible to make a contrast between a highlighter pen and a pencil. I had in mind that there could be some construction using a modifier on analogy with *gyemk* 'light', *gyemgm aatk* 'moon'. My consultant's good-natured but pointed response was: "You're thinking like a white woman." To my comfort, I later discovered that there was in fact another word belonging to this domain:

> łem (n) *chalk; crayon* Hasa̲ga łgu hana̲'a dmt gyiiga łem. *The little girl wants to buy crayons.*

Nevertheless the point was well taken.

## 8.6 Underspecification of Sm'algyax verbs

The strategy of underspecification is used in the treatment of verbs in the SLD. Other authors have in practice identified transitive and intransitive verbs in Sm'algyax; however, this has led to some rather strange results. For example, in Dunn (1978a) around a quarter of the entries for verbs cite both transitive and intransitive forms often without a listing of different glosses for each type. As noted in §4.2, Sm'algyax has three classes of ambitransitive verbs. These are:

> (ViS$_a$) → (ViS$_o$): *betsk* 'arrive, be placed'*; gyiitk* 'swell, be swollen' *p'oo* 'be breaking', 'be broken'; and *xsp'o'onsk* 'crackle'.

> (ViS$_a$) → (VtAO): *aaw* 'cry, cry over'; *gaapk* 'scratch, scratch something'; *gox* 'nod, peck'; *and ksiwox* 'dream, dream that'.

> (ViS$_o$) - (VtAO): *gol* 'be spilt, spill something'.

In previous works on Sm'algyax, the practice of treating each sense that belonged to different grammatical (sub)class as a polysemous form led to a large number of entries in which the same gloss is repeated as a different part of speech. For example the following pairs are S = A, *liidzxk* (vt) read, (vi) count, read; and *liimi* (vt) sing, (vi) sing.

The inelegance of this result lead me to seek an alternative approach in which transitivity is not routinely specified in the dictionary. In order to provide a theoretical basis for this practice it has been necessary to turn to literature on transitivity and to develop a model based on theories of underspecification.

As I noted in §8.4.3, it is possible to propose general senses for words and argue that the specific senses they come to have in particular contexts arise from the context and the hearer's interpretation of the context. This approach has grown out of the work of Bierwisch (1983) and has been used by some writers to account for the difference in argument structures associated with multi-sense verbs. Pause et al. (1995) offer the following specification for the verb melt which has both an intransitive change of state reading and a transitive causative meaning in English:

> /melt/
>
> V, _(NPx)
>
> λX[ (λY[∃Z [DO Y Z]
>
> [CAUSE Z) [GO [SOLID X] LIQUID X]]]]

<div align="right">**Pause et .al. 1995:254**</div>

The authors explain:

> *The example above shows that the transitive causative melt and the intransitive inchoative melt correspond to certain parts of the composition (components in parentheses are optimal; the subject is not specified, since it is the external argument).*

**Pause et al. 1995:254**

The treatment of verbs in the SLD is compatible with this approach because either a transitive or an intransitive reading may be possible, depending on the context.

Hopper and Thompson (1980) have discussed transitivity as a characteristic of clauses. They identify a number of parameters that are present in transitive clauses which have a bearing on the degree of transfer of action (the prototypical characteristic of a transitive clause) including: number of participants, kinesis, punctuality, volitionality, affirmation, mode, agency, affectedness of O, and individuation of O. It is the optionality of a second argument in Pause et al.'s treatment of melt that allows it to have both transitive and intransitive meanings. Both of these approaches are broadly compatible with the treatment of verbs in the SLD.

Derivational suffixes have been characterised as having the function of increasing or decreasing the inherent transitivity of the stem (Stebbins 1999:146ff). Although the use of this morphology is not yet fully understood, it shows that words in Sm'algyax do have degrees of inherent transitivity. Words such as 'eat', 'read' and 'sing' are all semantically transitive; i.e. they all have objects in a real world sense; however, they may or may not require explicit objects syntactically. It is this possibility which led to the multiple coding of verb types in Dunn (1978a).

Inherent transitivity is lexical or semantic whereas the transitivity indicated by the number of arguments taken by a particular verb in a particular clause is syntactic. Since the optional coding of objects is possible for many verbs, the labels vi and vt seem to be redundant. They account for a binary distinction between transitive and intransitive verbs which is not motivated by the data. Instead of neat subclasses of transitive and intransitive verbs, multiple argument patterns of some verbs and the derivational morphology suggest that Sm'algyax treats transitivity as a cline.

As a result of these observations, I chose not to specify the transitivity of verbs in the SLD. In most cases the English glosses had the same valency as their Sm'algyax counterparts, making transitivity labels rather redundant in any case. In order to ensure that any specific requirements of a word's argument structure that would not be obvious to the reader were still available, information of this kind was included in the note field and implicitly in example sentences.

> łaantk (v) *move* NOTE: *Intransitive verb – no object* Łaantga yuup. *The earth moved (e.g. because something heavy was dropped).*
>
> (v) *agree with someone; back someone up; give support to someone's argument.* USAGE VARIANT: łaantg-

Given the fairly small numbers of words that have valencies which are not clearly reflected in the English glosses and the disjunction of syntactic and lexical transitivity, the approach of only including information about transitivity in unusual cases (i.e. general underspecification) has proved to be both useful and in keeping with the data.

In this way, the practical problem of managing the representation of transitivity in Sm'algyax in the SLD was resolved.

## 8.7 Conclusion

This chapter described the treatment of various types of polysemy in the SLD. The use of the polysemy continuum to describe a range of form-meaning relationships was discussed in §8.1. In §8.2 and §8.3 polysemy was distinguished from homonymy and from sense modulation. A number of examples of homonymy, polysemy and sense modulation from the dictionary were presented §8.4.

In §8.5, the use of semantically broad terms in lexical expansion was examined in more detail. Finally, in §8.6, I argued that underspecification was a useful approach to transitivity in the SLD. Given the fluidity of transitivity in Sm'algyax, more specific statements about transitivity are either potentially misleading or redundant. Only in cases in which the argument structure of a verb cannot be predicted from the English gloss are explicit statements regarding transitivity included in the SLD.

# Chapter Nine:
# Spelling in Sm'algyax

## 9.0 Introduction

The practical orthography used in the preparation of the SLD was introduced in Chapter Two. This chapter explores issues relating to the use of the orthography as a writing system, rather than as a collection of symbols. Community perspectives on the writing system are discussed in Chapter Ten. This chapter begins with a discussion of the differences between transcription systems and writing systems (in §9.1), and argues that spelling rules are an important characteristic of the latter. The complexity of spelling rules varies depending on the nature of the orthography. In §9.2 key spelling issues that arose during the development of the SLD are described and principles for dealing with these problems are developed. The possibility of treating Sm'algyax as a featural system are explored in §9.3. In featural orthographic systems, diacritics representing phonological features are added to graphemes. For fluent speakers who are also literate these diacritics are redundant and are avoided in many settings. The costs and benefits of avoiding diacritics in Sm'algyax is considered in relation to language revitalisation efforts in the community. A summary of spelling conventions and of principles for fostering the Sm'algyax orthography is provided in §9.4. Finally, in §9.5, conventions for representing word boundaries are described. Because Sm'algyax is a polysynthetic language, principles for representing clitics are required.

## 9.1 Representing Sm'algyax in writing

The Practical Orthography is widely promoted as having the capacity to represent words 'how they sound' in Sm'algyax. Although it is true that the orthography is largely phonemically based, there is a difference between a transcription system (such as the International Phonetic Alphabet) and a writing system. The differences between these systems is borne out in the following sections.

The concept of orthographic depth is introduced in §9.1.1 to distinguish between writing systems that represent morphological as well as phonological information (deep orthographies) from those that do not (shallow orthographies). The nature of the orthography determines the requirements of the spelling system. This relationship is discussed in §9.1.2. Finally, in §9.1.3, the spelling requirements for a shallow orthography such as Sm'algyax are described.

### 9.1.1 DEEP AND SHALLOW ORTHOGRAPHIES

In Mattingly's 1992 taxonomy of writing systems, he argues that there are two basic kinds of systems. One is syllabic, in which a grapheme represents a whole syllable, and the other is segmental, so that graphemes stand for individual phonemes.

> *Either of these may or may not be accompanied by logograms [words with unique, often iconic symbols]. Transcription of vowels in segmental systems is a matter of degree, with Phonetian [no vowel representation] at one end of the scale and Greek [vowels and consonants all represented; also known as plene systems] at the other.*

**Mattingly 1992:13**

Overall, there is a general correspondence between a phoneme and a grapheme in segmental or alphabetic systems. Some orthographies are considered to present this correspondence more consistently than others. This is the distinction between 'deep' and 'shallow' orthographies.

Shallow orthographies are characterised by a regular correspondence between the way a word sounds and its spelling. This is not the most appropriate system for all languages. It is used for Serbo-Croatian. Katz and Frost 1992 describe the situation there in the following terms:

> *Its present alphabet was introduced in the early nineteenth century following the principle,*
> *"Spell a word like it sounds and speak it the way it is spelled." ... The relation between*
> *letters and phonemes is isomorphic and exhaustive. ... This simple spelling system works*
> *well for Serbo-Croatian because morphemic variations in the language due to inflection*
> *and derivation do not often produce alternations in the phonemic structure of word stems;*
> *word stems remain largely intact.*
>
> **Katz & Frost 1992:69-70**

As Katz and Frost note, a shallow orthography would be far less beneficial for a language like English because English exhibits:

> *a large amount of regular phonologic change among words in the same derivational*
> *family... English spelling represents a compromise between the attempt to maintain a*
> *consistent letter-phoneme relation and the attempt to represent morphological commonality*
> *among words ... there are then different pronunciations of the same spelling on occasion*
> *(e.g. HEAL-HEALTH) and, inadvertently, identical pronunciations for different spellings*
> *(e.g. PEEL-DEAL).*
>
> **Katz & Frost 1992:70**

Even though there is greater irregularity and complexity in the English spelling system, the deep orthography has some advantages for readers, such as the more regular representation of morphologically related words. Thus, phonological information is used or represented to varying degrees depending on the orthography.

In general, theorists have focused on the contribution this information makes to reading. There are two major strategies considered to be used in reading. The first is phonological decoding. Using this strategy the reader makes an association between each grapheme in the word and the phoneme it stands for. They construct a word out of these recovered sounds and (with some help from contextual cues, etc.) figure out which word has been written by making a connection between the shape of the word and its meaning. This strategy is generally referred to by educators as the 'phonics approach'. Word recognition in this strategy relies on the sound shape of a word. The second strategy is for the reader to examine the shape of the word as it appears on the page, the visual shape, and (again with help from other cues) make a connection to the meaning of the word. This is called the 'sight word approach' by educators.

Some argue that the latter strategy predominates in deep orthographies, while the former is strongly associated with shallow orthographies. It is likely that people use both strategies. Even in a deep orthography, readers must resort to 'sounding it out' when they attempt to read an unfamiliar word, while in shallow orthographies readers are hardly likely to bother mentally sounding out words they recognise immediately. Bajo et al (1994), Katz and Frost (1992), and Baluch (1993) all suggest that both strategies are in fact used by all readers. The

sight word approach is generally used when words are familiar (see also Frost & Bentin 1992:35) or (as in the case of unpointed Hebrew) when no other strategy is available. Interestingly, other studies cited in Frost and Bentin (1992:32) have found that skilled Hebrew readers do not ignore vowel marks when they are present. This suggests that they are allowing the possibility of phonic reading even though they typically use the sight word approach.

In the general scheme of things Sm'algyax is a fairly shallow orthography. It shows a strong regular relation between graphemes and phonemes. This allows people learning to read and spell Sm'algyax to make great use of their knowledge of Sm'algyax phonology. Conversely, written Sm'algyax contains enough phonological information for a reader to pronounce words fairly accurately provided the rules of the orthography are followed.

## 9.1.2 WHY SPELL?

The most important premise underlying writing systems is that while symbols and combinations of symbols represent a relationship between signs and meanings (just as spoken words do) the writing system does not precisely replicate all the signs used in speech.

The orthography is a restricted set of symbols used to represent a practically unlimited set of words in a language. Mattingly (1992) notes that while the appearance of a script is only constrained by the requirement that the graphemes are recognisably different from each other, their relationships to linguistic values (i.e. phonemes in an alphabetic system) "is highly constrained. In the first place, the orthography must correspond to [speakers'] linguistic representation, because there is no other cognitive path to linguistic processes" (1992:15).

Reading is the activity of recognising words as they are written instead of spoken. Liberman (1992) presents an excellent discussion of the differences between speech and reading/writing, and the tensions between the two. In her view, a fundamental problem for learning reading is that:

> *experience with speech is normally not sufficient to make one consciously aware of the phonological structure of its words, yet it is exactly this awareness that is required of all who would enjoy the advantages of an alphabetic scheme for reading and writing.*
>
> **Liberman 1992:175**

This is complicated by the fact that unlike the symbols in the orthography which are invariant, speech exhibits a great deal of variation, so much variation that Nusbaum and Henly (1992) consider a series of studies on speech perception, and conclude that the articulatory effect of phonological segments on their neighbours is so great that it forces hearers to make use of a variety of cues in order to recognise phonemes in the context of speech. Speakers who wish to become readers and writers have two tasks: the first is to develop phonological awareness and the second is to schematise what they hear, to develop phonemic, or even morphophonemic, awareness.

Words sound different in isolation than in connected speech, in careful than in fast speech, different depending on the dialect of the speaker and depending on the speaker's physiological state. For example, tiredness and excitement both affect the way a person speaks. Liberman notes that while "Narrow transcriptions are easier to read ... there is still more context- rate- and speaker-conditioned variation than the eye is comfortable with ... To be useable, scripts must, apparently, be pitched at more abstract phonological and morphological levels" (Liberman 1992:168). In a similar vein, Mattingly asks: "...why is a narrow phonetic transcription an unlikely

orthography? The reason must be that the shapes of words in such a transcription are context-sensitive and thus difficult to recognise. (Notice what happens to /hænd/, *hand* in [hæŋgrənejd], *hand grenade*, [hæmpɪkt], *handpicked* etc.)" (Mattingly 1992:18).

The task of the spelling system is to mediate the differences between the sound system of a language and its orthography, in order to produce a consistent system people can learn to use both for reading and writing. Thus the spelling system is fundamentally different from a transcription system. The former is used to represent words, while the latter is used to represent sounds.

Mattingly notes that "an orthography is not productive without a spelling system: The invention of one requires the invention of the other" (1992 :22). His reason for this statement is that only by having a spelling system is the orthography productive. Spelling conventions are the way that a writer is able to write any word in the language (1992: 18).

Before considering the nature of spelling systems in more detail and reaching conclusions about the Sm'algyax system, it is important to clarify the nature of the Sm'algyax orthography. The next section considers the distinction between 'deep' and 'shallow' orthographies. This is used in psycholinguistic literature on spelling and reading. I am using it here to relate spelling rules to the nature of an orthography.

## 9.1.3 HOW TO SPELL

The general relationship between a phonological and orthographic form that allows people to read even unknown words effectively is sometimes pressed into service by writers who need to spell unknown words (i.e. words they know but have never seen written). In attempting to spell an unknown word, the writer seeks to apply the conventions for representing particular sounds in the writing system. For want of a better term I call this strategy 'phonetic spelling'.

In a deep orthography, the distant relationship between the phonology and orthography of the language will require many complex spelling rules. Very often a system of this kind makes use of morpho-phonological and morphological information. For example, the English word *sign* has a 'silent' *g*. This is an example of spelling according to the derivational family of the stem. In other related words, such as *signal, signify, significant,* and *signature,* the *g* is audible. By having a silent *g* in the root, the form of the derivational family of *sign* is represented consistently in English. In a language such as English, it is very easy to fall afoul of spelling rules for words spelt using morphological information when resorting to the phonetic spelling strategy. For example, there is no way to predict from the sounds of the word *sign* [saɪn] that a *g* should be a part of its spelling.

Learning to read and spell in an orthographically shallow system is theoretically more straightforward. These systems are said to make less use of morphological and morpho-phonemic patterns, preferring to represent the phonology more explicitly. One consequence is that fewer spelling rules are required. In learning to spell using a shallow orthography, the main task is to develop an idealised conception of the sounds to allow words to be written consistently.

Overall, phonological information is less useful in encoding (spelling and writing) than in decoding (reading), and less useful (for both reading and writing) in deep than shallow orthographies. For writers of Sm'algyax, one difficulty is the lack of widely accepted spelling conventions. Limited experience with reading and writing Sm'algyax more generally results in people regularly resorting to phonetic spelling. The same problem occurs in other similar situations. For example, Ndukwe in her discussion of problems with the standardisation of Nigerian languages reported that "students at Maiduguri teacher training colleges spelled dictation words in up to nine different ways" (Ndukwe 1982:142). The result is a plethora of competing forms for many words,

making the job of the reader (who relies on recognising a good percentage of words on sight in order to read at a comfortable rate) difficult indeed.

This variation arises because Sm'algyax writers are often unclear about the limitations and values of the orthography, and so use it inconsistently. Individual and dialect variants are also written down using this strategy, making the results even less consistent. Although these practices of Sm'algyax writers are understandable, natural adaptations to the situation characterised by a lack of spelling conventions, the writing produced in this way is difficult to read and often the subject of controversy within the community. For this reason spelling conventions are likely to benefit the community, making both writing and reading easier activities.

The phenomenon of spelling pronunciations is relevant here as it points to a reciprocal relationship between spelling ability and phonological knowledge. Ehri (1985) gives a variety of evidence that the conceptualisation of the sound structures of words among fluent readers depends on information about both spelling and pronunciation. This suggests that the development of spelling conventions in Sm'algyax will make more sense to speakers over time. Basically, the more people are exposed to a particular writing system, the more obvious and natural it will seem.

## 9.2 Spelling in Sm'algyax

The remainder of this chapter considers the main areas of difficulty for Sm'algyax spellers, identified as the main patterns of spelling variation in the dictionary database. Recommendations for spelling conventions are made in each case. Spelling problems associated with vowels are presented first (§9.2.1). These include vowel length, the representation of unstressed vowels, and the spelling of syllables that have syllabic consonants sometimes augmented by epenthetic vowels. Then, spelling problems associated with consonants are considered (§9.2.2). These include the lenition of word initial and word final stops, and the process of palatalisation.

Two broad principles inform the recommendations I make in this section. Firstly, the forms available in the orthography should be used consistently and accurately. This takes care of a surprisingly large number of competing forms. Simply by ensuring that the orthography is used properly (that is by avoiding English-like spelling practices) the majority of spelling problems identified in the dictionary were resolved.

Secondly, the spelling practices used in Sm'algyax should preserve as many characteristics of the language (particularly phonological distinctions) as possible. Too much simplification of the system is potentially damaging in a situation in which so few speakers read and so few community members speak the language. Simplification of this kind may obscure the phonological values of particular graphemes and give rise to incorrect spelling pronunciation. This second principle is useful for deciding on spellings in contexts that make it difficult to identify a phoneme. For example, in the environment of /i/, a /g/ typically sounds palatalised. Consistently writing /gy/ where that sound may be present gives people a way to resolve the question without making assumptions about, or having to assess, the underlying structure of a word.

Given that spelling does influence pronunciation, it makes sense to try and preserve the phonemic inventory of Sm'algyax by ensuring that it is represented as fully as possible.

### 9.2.1 VOWELS

The main factor affecting the representation of vowels in the Sm'algyax writing system is whether or not the syllable in question is stressed. When writers attempt phonetic spelling, a great deal will depend on the stress patterns assigned to the word as they sound it out. This includes both the stress patterns associated with indi-

vidual words in Sm'algyax and other factors that may also affect the vowel quality in particular contexts, such as the intonation contour of the utterance.

## A. VOWEL LENGTH ALTERNATION

Typical examples of this type of spelling problem are the forms *haytk* and *haaytk* 'stand up'. Speakers sometimes have trouble deciding whether or not a vowel is long. Suprasegmental effects are often the cause of confusion about vowel length. When a word gets extra stress one result is apparent vowel lengthening. It is important to note that vowel length is phonemic in Sm'algyax. Consider, for example, the pair *ap* 'bee' and *aap* 'father'. There is no allomorphic or allophonic vowel length variation but other suprasegmental factors, particularly stress, may give the appearance of such a difference.

When people spell phonetically this can affect the spelling of a word. During the development of the SLD, care was taken to ensure that vowel length was represented accurately. As we discussed each word independently of a textual context, vowel lengthening effects arising from the context of speech were absent. Occasionally it was necessary for us to compare a word to words we had already established as having a short or long sound. During this process it was decided to spell 'stand' with one *a*, as *haytk*.

As a more general guide it seems to be safer to err on the side of writing vowels as short vowels unless they are clearly long when examined as individual words (i.e. in a decontextualised way). If the spellings recorded in the SLD become familiar to writers of Sm'algyax, people will come to use them as a matter of convention and will no longer experience a problem in this area. This is a result of the influence that spelling has on the conceptualisation of the sound structures of a word. As speakers internalise a particular spelling they develop a clearer model of a word's sound structure and are less likely to face choices over how it should be spelt.

## B. UNSTRESSED SHORT VOWELS

A very troubling problem in spelling Sm'algyax is the set of prefixes that contain unstressed vowels. There is no conventional form such as the grapheme <ᴇ>, which Boas used for writing an unstressed, schwa-like vowel, in the current orthography. As a consequence, writers are forced to nominate a specific vowel every time they use one of these morphemes. Because they are prefixes, phonologically dependent on a stem, these vowels are never stressed. The quality of these vowels can be very difficult to ascertain, and when writers are forced to make a decision, they tend to differ depending on their dialect. Quite often, speakers from Hartley Bay use <ü> and speakers from Kitkatla prefer <a̲>.



Aerial view of Hartley Bay, 2007

There are a number of approaches to this problem. Firstly, one could nominate a spelling for each morpheme and write it without regard to how it sounds in particular contexts; or using the morphophonemic rules described above, one could make a set of spelling conventions that applied to these forms. The letter would more closely resemble the sound of the words formed with clitics and prefixes. Or thirdly, one could make case by case decisions for each word.

One example in which the first strategy has been used is in the case of *gwis-*, which has also been spelt *gwüs-*. This prefix is used in order to derive words pertaining to clothing and blankets. In this case people can easily recognise that the words containing the prefix are related, so it makes sense to establish one spelling for the prefix. The dictionary committee agreed that all words containing this prefix should be spelt *gwis-*.

Unfortunately, such a straightforward decision-making process is not generally possible, because there often seem to be morpho-phonological processes at work. Thus the prefix *sü-* 'do, make, get' also frequently occurs as *sa-*, *si-*, and *su-*. Morpho-phonological processes and dialect differences seem to combine in the distribution of these forms. Fumiko Sasama (pers. comm.) has tentatively suggested a set of distributional rules to account for these differences. She observes that the allomorph spelled *sa-* occurs adjacent to velar and glottal segments, the *si-* before <y> initial segments and the *sü-* occurs elsewhere. The patterns she observes are set out in the following table:

| Hartley Bay spelling | English gloss |
| --- | --- |
| *sahakwdak* | 'yew' |
| *siyełk* | 'polish' |
| *sümaay* | 'pick berries' |

Table 9.1: Distribution of <i>, <ü>, <a>, and <u> in Hartley Bay Sm'algyax

The spellings decided by the dictionary committee are sometimes at variance with these predictions. This is because the dictionary committee included members from many different dialect groups, while Sasama's data is based on speakers from Hartley Bay in particular. Interestingly, Sasama's observations about the effect of adjacent back velar, glottal, and adjacent <y> do hold for all the spellings in the dictionary. However, there are also a large number of examples in the dictionary where Sasama predicts <ü> that are in fact spelled with either <a> or <i>. Examples include:

| SLD spelling | English gloss |
| --- | --- |
| *saluuna* | 'make dry' |
| *sip'iyaansk* | 'make smoke' |

Table 9.2: Distribution of <i>, <ti>, <a>, and <u> in the SLD

Overall it appears as if Sasama's observations about the distribution of <a> and <i> are accurate for all Sm'algyax speakers. However, these allophones may also appear in other contexts where Sasama would predict a <ü>. The distribution of *ü* is obviously complicated by dialect differences. As I observed in the introduction to this section, Kitkatla speakers tend to prefer <a̲> to <ü>.

An overt attempt at conventionalisation of these forms is not appropriate at this time because there are dialect differences which are not yet fully understood. However, it is likely that their spellings will eventually become less varied. It already appears that the spellings in the environments of adjacent back velar, glottal, and adjacent y are well established. In other cases it was possible to agree on spellings for words containing these morphemes within the dictionary committee. However, I could not predict which spellings would be accepted in particular contexts.

## C. BACK a <a̲>

The phonemic distinction between /æ/, which is written <a>, and /a/, written as <a̲>, is neutralised in unstressed syllables. Speakers vary in their perception of this sound in unstressed contexts. There is also a tendency to

avoid marking backness in the reduced orthography. As a consequence some writers rarely, if ever, use the form <a>.

Overall, a practical and reasonably uncontroversial solution to this variation has been to at least write <a> when it is stressed, in contexts in which the sound is both significant and clear. The result of this principle is shown in the following entry:

> ts'mts'ax [ts'm\*ts'ax] (n) *nostril* G̲ani ksibaa ts'mts'axs Meli. *Mary's nostril keeps running.* MORPH: ts'm-ts'ax *in-nose*

Although writers may not always use <a> in unstressed syllables, and the distinction may be lost for unstressed vowels, this solution has two benefits. Firstly, the reader can recover the pronunciation from the spelling; and secondly, writers are not forced to make a decision in situations where the distinction between /æ/ <a> and /a/ <a> is hard to make. This is especially important in monosyllabic words such as *wan* 'sit' or *t'am* 'paint designs, write'. If these words were written *wan* and *t'am* then learners would naturally pronounce them with /æ/.

Within the set of lexical clitics and derivational prefixes there are a few exceptions to this convention. All the exceptions occur in environments containing another back segment, especially the phonemes <g> and <x>. For example, the form *sgan-* has <a>. This proclitic seems to be related to the stem g̲an 'tree', and the use of <a> is well established. In many other cases dictionary lists both <a> and <a> as possible spellings for low vowels preceded by uvulars. Consider, for example, the following entries:

> sga- (loc) *across; in the way; obstructing* Sga daaw na 'ni'aksm. *Where we get our water is frozen.* VARIANT: sga-

> txa- (der n) *place where* G̲ak'awtga gyibaaw a txadoosda galts'ap. *The wolf howled across the village.* SEE ALSO: txahawli *behind 'place in back of'* VARIANT: txa-

> txal- (loc) *against; adhering, meeting with; touching* VARIANT: txa1-

In keeping with the practice of not underlining unstressed <a>, the <a> in the proclitics (which are never stressed) are not underlined in the head word versions in the dictionary. However, underlined versions are given as variants and it may be that these forms turn out to be preferred by the majority of writers. If this is the case, then the ordering of the representations should eventually be reversed.

At this time there is a good deal of variation about the treatment of unstressed <a> among Sm'algyax writers. However, <a> occurs in all relevant stressed syllables in the dictionary. As the main concern is to ensure that the phonemic inventory of Sm'algyax is fully represented, variation in the representation of unstressed *a* is not a particular concern. The priority has been to ensure that incorrect spelling pronunciations caused by the use of <a> instead of <a> in stressed syllables is avoided.

## D. EPENTHETIC VOWELS

The last set of variants I wish to discuss in relation to writing vowel sounds are alternatives incorporating epenthetic vowels. Epenthetic vowels are sometimes inserted into syllables with syllabic consonants, especially in careful speech. Changes in the word structure can also trigger epenthetic vowels. For example, the word *xs'waanx* 'herring eggs' forms the stem for the word *ha'lixswaanax̲* 'April'. When syllables are added to the front of the stem, the stress pattern changes and an epenthetic vowel creates a new syllable and breaks up the consonant cluster.

There are a number of possibilities for standardising spellings in cases like this. Firstly, the epenthetic vowel could be inserted in the stem at all times. This would result in morphological spellings of these words. Alter-

natively, the vowel could be ignored. In either of these cases the reader will not be able to recover the pronunciation of the word from its spelling. To write an epenthetic vowel in stems where it is not said is particularly misleading, given our previous decision to write _a_ especially when it is stressed.

For these reasons, I suggest that the best solution is to stick to the phonetic principles that underlie the Sm'algyax writing system, and to write the epenthetic vowel only when it occurs in speech. The advantage for both readers and writers is that the spelling will follow the sounds of the word. Since the epenthetic vowel only occurs in the final syllable of multisyllablic words, it will create fewer difficulties for word recognition than variation at the beginning of words.

## 9.2.2 CONSONANTS

The main processes affecting the representation of consonant sounds in spelling are lenition and palatalisation. In the following discussion, I argue that priority should be given to phonemic, rather than morphemic or phonetic, spelling in order to maintain the benefits of Sm'algyax's shallow orthography.

## A. WORD INITIAL LENITION

In connected speech, the voiceless ejective uvular stop _k̲'_ in Sm'algyax tends to become a voiced uvular or velar stop. This change is an example of lenition. Writers using the phonetic spelling strategy are just as likely to write the strong as the weakened form of the consonant. For example, the following variations of _k'os_ 'jump' 'sometimes occur in writing: _goos_ and _goos_. Vowel lengthening is also associated with the weakened form of the initial consonant. Other examples include _k̲'a̲l_ / _ga̲l_ 'come', and _k̲'a̲lmoos_ / _galmoos_ 'crab'.

Word initial variation is particularly troublesome for readers. The process of word recognition has been described by Grainger (1992:131) as "a process in which incoming sensory information defines a set of lexical candidates that then compete with each other for identification". However one decides to model the cognitive processes involved, one thing is clear: word initial variation sends the reader up a garden path early in the process of word identification and makes it difficult to identify a useful set of likely words. There is really nothing about the visual shape of the word _goos_ that is likely to trigger an association to _k'os_ in the mind of the reader. The spellings KONSIDER and CONSIDAR of the word _consider_ can be used to illustrate the importance of initial letters in word recognition. In both cases only one letter is changed. In the first case the reader is quickly pulled up short. There are no words that are easy to 'match' with a word this shape. In fact the Australian Pocket Oxford Dictionary doesn't list a single word beginning with the string KON-. The form CONSIDAR is also a problem for the reader, but the identification of likely target words is already accomplished before the spelling mistake (-_ar_) is encountered.

For this reason alone it is probably worth avoiding word initial alternations. Nor is the variation morphemic; the variation does not convey any meaning. Lenition of the ejective form is simply an artefact of connected speech. Either form may be pronounced, depending on external factors such as the rate of speech; however, these external factors are not relevant to written language. For all these reasons, I recommend that the strong form of the initial consonant be written.

A further advantage in making the choice for representing the ejective forms is that they are not found in English. If these sounds are not recorded in the Sm'algyax writing system, it is more likely that they will not be passed on to people learning the language in the future. While it was noted in §3.3 that the loss of sounds is likely to be a symptom rather than a cause of language loss, it nevertheless seems worthwhile to protect and reinforce the phonemic inventory of Sm'algyax wherever possible. At least these spellings will stand as a record to the unique complexities of the language.

## B. STEM FINAL LENITION

Lenition also occurs stem finally with voiceless stops (not ejectives) if the following morpheme (i.e. a suffix) begins with a voiced segment. There are two different spellings of the stem *daat* 'crew a boat' depending on which suffix it hosts. As the following examples show, it may also be spelled *daad* when a voiced segment follows:

> daat (v) *crew a boat* Dzon di **daats** Sam. *John is Sam's crew*. USAGE VARIANT: daad- PLURAL: didaat

> didaat (v) *crew a boat* NOTE: *Plural* 'Nüüsm dm di **didaadu**. *You all be my crew*. USAGE VARIANT: didaad- SINGULAR: daat

This alternation is well established in the Sm'algyax writing system, and unlike the word initial alternation that occurs in connected speech, considered in (A), stem final lenition is a morphophonemic (rather than articulatory) phenomenon. Also, people can relate either shape to the appropriate meaning because this process happens word finally and only concerns the feature of voicing.

There are a small number of cases in which this alternation does not occur. However, as these cases have not yet been identified in the dictionary (because the process of identifying all the words for which the alternation does take place is incomplete), it is not possible to be more explicit at this time. Obviously, this is an area that deserves attention in the development of the next draft of the dictionary.

Overall I suggest that the general statement that 'voiceless consonants become voiced if the following syllable begins in a voiced segment' can be expressed in the orthography (i.e. write *b* instead of *p* etc.) and that it is easier to learn the exceptions to this rule than to learn all the cases in which it applies. The nonlenited forms of these words are treated as the basic forms in the dictionary and are listed as the head words. The lenited forms are listed within relevant entries as 'usage variants'. Once it is clear which stems do not take part in this alternation they can also be identified in the dictionary.

## C. PALATALISATION

Although statements are sometimes made regarding the derivation of palatalised consonants by rule in Sm'algyax, palatalised consonants are in fact phonemes in this language. Consider for example, *goo* 'what' and *gyoo* 'anchor'. Especially in the environment of a following i some writers (cf. Dunn 1995:xi) have begun to write all palatalised velars *gyi*, *kyi*, and *k'yi* as *gi*, *ki*, and *k'i*. The fact that it can be quite difficult to distinguish between a palatalised and a non-palatalised velar in the environment of a high front vowel seems to be a factor in this change.

If *gi* is used to write *gyi* there is no longer any possibility for examples of non-palatalised *gi* to be represented in the orthography. It would be a real overstatement to suggest that this rule always applies, particularly across syllable boundaries. This leads to a misrepresentation of Sm'algyax, because it implies that whereas the other vowels can occur after a palatalised velar (*gye*, *kyo*, *k'ya* etc), high front vowels never occur with palatalised velars. If the characteristics of a shallow orthography are to be maintained then this is not a helpful convention to foster.

In the SLD there are examples of both gi and gyi as the following entries show:

> Gisbutwada (n) *Blackfish clan* Gisbutwada di pteegu. *My clan is the Blackfish clan.*

> gyiimst (n) *match* NOTE: *Made of cedar bark, archaic* USAGE VARIANT: gyiimsd-

The spellings of these words was made on the basis of the pronunciation of the words by members of the dictionary committee and their intuitions about the presence of the phonemes /g/ and /gy/. In a number of cases the non-palatalised or palatalised alternant is given as a variant:

> gitwaaltk (n) *attack* Wayi, ła dm goydiksa gitwaaltk. *Well, they are here ready to fight.* USAGE VARIANT: gyitwaaltg- VARIANT: gyitwaaltk

> gyik (adv) *again* Gyik silmhawn da goo nab małdn da k'am. *Say it again, what you told us.* VARIANT: gik

This solution avoids forcing the reader to interpret all cases of *gi* as being distinctly palatalised.

## 9.3 Featural systems and reduced orthographies

The practical orthography uses diacritics to code phonetic features that tell the reader the form in question has a particular characteristic. Other languages that make some use of featural information include Japanese and Korean. Mattingly (1992:19) reports that diacritics have a small role in the Japanese spelling system where they indicate changes in articulation, and in the Hangul script (Korean) glottalisation is represented by doubling, and aspiration is represented by adding an extra stroke to basic (stop) characters (Hannas 1995:164).

The features represented by diacritics in Sm'algyax are the very features that distinguish its phonology most clearly from English phonology. This is a natural consequence of adapting the English orthography to the Sm'algyax language. The following table shows the use of the diacritics. The umlaut is used to represent unrounded sounds, back sounds are underlined, and the apostrophe denotes glottalised sounds. Diacritics are used with both vowels and consonants.

| Feature | With diacritic | Without diacritic |
|---|---|---|
| Rounding | <ü> (high unrounded back vowel) /ɨ/ | <u> (high rounded back vowel) /u/ |
| | <ẅ> (unrounded velar approximant) /ɰ/ | <w> (labialised velar approximant) /w/ |
| backness | <a̲> (low back vowel) /ɑ/ | <a> (low front vowel) /a/ |
| | <k̲> (voiceless uvular stop) /q/ | <k> (voiceless velar stop) /k/ |
| | <g̲> (voiced uvular stop) /ɢ/ | <g> (voiced velar stop) /g/ |
| glottalisation | <a'a> (glottalised long low front vowel) (also <o'o>, <a'a>, ...) | <aa> (long low front vowel) (cf <oo>, <aa>) |
| | <p'> (ejective voiceless bilabial stop) (also <k'>, <k'w>, <k'y>, <k̲'>, <t'>, <ts'>) | <p> (voiceless bilabial stop) (cf <k>, <kw>, <ky>, <k̲>, <t>, <ts>) |
| | <'m> (implosive bilabial nasal) (also <'l>, <'n>, <'w>, <'ẅ>, <'y>) | <m> (bilabial nasal) (cf <l>, <n>, <w>, <ẅ>, <y>) |

Table 9.3: Diacritics in Sm'algyax

The use of diacritics for featural information in Sm'algyax opens the possibility of writing Sm'algyax without the diacritics. This is in fact widely practiced by many Sm'algyax speakers who are at least partially acquainted with the practical orthography. When a subset of the practical orthography is used in this way, it is an example of a reduced orthography.

Hebrew (which has diacritics for seven vowels and a feature diacritic which distinguishes stops and fricatives) and Persian (which uses diacritics to represent three vowel sounds) are well known reduced orthographies. The

convention in Hebrew is to write books for children using diacritics that represent vowel sounds but to dispense with them in adult materials such as newspapers. Frost and Bentin (1992:30) note: "Without the vowel marks the beginning reader in Hebrew would have to rely on the holistic recognition of consonant clusters and their correspondence to spoken words which ... is extremely ambiguous." The provision of diacritics for readers who need them is a practical compromise which might also work for Sm'algyax. Nevertheless, there are some differences between Sm'algyax and these other languages, which need to be taken into account.

Most obviously, the Hebrew and Persian languages are spoken by large populations, associated with particular nations and cultures. In contrast Sm'algyax is spoken by a small population; in fact, many Tsimshian people do not speak the language at all (see Chapter Three). Sm'algyax language is associated with a particular culture but this culture has undergone dramatic changes in the past two centuries as a result of contact with Europeans and because the territory of the Tsimshian people is now part of Canada. In other words, the numerical, cultural, and political supports for Sm'algyax have been strained in the past, and the results are clearly seen in the reduced vitality of the language.

Sm'algyax is no longer being acquired by children as a first language. This is both a result of the decline of Sm'algyax, and the cause of continuing decline. Again, this is in contrast to languages such as Hebrew and Persian. Furthermore, relative to these other languages there is really very little literature of any kind in Sm'algyax, and what does exist is generally only used in schools (some of the religious materials are also used but these are generally in the Anglican orthography).

Whilst the task of a poor or learning reader is to decipher the code of an alphabetic system using the symbols to get information about phonology and then use the phonological information to hypothesise the shape of the word, a good reader uses the shape of the written form as the basis for a hypothesis about what the word is. Good readers bypass a significant amount of phonological information during reading (see Frost & Betin 1992:33, Mattingly 1992:17).

According to this model (based on the orthographic depth hypothesis, which was described in more detail in §9.1), good speakers who are also good readers use their knowledge about the 'shapes' of words in order to read successfully. The basic assumption is that reading is to a large extent a process of recognising words in print. That is, the writing system is not treated by readers as a representation of pronunciation. Rather, fluent readers use the writing system as a representation of unitary words. This is only possible if readers are both fully literate and fully fluent in the language they are attempting to read.

The reason why writers of Hebrew and Persian are able to dispense with diacritics when they are writing for adults is that adults no longer rely as heavily on the strategy of interpreting a written word as a string of sounds. Instead, adult readers look for the characteristics of the word which distinguish it visually from other related or similar words, using cues from the context to assist them in arriving at the right interpretation for the sign (Frost & Bentin 1992:33).

It is probably the case that children who are not yet good readers in Hebrew and Persian find texts like newspapers quite difficult to read. So long as there is a general correlation between the target audience and the orthographic style of the text, this is probably not a real problem. However, as there are no doubt adults who could fairly easily read in the full system but struggle and ultimately avoid having to read the reduced system, the meaning of literacy in Hebrew and Persian communities may be affected.

Many writers in the Tsimshian community do not make use (or at least not consistent use) of the diacritics described above. Although this is a valid choice for writers to make (and is consistent with practice elsewhere

that reduced orthographies are available), a reduced orthography does make additional demands on the reader by making the text less phonetically transparent. Given that Sm'algyax is an endangered language and many of the current writing efforts are directed at supporting language learners, it is this aspect of using reduced orthographies which deserves special attention.

The readers of Hebrew (at least in Israel) and Persian can be divided into two basic groups. Firstly, there are children fluent in the language who are learning to read; secondly, there are adults who can both speak and (to varying degrees of proficiency) read the language. This situation leads to the practice of including diacritics in works designed specifically for children to assist them in reading, but excluding diacritics from texts intended for adult readers (who it is assumed do not require such additional assistance).

The readers, and potential readers, of Sm'algyax form more complex groups as fluency in Sm'algyax and literacy in the language are variables that may not correspond to each other. Furthermore, it is important to emphasise that the difference between a speaker and a non-speaker is actually represented in the community by degrees.

| Years of age | Fluency in Sm'algyax | Literacy in Sm'algyax (PO) |
|---|---|---|
| 70 and over | generally excellent | generally very poor |
| 50-70 | ranges from good to excellent | ranges from poor to excellent |
| 30-50 | ranges from poor to good | ranges from poor to excellent |
| under 30 | generally limited | ranges from poor to excellent |

Table 9.4: Variables in Sm'algyax fluency and literacy with corresponding age groups.

The oldest and most fluent group of Sm'algyax speakers (aged 70 and over) includes a number who are familiar with the Anglican orthography, but very few who are familiar with the practical orthography. Most speakers in this group are no longer directly involved in language support activities, but many are happy to share their knowledge with members from younger groups. Members of this group do not tend to show any interest in learning the practical orthography, but are generally supportive of the language activities currently going on.

The next group is made up of Sm'algyax speakers (aged 50 to 70) whose fluency ranges from good to excellent. Speakers in this generation have all been exposed to English orthography and the vast majority are literate in English. The Sm'algyax language teachers are probably the most proficient members of this group in terms of their Sm'algyax writing skills. However, there is no reason for others not to join them as skillful writers.

Although many members of this group are good speakers, they can really only muddle their way through a writing or reading task. Many of these people lack confidence, rightly assessing themselves as being unclear about the conventions for writing Sm'algyax, and consequently being reluctant to write.

A typical difficulty is the use of the grapheme x. In English this is used to represent the consonant cluster /ks/. This is a very common sequence in Sm'algyax and writers sometimes inadvertently use the English spelling. However, the grapheme *x* actually represents the sound /x̣/ in Sm'algyax, leading to a spelling mistake. As writing is frequently intended to be read by others, the reluctance of these inexperienced writers of Sm'algyax to 'have a go' is understandable. There is a good chance that any mistakes they make will be noticed by others.

The main task for this group in becoming better readers and writers of Sm'algyax is to learn the conventions of the Sm'algyax writing system (i.e. orthography, plus spelling and punctuation). Ultimately this group is likely to choose to avoid writing with diacritics. They will quickly become fluent readers and start to read by trying to recognise words by their shape.

This group is likely to be the main source of new writing in Sm'algyax for the next few years. The most important prerequisite to writing in Sm'algyax is speaking Sm'algyax. In choosing to avoid the use of diacritics it will be crucial for speakers to consider their audience.

Among the younger generations are a number of people who are able to use the practical orthography for reading and writing. Among speakers under fifty years of age are a few individuals reasonably fluent in the orthography. Roughly speaking, members of these generations learn to read Sm'algyax at the same time as they learn to speak it and they rely on the phonological information provided by diacritics to achieve a phonological interpretation of the orthography. In many cases degrees of Sm'algyax fluency and literacy coincide; however, there are also a number of people who have learned about the practical orthography in language classes without yet gaining fluency. They attempt to read Sm'algyax for two reasons: to increase their vocabulary, and to increase their skill as speakers of Sm'algyax. Because they are learners, contact with a reduced orthography will at best lead to confusion about the sound of unfamiliar words. At worst it will lead them to pronounce unfamiliar words as if they were English words (remember that the diacritics represent the features unique to Sm'algyax). Learners are not able to predict where these features should go.

Furthermore the opacity of a reduced orthography for Sm'algyax learners will mean that they experience more difficulty and frustration in reading because the information that would allow for efficient phonological strategies of reading are absent. This effectively compounds the other pressures and difficulties associated with language learning and is likely to put off a number of learners.

Children who are being exposed to Sm'algyax for small but regular amounts of time during school hours deserve extra comment. Although their task as language learners is similar to the task of adults, their exposure to Sm'algyax coincides with their acquisition of literacy in English. Children in this program do not learn to speak and read Sm'algyax unless their learning is generously supplemented by speakers outside of school, particularly parents and grandparents.

Nevertheless children still benefit from exposure to Sm'algyax language and orthography in school programs. It seems to be easier for adults who have had this experience with the language at school to continue learning later in life. Again, the most significant factor is the amount of supplementary language learning these people obtained outside of school.

## 9.4 Recommendations for the development of the practical orthography

Overall, I have favoured spelling conventions that represent the phonemic characteristics of words in the writing system. This is in keeping with the shallow nature of the Sm'algyax orthography, and results in less work for both readers and writers. These recommendations generally follow those observed by Mulder (1994:28).

Over and above these rules, correct spelling is ensured simply by making sure the phonological values of the practical orthography are used properly, and confusions with English are avoided. Graphemes with different values in the English writing system can be especially troublesome. They need to be written consistently so that learners can be made aware of their occurrence and use them.

Finally, I should note that with the exception of stem final syllables which receive epenthetic vowels, I generally favour the morphemic spelling of stems. It is possible to do this in Sm'algyax while maintaining a shallow orthography because there is very little variation in the shape of morphemes across different contexts. Neither

stems, nor derivational morphemes tend to exhibit much variation.[14] Consider the examples of the dependent stem -*hawli* 'back':

> gyilhawli (n) *up in the hills; up in the mountains* Gyilhawli dm wil dp güül maay. *We're going to collect berries in the hills.* VARIANT: gyilh<u>a</u>li

> txalhawli (v) *behind* Txalhawli w<u>a</u>p siipk di wil dzog<u>u</u>. *I live behind the hospital.*

and the following examples containing the derivational prefix *aks-*:

> aksyaa (v) *accumulate; increase; get fat* Ła aksyaa sg<u>a</u>buu hashaas da Txalgiyu. *The dog population has increased in Hartley Bay.* PLURAL: akswaalxs

> aksya'ansk (n) *savings account* Lutgu gawdi na aksya'ansk daalayu. *My savings account is all empty.* VARIANT: aksyaamsk

The conventional spelling of morphemes of all kinds aids word recognition and makes the relationships between words in a derivational family easier to understand. Table 9.5 summarises the spelling principles identified in the previous sections.

| Type of variation | Cause of variation | Suggested spelling convention | Comment |
|---|---|---|---|
| Vowel length (§9.2.1 A) | intonation contour changes vowel length | Spell words as pronounced out of context. | Results in a lower number of long vowel spellings |
| Unstressed vowels (§9.2.1 B) | neutralisation of vowel sounds | Follow the spellings listed in the dictionary. | Allow that the spellings in the dictionary may change a bit until conventions are settled. |
| Back <a> (§9.2.1 C) | neutralisation of vowel sounds | Always use the grapheme a when a back *a* occurs in a stressed syllable. | Also appropriate to use in proclitics in the environment of a uvular consonant. |
| Epenthetic vowels (§9.2.1 D) | break up of consonant clusters | Where an epenthetic vowel occurs it should be included in the spelling. | |
| Word initial lenition (§9.2.2 A) | connected speech | Always use the non-lenited forms. | |
| Word final lenition (§9.2.2 B) | voicing assimilation | Write the voiced alternant of stem final voiceless stops and affricates when followed by a voiced sound. | Words for which this is not the case need to be identified in the dictionary. |
| Palatalisation (§9.2.2 C) | assimilation of place of articulation | Write the palatalised stops in environments where they are heard or as indicated in the dictionary. | The orthography does not distinguish between phonemic palatal stops and stops which have become palatal due to assimilation. |

Table 9.5: Summary of spelling rules suggested for Sm'algyax writing system and used in the SLD

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14. The notable exception are the lexical clitics and derivational prefixes Boas spelled with a schwa which are discussed in §9.2.1 (B).

The practical orthography has been used for over twenty years in the Sm'algyax Language Program. It is the only orthography in which any number of Sm'algyax speakers could be said to be literate. As loyalty to the Anglican orthography diminishes with the death of those people who were accustomed to using it in worship, there is less dissent within the community about the practical orthography. Other systems will no doubt continue to be created by individuals within the community who wish to write their language. The Tsimshian community must make a concerted effort to educate any interested speakers or language learners about the practical orthography in order to minimise this type of situation.

The practical orthography is the most widely used system in the community and the only system used in publications over the past twenty years. The development and use of other writing systems which distances the people who use it from all recent resources written in the language can only be seen as a backward, divisive step. However, it is not constructive simply to be critical of the efforts of individuals who develop their own writing systems. Individuals who take this course put a great deal of time and energy into the task and do so out of a commitment to their language. Most significantly they adopt this strategy because it seems to them to be the only viable one available. Easier access to education about the practical orthography would be one way to avoid this problem.

Given that the majority of Sm'algyax speakers are not literate in the practical orthography, all public writing and all materials written for learners should be produced using the full orthography. This means that texts are accessible to the whole community, giving everyone an opportunity to get acquainted with the writing system. There are some situations in which the use of the full orthography will not be possible. In order to write e-mail, or in other situations in which use of the Sm'algyax font is not possible, a writer may have no choice but to use the reduced orthography. It is a positive feature of the Sm'algyax system that it at least has the flexibility to be used in these circumstances, even if the readability is reduced in such cases.

Note that the character <ł>, which is generally written even in the reduced system, is not available in contexts such as these. Some writers use <l> instead which is consistent with the avoidance of non-English grapheme features. Unlike the cases involving diacritics, people do not seem to recognise <l> as a reduced form of <ł>. I suggest that <ł> is not an <l> with a <~> but a unique letter analogous to <t>; that the <~> is not a diacritic (it is also written as < ł >); rather it is a part of the letter <ł>. In order to represent this graph on standard keyboards there are many possibilities. They range from the use of a free symbol such as <!> or <\> to the use of a diagraph such as <ti>, <sl>, or <lh>. A frequent choice in the past few years has been the symbol <£> which resembles a capital <ł> (for example, this has been the practice in the UNBC language classes). Where people can use any character from an extended character set this makes for a viable alternative; however, this graph is absent from the standard keyboard.

For speakers of Sm'algyax to become confident writers, it is imperative that the conventions associated with writing Sm'algyax be available in a clear and simple format. Learners of Sm'algyax have additional needs. They lack the language skills required for reading a reduced orthography. For their sakes it is important that public writing in Sm'algyax be produced using the full orthography. If a time comes when the number of fluent speakers is great enough, a situation similar to that found in Hebrew or Persian will naturally arise. However, given the state of the language at this time, the benefits of the full orthography that makes Sm'algyax accessible for all readers outweigh the costs to writers in making sure the diacritics are present.

## 9.5 Word boundaries in Sm'algyax writing

The morphology and syntax described in Chapter Four pose some interesting problems for the Sm'algyax writing system. On the whole, writers prefer not to create lengthy strings of graphemes and tend not to treat lexical clitics as part of the stem orthographically. Occasionally this principle of writing meaningful units as separate orthographic words is extended to compounds and even derivational prefixes.

One of the greatest difficulties in the orthographic treatment of lexical clitics is the representation of words that contain lexical clitics (modifiers and locatives), which are no longer considered to be independent words (because they have become lexicalised). Whereas it seems perfectly acceptable to treat non-lexicalised clitics as orthographically independent words (reflecting their syntactic status in the phrase), it is misleading to present lexical clitics as orthographically independent words if they have been fused to the stem in order to create a new word. The same is true of compounds. Once an expression is lexicalised and refers to a single concept (rather than a combination of concepts), it should be treated as a single orthographic word.

Lexicalisation should thus be the key to deciding whether or not a clitic or compounded element is treated as a part of the orthographic word. If the construction in question is lexicalised then it may be written as one word. If the construction in question is not lexicalised it should be treated as containing more than one word. Since lexicalisation is a process, and constructions may show different degrees of lexicalisation (some people will consider the construction to be conceptually unified while others consider it to be conceptually complex), there will be some variation in the way different writers treat some constructions.

Beynon, probably the most prolific writer of Sm'algyax, in his manuscripts tends to attach the nearest lexical clitic to the stem and treat the others independently. This is a useful convention for managing long strings of lexical clitics because it restricts the length of 'words'. The phonologically intermediate status of the proclitics is also neatly represented in this system. Once a proclitic is a certain distance from the stem it is unable to rely as heavily on the stem for support.

In the dictionary, only lexicalised forms have been included as entries. All of the lexical clitics and derivational prefixes are also listed as head words with a hyphen following to indicate that they are not phonologically independent words. In the example sentences, the treatment of the clitics and affixes reflects the authors' preferences so that the lexicalised clitic + stem units are more likely to be written as one word than the non-lexicalised units.

The principle of writing lexicalised constructions as unitary orthographic words makes explicit and motivates the practice that is emerging among writers of Sm'algyax at this time.

## 9.6 Conclusion

There have been a number of writing systems used to record Sm'algyax over the past two centuries. Today the practical orthography is the most widely used writing system in the Tsimshian community. However, a great many Sm'algyax speakers do not know how to use this orthography, and sometimes individuals create their own writing systems, so great is their desire to write the language.

As an endangered language, Sm'algyax will benefit most if the community generally becomes literate in a single orthography. The practical orthography is the obvious choice for the Tsimshian community as it has been used in the Sm'algyax Language Program. The practical orthography has also been used in a variety of

language teaching materials such as the SLD. The spread of literacy in the practical orthography will require effort both from learners and from teachers. Only when conventional spellings for the majority of Sm'algyax words have been established and are consistently used in writing will reading and writing become simple tasks for Sm'algyax speakers.

This chapter described the spelling suggestions followed in the development of the SLD. It takes advantage of the shallow orthographic system represented by the practical orthography, which represents virtually all the phonemes in the language. Principles for organising word boundaries were also presented here. Together, these principles provide conventions for a fully-fledged Sm'algyax writing system.

# Chapter Ten:
# Variation in Sm'algyax

## 10.0 Introduction

The community of Sm'algyax speakers are highly sensitised to idiolectal and dialectal differences between speakers. This seems to stem from the fact that historically each village had its own dialect, distinguished from others by a combination of minor phonetic differences, minor variations in many word forms, and some different word forms for particular lexical items. With the development of interest in revitalising Sm'algyax, the differences between speakers have become increasingly problematic.

There is tension between the desire to accommodate differences which everybody knows exist within the speech community and the desire to promote 'true' Sm'algyax. The pedagogical goals of language work in the community have set the parameters of this issue. As far as the SLD is concerned, the tension may be stated as follows: on the one hand, it does not help the learner to include every possible spelling of a word that has ever been made since this gives them too many choices, making the dictionary difficult to use; on the other hand, it is very important to represent the variation that has psychological validity for Sm'algyax speakers – to omit this is to fail to describe the language accurately.

These factors make it important to deal with variation in the language in a systematic, balanced way. Practical constraints, as well as the fact that the development of the SLD was a community directed project, mean that some framework was needed to assess the differences that arise so that such variation could be treated consistently and accurately in the dictionary.

The prescriptive nature of the SLD is discussed briefly in §10.1, with a review of the types of variation present in the language. In §10.2 a critical discourse analysis of the role of standardisation is presented. The discussion focuses on the. development of spelling conventions for Sm'algyax (tracking the fate of the conventions suggested in Chapter Nine). Then in §10.3 a framework for assessing variation in Sm'algyax is discussed. Finally, principles for managing variation in the SLD are provided in §10.4.

## 10.1 Prescription in the Sm'algyax Learners' Dictionary

As a document that presents information about Sm'algyax in an orderly and systematic way, the SLD is inevitably representing a somewhat idealised form of the language. Practical constraints require that some limits are imposed on the information included in the dictionary. In particular, the use of the dictionary as a pedagogical tool imposes limits on the amount of variation represented in there.

The cultural understanding of dictionaries as prescriptive documents is very strong. The reasons for the Tsimshian community to support the project were closely related to the functions they understood the dictionary could have. The primary functions for the dictionary as far as the community was concerned were related to increasing the status of the language through documentation and revitalising the language by using the dictionary as a teaching aid.

Because the dictionary is used by learners of the language who are relying on it for information on how to speak Sm'algyax, the dictionary is a prescriptive document. This is especially true for learners or people who

are unable to spell Sm'algyax confidently without the dictionary, who will use the dictionary as a guide to spelling.

For these reasons variation within the language was an important area in the development of the dictionary. The types of variation present in the language were discussed in Chapter Three and examples were given there. The parameters for variation that were most apparent in the lexicon were:

- registers associated with public versus private speaking: the public register contains more archaisms.
- language change: some sound changes (e.g. consonant cluster reduction) have not yet been adopted by the entire community.
- dialect differences: although these differences do not form discrete boundaries between communities, there are many examples of variant forms that can be broadly associated with particular speech communities.
- differences based on fluency: semi-speakers form a significant part of the Sm'algyax speech community and individuals' ability in the language varies significantly.

A few additional remarks about dialects are worth making here. The distribution of forms caused difficulties in the dictionary project because we found it was frequently misleading to state that speakers in one place use a particular form. It was often the case that the form was used by at least one other group in another village somewhere within the Sm'algyax speech community. In other words, it was easy to make overstatements about the exclusivity of the use of word forms.

This variation seems to have developed because most speakers have a variety of Sm'algyax influenced by the home villages of each of their parents, as well as the village in which they spent most of their lives. At this time it is no longer easy to find speakers of pure, say, Hartley Bay Sm'algyax, as one of the language teachers observed. A direct result of increased mobility between communities has been that the speech community in any village (indeed any household) is rarely homogeneous. This is not to say that individuals never moved between villages in the past. What is new is the fact that there is no longer a strongly shared norm that these outsiders could deviate from or choose to adopt.

The long process of language shift in each community, particularly the practice of restricting talk in Sm'algyax to closed situations, has lead to the fragmentation of these speech communities. For several decades there have been relatively few opportunities for a shared norm in a community to be demonstrated and reinforced. This situation is exacerbated by the process of language loss (attrition) in individuals. Because of the lack of exposure to their own and other dialects of Sm'algyax, some speakers show limited lexical repertoires for areas that have not been central to their experience, as well as uncertainty about the exact form of words they use more often.

It is very common to explain the uncertainty over word forms arising from attrition as dialect differences. This is an important face-saving device for speakers. It allows speakers to turn their faded knowledge of Sm'algyax into faded knowledge about someone else's dialect of Sm'algyax; or (more usually) it allows speakers to assert the validity of their Sm'algyax in the face of others' objections. Differences in knowledge or ability become differences of dialect.

Had Sm'algyax somehow remained vital during this period of increased social mobility, it is possible that standardisation might have begun to take place. Instead, there has been a fracturing of linguistic cohesion so that individual varieties (idiolects) have frequently attained the status of dialects, particularly in the minds of younger speakers and dialects are rather more of an ideal than a reality for the lexicographer.

Although dialect differences are still recognised and maintained, they are no longer clearly defined in the minds of speakers, nor are they shared consistently by the speech community as a collective. Dialects in Sm'algyax cannot be described as a matter of course. They may still be partially described whenever speakers identify clear, shared differences between communities. In such cases words belonging to particular communities are identified in the dictionary.

In §10.2 differences associated with dialects by members of the Tsimshian community are considered using a critical discourse analysis. This shows that there is a basic tension within the community between being identified as a distinct (relatively homogeneous) group and being identified as a collection of unique and different groups. The tension is given added significance in the context of language revitalisation efforts because the community is relatively small and resources are limited.

## 10.2 Current discourses relating to the Sm'algyax orthography

In this section I examine the issues involved in the development of a standard spelling system for Sm'algyax. This section shows that the community itself may embody contradictory positions on language description or directions for language revitalisation that cannot be readily resolved. In these cases, the most practical response is not to find and impose a right answer but to seek to balance competing motivations and concerns.

The Sm'algyax orthography is both a cultural institution and a technical representational system for the language. Eira (1998) describes the powerful political meanings represented by orthographies:

> *...orthographies are constructed as symbols of identity for groups delineated by language, culture, country of origin, religion. They hold sacred status at various levels; they admit and bar access to knowledge and social strata. They are used to identify communities both as distinct and unitary; and they are imbued with the power to. validate and perpetuate the existence of a language or language group.*

**Eira 1998:172**

She argues that "the basis for orthography selection is fundamentally a question of the location of authority, which is in turn a function of the prevailing discourse" (Eira 1998:172). The term 'discourse' refers to the belief frameworks that members of the community use to understand and make decisions about their world.

Chapter Nine presents the development of the orthography from a technical linguistic standpoint. This is of course the discourse in which I personally am most at home (as a descriptive linguist). It is also the discourse that the Tsimshian community expects me to represent in discussions about the orthography because I am a linguist. As the following sections show, there are other discourses involved in the development of the Sm'algyax orthography, and the scientific one outlined above is far from being the most influential.

At this time discourse concerning the Sm'algyax orthography is centred on developing spelling conventions. These issues are addressed in the community through a number of different discourses. Spelling conventions are the active concern of only a restricted set of people. This includes the teachers in the Sm'algyax Language Program and a few others working in support roles to the program (such as myself). Although the wider Tsimshian community is understood to have much to gain from a well established orthography, very few people outside the Language Program make much use of the writing system. Until it is more widely understood and used, the orthography will in practice remain the prerogative of those (including students) associated with the language program.

The language teachers put a lot of effort into trying to ensure that the spelling they use is 'correct'. The spelling patterns that can be observed in their writings, particularly the instability of what appear to be long established spellings, is indicative of the pressures being brought to bear on the development of the spelling system through a number of different discourses.

Perspectives and practices in the negotiation of spellings can be identified as stemming from a number of the discourses identified in Eira 1998. A major focus within the community is pedagogical discourse (§10.2.1), expressed through curriculum development, with some recourse to scientific discourse in order to resolve practical issues (§10.2.2); an underlying orientation to political discourse is expressed in the community as a concern with dialect differences (§10.2.3); finally issues of individuals' status and authority that is treated here as community discourse (for want of a better term) (§10.2.4). As Eira notes (1998:173) discourses are visible to participants to varying degrees. When they are invisible they acquire the status of absolute truth. In the following sections I identify the main participants in each of these discourses and bring to light the understandings (belief frameworks) that inform them. A summary is provided in §10.2.5.

## 10.2.1 PEDAGOGICAL DISCOURSE

The focus of the Sm'algyax Language Program is to provide language lessons to elementary and junior high school students in the town of Prince Rupert and to all students in on-reserve schools. All the students in the program have English as their first language. The language program is in the process of expanding and will eventually be available to students at all grade levels. The language teachers also run adult language classes in the evenings during term time. Again the goal is to teach the language to learners.

The pedagogical discourse relating to spelling is focussed on the idea that the representation of Sm'algyax words in writing should be presented consistently by the language teachers. As far as the language teachers are concerned it is good pedagogical practice to present a unified form of Sm'algyax to all their students. This is true of syntax, word choice and orthography. Pronunciation is not identified as an issue in this regard (the focus is on developing the students' abilities to pronounce Sm'algyax phonemes not shared with English).

My position has also been that there will be benefits for the community if the spelling system is established and conventional spellings for words become widely shared in the community. I have argued that these developments would make the orthography easier to learn, and would make teaching the language easier as teachers would not have to spend so much time focussing on how to spell each word.

The study by Dixon and Kaminska (1997) on the influences of fresh orthographic information on spelling ability convinced me that many variant spellings are a real burden on both readers and writers. This study showed that exposure to misspelled words in English interferes with subjects' ability to spell those words for extended periods:

> *...prior exposure to an orthographic form of a word can affect spelling accuracy for that word, correct exemplars enhancing it and incorrect ones depressing it relative to baseline performance [i.e. the subjects' general ability as spellers]. This priming effect is persistent, lasting for at least one week.*

> **Dixon & Kaminska 1997**

If each exposure to a different spelling influences the writers' ability to spell that word, then a great deal of the spelling variation in Sm'algyax writings may be put down to writers being influenced by the variant spellings they observe in the writings of others. This is a particularly attractive explanation for the apparent instability

of long established spellings in the community. There is a core set of words used frequently by teachers in the Language Program that have not varied in their spelling over many years. Occasionally one of these words suddenly changes spelling. For example the word for a jacket or coat *gwüda'ats* transformed into *guda'ats* and was being spelled as such by a number of writers until someone pointed out that the word already had another ('better') established spelling.

## 10.2.2 SCIENTIFIC DISCOURSE

One of our stated aims for the dictionary project was to provide appropriate spellings for words. Our strategy was to spell the word the way it sounded in isolation and to spell morphologically complex words largely on the basis of how individual stems and affixes had been spelled. I would write these words on the board, in my own notes and include them in the dictionary database after each meeting. This process left decisions about spelling with elders from the community, and I thought, ensured that the spellings that resulted were community spellings.

Due to my intensive exposure to the spellings that the elders nominated as correct for different words, I developed the ability to spell most of them. That is, I used the spellings nominated in the dictionary committee as my target system and learned a conventional spelling for each word. This matches my (and most other people's) experiences of learning to spell in English. However, as I observed at the beginning of this paper, Sm'algyax does not in fact have a set of spelling conventions. I personally have them, and they are recorded in the dictionary, but the wider community does not share them.

As a result, I perceive that the spelling system I have learnt is the one nominated by the dictionary committee as their spelling system. In practice however, individual members of the dictionary committee do not spell the same way as the dictionary suggests and they perceive dictionary spellings, which I use, as belonging only to me. Thus, from their perspective the dictionary largely contains Tonya's spellings even though those spellings were nominated by the committee and not by me.

I suspect that this is common experience for linguists in my position. The fact that linguists are identified as people who consistently spell things in particular ways (so that some spellings are nominated as Tonya's as opposed to Jean's or John's by people in the community) indicates that we approach this problem differently from others.[15] Our work actually exposes us to many more vernacular texts than most other people, and the texts tend to be written using a single set of conventions (that is, the ones we choose to use). We take these spellings for granted, up to and occasionally including the practice of correcting others whose spellings diverge from our own.

Members of the Tsimshian community engage in our discourse and appreciate the fruits of these labours to varying degrees. However, experience suggests that the scientific discourse is in fact somewhat peripheral to the development of the spelling system. Spellings arising from scientific discourse are associated with the individuals that promote them rather than being incorporated into the spelling practices of the community. Although this has been something of a surprise to me, it seems to be a very positive indication of the community's authority over the language. As an endangered language, signs of interest and authority about Sm'algyax from the Tsimshian community suggest that there is a sense of ownership and commitment to keeping the language going.

Additional scientific perspectives about the use of the writing system have developed in the community. These ideas are elaborations of the ideas presented by linguists that the Sm'algyax orthography is 'shallow' and

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15.  Jean Mulder and John Dunn are other linguists who have worked for many years in the Tsimshian community.

therefore easy to learn to read and write. On the whole these relate to beliefs that words should be spelled how they sound as (writers believe) befits a shallow orthography. Furthermore, given that there is no clearly established target spelling system, it makes sense that speakers should resort to phonetic strategies.

### 10.2.3 POLITICAL DISCOURSE

The desire for consistent representations of Sm'algyax, espoused in both the pedagogical and scientific discourses, is in conflict with some aspects of the political discourse of the community. As far as this relates to language, the political discourse understands that Sm'algyax is comprised of a number of different dialects, historically related to the different tribes, and now more loosely related to different villages.

As Eira, among others, notes, an orthography "can function to define a national/cultural group by inclusion or exclusion (Eira 1998:177)." Tsimshian writers at different times seek to use the orthography for both these ends. Language teachers, in their decision to present Sm'algyax in a unified way to students, are seeking to be inclusive. They associate Sm'algyax with the Tsimshian Nation. Others in the community are critical of the hybrid form of Sm'algyax that they consider results from this strategy. They consider that the form taught in schools is inauthentic because it does not accurately represent any one of the Sm'algyax dialects associated with particular villages.

In §3.2.3 I showed that Sm'algyax dialects are not all that clearly associated with particular villages. In fact they are more easily associated with family networks than with villages. That is, they are increasingly indicators of private social ties rather than public social affiliations. Many of the words in the dictionary that are identified as belonging to one group are in fact also used by others. More significantly for the spelling system, some writers actively seek to differentiate their spellings from others in the belief that to be correct their writing must show the different pronunciations they know they have. Nevertheless, dialect differences are treated as a legitimate and significant point of inclusion/exclusion within the community.

This tension between village and Nation is reflected in many other areas of community life. Many disagreements that occur in the community, while they may begin as issues for particular individuals, quickly escalate into debates about the autonomy and power of villages or communities within the Nation. Like the notion of dialects belonging to particular villages, the notion of nationhood is both a reflection of reality and a particular interpretation of the facts. Although Tsimshian people have been identified and have identified themselves as a group since time immemorial, the nature of group membership has evolved like other aspects of the culture.

Political discourse then makes two contributions to the development of the spelling system. Firstly, it allows for the idea that Sm'algyax is the language shared by all members of the Tsimshian Nation. Agreement on this point allowed the dictionary project to be funded by the community, and allows families with ties to particular villages to enrol their children in language classes taught by teachers from other villages. Secondly, it allows for the idea that each village has a different dialect of the language that is associated with speakers from that place. Agreement on this point meant that community consultations about the dictionary focussed heavily on our ability to represent each dialect in a balanced way.

The conflicting desires for 'nationhood' (strength and political independence from the provincial and Canadian governments through unity) and village/tribe independence (freedom to develop local identity and group practices), are deeply felt within the community. So too are the linguistic aspects of this division. Through unity it may be possible to restore the language to the whole Tsimshian community; however, this may come at some cost to the use of dialects within the political discourse.

Nowhere is this more apparent than in the town of Prince Rupert. Although members of different villages continue to identify with each other in town through clubs and societies that provide mutual support for members, much of the negotiation with outsiders (i.e. Euro-Canadian institutions such as the law, the education system and so on) is conducted on behalf of all Tsimshian people or, more typically, on behalf of all First Nations people in the area. The presence of the Sm'algyax Language Program in Prince Rupert is due in part to the location of the town within Tsimshian territory.

## 10.2.4 COMMUNITY DISCOURSE

Decision making in Tsimshian society continues to rely heavily on a number of traditional structures and processes. The community is matriarchal, and people acquire status in the community by taking hereditary names that are associated with particular rights and responsibilities. Hereditary chiefs are generally men who have earned the rights to names carrying great power and significant responsibility for other people in their community. This traditionally involved years of training in many aspects of Tsimshian culture as well as demonstrations of leadership abilities. Although the system of hereditary naming functions in more limited ways than it did a century ago, the hereditary chiefs remain a significant locus of power and authority in the Tsimshian community.

Like all other aspects of community life, the community expects the chiefs to have significant input into the spelling system. Also, because it concerns the language, and by extension Tsimshian culture, the chiefs consider that spelling is an area in which they should concern themselves. Only when the chiefs were seen to be in favour of the dictionary project could it go ahead.

As individuals, the chiefs have varying attitudes towards the importance of Sm'algyax to the Tsimshian Nation, and some are more fluent than others. There is also a range of levels of literacy and attitudes towards dialect differences within the group. Some members of the group are also loyal to other writing systems for the language. In other words, in my experience, there is in fact a range of interest and ability concerning contributions that the chiefs make to the development of the spelling system.

The crucial point here is that other people are obliged to respect and follow the chiefs' point of view. This relationship between authority (who is qualified to 'say') and respect (the obligation to 'do'), can also be observed between generations. Elders are people in the community from among the older generations. Except for the most elderly, most people are able to seek knowledge about Tsimshian culture from someone (a parent, aunt or uncle, or a grandparent, etc.). Within the community there are also individuals who are identified and sought out because they are particularly knowledgeable about certain things.

In general, people are very circumspect about their knowledge. In my experience, younger people who are in fact quite knowledgeable about some aspect of the culture or who are reasonably fluent in the language tend to keep this to themselves. This is because there are others in the community who are authorised to explain and more experienced in deciding to whom and when such knowledge should be shared.

The chiefs exert a great deal of influence in the Tsimshian community. They are not generally informed about either the pedagogical or the scientific discourses relating to spelling and generally avoid making comments about areas where they do not personally feel qualified to contribute properly. Some chiefs are able to use the Anglican orthography, and most have opinions about whether the Nation should be addressing language maintenance. Occasionally they direct their attention towards the orthography. This can be a challenge for other members of the Nation who are more experienced at using the orthography. The chiefs' ideas must be respected because it is culturally impossible to contradict or ignore them, even when such ideas severely challenge the other discourses in which Tsimshian writers are engaged.

## 10.2.5 SUMMARY

It is clear that the spelling practices of individuals as well as the group as a whole are influenced by competing discourses. In some cases these discourses go to the heart of concerns about Tsimshian identity and culture, and language maintenance more generally. It is possible to explain some of the frustration Sm'algyax writers experience by identifying and acknowledging that the resolution of these discourses is in fact the fundamental process involved in developing a spelling system. Had the spellings nominated by the dictionary committee during my work with them been taken on board, the scientific discourse would have silenced these other concerns. In the long run I suggest that the community's strategy of grappling with these issues from the beginning is the better one. Forcing competing discourses underground does not actually make them go away.

# 10.3 Variation in Sm'algyax

The aim of this section is to identify functions of variation in Sm'algyax and to reach some conclusions about what sort of variation should be represented in the dictionary. I have identified three types of variation based on their functional status within the speech community. Firstly, there is variation that serves to distinguish, or is associated with, particular social groups or situations. Because this variation is recognised within the community as having particular meanings or uses, it is called 'functional variation'.

There is also some variation associated with social groups that is not identified as meaningful by the language community. I have called this 'non-functional variation' as it appears to be neutral in value for speakers. This kind of variation has very little psychological salience and even though in some cases its distribution could make it a marker of social identity, speakers will generally not recognise these different forms as variation. Very often this variation is associated with phonological changes gradually spreading through the community. Variation identified in Dorian 1994 as 'personal-pattern variation' also belongs in this category.

Finally there is variation that is highly salient to speakers psychologically but which is not associated with any kind of meaningful pattern within the community. This is called 'dysfunctional variation'. I have used this term because it reflects the disruptive nature of this kind of variation. Disruption occurs when people identify a difference as salient but are unable to assign meaning to it. They experience a misunderstanding and a significant increase in effort must be made in order for them to keep following the gist of what is being said. Dysfunctional variation is associated with language decay. It is a sign that the norms of the language are not being reinforced as they would be in a healthy language, and that people do not have a strong framework for fostering or abandoning variation.

In each case variation may affect the phonological, lexical, or grammatical patterns of speakers. Overall, the following basic reasons for variation have been identified: it is a marker of group identity, a marker of language style, a marker of individual speech patterns, a result of community-wide language obsolescence or of individual attrition.

I will deal with each type of variation in turn, considering the way it affects interactions between speakers.

## 10.3.1 FUNCTIONAL VARIATION

Where variation is recognised by speakers and associated with particular meanings, it may be said to have a function within the language. In general variation of this kind is either a marker of group identity or of a particular social situation. Both of these types of variation are present in Sm'algyax.

Dialect differences in Sm'algyax are subject to negotiation between speakers as the previous discussion has shown (see §3.2.3 and §10.1). This is an example of functional variation since Sm'algyax speakers take these differences as an indication of the identity of the speaker.

Variation may also be associated with the social setting in which speakers find themselves. There are many different ways to characterise variation of this kind, using terms such as style, domain, genre, etc. In Sm'algyax there is an important difference between the public register associated with formal speaking, which involves an element of performance, and a neutral register associated with private communication. Register differences are a type of functional variation as they mark the social setting of communication (see also §3.2.1).

## 10.3.2 NON-FUNCTIONAL VARIATION

There are cases in which variation seems to go unnoticed by members of the speech community. In these cases it seems as if the variation has no psychological salience for speakers/hearers. As it is largely ignored, this variation seems not to have any social meaning within the speech community. It seems to be 'nonfunctional'.

This is not to suggest that outsiders cannot identify variants associated with particular social groups, but it does seem as if some variation is treated as insignificant within the speech community. In Sm'algyax there are many examples of variation between speakers that are difficult to relate to variables such as age, social status, geography and so on. Dorian 1994b reports something similar, which she terms 'personal-pattern variation'. She suggests (1994b:674) that in small, enclaved communities with no written standard, language norming processes are quite different to the processes observed in communities that have an external prestige norm. I use the term 'non-functional variation' to describe personal-pattern variation and phonetic dialect differences that were not identified by speakers.

The development of the dictionary marked a change in the language norming practices of the Tsimshian community. As I noted in §10.2 this change was associated with considerable ambivalence. As far as the dictionary project was concerned, the main issue was how to map earlier language norms that allowed for significant personal-pattern variation on to a prescriptive document. Non-functional variation was only represented where the process of preparing the dictionary made differences overtly apparent.



Lax Kw'alaams (Port Simpson), British Columbia, 2008

For example, the distinction between [dz] and [ʒ] mentioned in §3.3 as a marker of the Lax Kw'alaams dialect was not represented in the dictionary because it is a phonetic distinction, invisible to Sm'algyax speakers, and irrelevant to the orthography. On the other hand, personal-pattern variation involving slightly different forms was included because exclusion of forms implied that speakers with those forms were 'wrong'. Among my consultants were cousins who had grown up in the same village, attended boarding school, and lived for a similar number of years in Prince Rupert. This variation could not be treated as dialectal. Two examples of their vocabulary are given in Table 10.1:

|            | 'toothpick'   | 'snail'       |
|------------|---------------|---------------|
| Speaker 1  | haga'waantk   | hadz̲a'üül    |
| Speaker 2  | haga'waan     | hadz̲a'üült   |

Table 10.1: Different word forms for 'toothpick' and 'snail'
in related speakers.

Non-functional variation refers to all examples that were also viewed as acceptable Sm'algyax by speakers but were never associated by speakers with variables such as age, social status, or geography and so on. This variation, which only became apparent during the preparation of the dictionary, seemed to have no significance to speakers at all. While the language remained a small enclaved community with no written standard, people did not seem to notice these variants.

### 10.3.3 DYSFUNCTIONAL VARIATION

Variation that does not show a relationship to a social group or communicative context, but which is psychologically salient for any reason, tends to create difficulties for listeners. Dysfunctional variation that does not give rise to some assignable meaning in this way is not generally discussed by speakers. In fact, it is only in the most pervasive or remarkable circumstances that dysfunctional variants of Sm'algyax words are explicitly identified and discussed.

Cases where somewhat obscene interpretations are possible attract the most attention. Although, because of their humorous nature, they are described by fluent speakers, these cases are rarely discussed without some allusion to the lack of knowledge about the language the use of such variants seems to indicate.

One example I heard about involved a Euro-Canadian school principal in one of the village schools. Some people had been out gathering chitons, a variety of shellfish which are called 'yaans or 'yaanst in Sm'algyax. There was discussion about this in the hearing of the school principal who stated loudly that he was very fond of eating 'yaan (possibly with the intention of procuring an offer of some of the chitons). Sm'algyax happens to have quite a different meaning associated with 'yaan. It is generally translated in the dictionary as 'excrement'. All those present with some knowledge of Sm'algyax had a good joke at the principal's expense.

Examples of extreme miscommunication are brought about by the misidentification of lexical forms by learners or less fluent speakers. As such they demonstrate the dysfunctional nature of variant forms which encode highly psychologically salient but unintended meanings.

This kind of variation should not be included in the dictionary as it is not representative of actual dialect differences. Many of these changes are brought about by the decline in the use of Sm'algyax: and are examples of incomplete learning. As dysfunctional variation most often causes either minor misunderstandings or brief moments of confusion, it is generally signalled by a mild frustration on the part of hearers who are having difficulty following what is being said because they are distracted by signals they cannot interpret satisfactorily.

The psychological salience of these variants forces listeners to attribute some kind of significance to the form (to interpret it one way or another). However, as this variation is not within the recognised norms for the language, the listener cannot easily or correctly interpret the marked forms. As a result listeners often treat unusual usages as 'wrong'. In a sense, this is a logical response. They are identifying forms or patterns that are not part of the conventional resources of the language. However, this conclusion creates further difficulties within the language community. The less fluent speakers who tend to produce these forms become reluctant to speak if their language is criticised.

## 10.4 Managing variation in the Sm'algyax Learners' Dictionary

Clearly, functional variation is worth including in the SLD. Usage notes were used to provide information about register differences where these were widely recognised within the community. In some cases words that were archaic for some speakers and were associated with the formal public register were current for many other speakers. In these cases the words are not labelled as archaic since this assessment was not held by the majority of speakers. Dialect differences are identified where a form was clearly associated with a particular village. For example the following words are listed for 'pillow':

> mełŭk (n) *pillow, cushion* NOTE: *Kitkatla dialect*. Dm txa'yaawkdu mełŭk dziła lisaym ła'ati. *I'm going to take a cushion along when I watch the ball game.*

> mełüü (n) *pillow* P'lk'wa hoyksit da mełüü. *Feather down is used in pillows*. SEE ALSO: mełŭk pillow (Kitkatla).

Nonfunctional variation is represented if there was a formal, phonologically significant distinction between the forms. Variation that has no phonological significance is not represented in the dictionary. To include variants that cannot be treated as belonging to distinct dialects, the following criteria were used to decide which of the forms should be given 'head word' status in the dictionary. Firstly, forms that appear to contain an inflectional ending are avoided and then the form that is phonologically 'fullest' (i.e. longest) is chosen as the head word. Thus haga'waantk and hadza'üült were chosen as head words for their entries (see Table 10.1).

Dysfunctional variation is not included in the dictionary for obvious reasons. However, it is sometimes difficult to distinguish variation which is indicative of healthy language change from variation due to incomplete learning. As we have seen it can be tempting to explain variation as a result of language loss; Sm'algyax speakers as well as linguists are prone to this explanation of variation in others. Sm'algyax speakers sometimes consider variations in their own speech to be examples of dialect differences even when this is not really the case. Where the nonstandard pattern is shared by a group of speakers this is particularly difficult to judge.

One example of a distinction which may either be due to a dialect difference or to a decline in the shared system of the lexicon occurs when speakers in one place use particular words with non-standard meanings in spite of their consistent use in other places. Consider the following case.

The village of Kitkatla lies on Dolphin Island in the outer line of islands between the mainland and the Hectate Strait. This location makes the village the most exposed to the sea of all the Tsimshian villages. Snow rarely falls here and even less frequently stays on the ground because of the temperate climatic effects of the sea.

One speaker from Kitkatla reported having the following sets of lexemes:

> *waas*      rain
>
> *maadm*     sleet
>
> *mooksm*    snow

Compare this to the use of these words elsewhere:

> *waas*      rain
>
> *maadm*     falling snow
>
> *moksk*     snow on the ground
>
> *kyi'ak'aksm maadm* or *akslsgmmaadm*      sleet

Other speakers at Kitkatla prefer the second series of words for precipitation. This suggests that the first set is not a real dialect difference. If it was it should be shared by a significant number, if not the majority, of fluent speakers at Kitkatla. This raises the question of how to treat these differences in meaning. It is possible that a new series of words is developing in Kitkatla due to the unique climate of this village. However, it is also possible that this variation is a result of incomplete learning on the part of some speakers, albeit reinforced by the environment.

Regardless of its origins, it is possible that the first series of precipitation words will spread in Kitkatla and become a feature of the Kitkatla dialect. However, as far as I can tell this is not yet the case. Until this difference becomes shared by the majority of the community, I suggest it is not appropriate to include it in the dictionary. The breakdown in the transmission of Sm'algyax between different generations allows incomplete learning to take place and fosters localised variation such as this.

Examples of variation with distributions of this kind are particularly difficult to judge. Where variation is only reported by individuals (who may be showing signs of attrition or partial learning) it seems quite reasonable to conclude that the forms in question are not part of the language shared by the community and do not belong in the dictionary. The larger the group that uses variant forms, the more likely it is that the forms have been incorporated into the language so that the inclusion of a form which is clearly associated with a particular social group in the dictionary is appropriate.

## 10.5 Conclusion

Developing a set of practices to manage the representation of variation in the SLD was one of the most challenging aspects of the dictionary project. As the discussion in §10.1 showed, this was a significant problem because people expected the dictionary to be a guide to proper Sm'algyax usage. The ambivalence of the community as a whole to the development of a written standard (the very thing the dictionary was meant to represent), discussed in §10.2, and the complexity of the function and distribution of forms described in §10.3, were the main issues to be addressed in developing a strategy for representing variation in the SLD. As a community directed project it was important for me to develop a solution that members of the community could understand, that reflected speakers' perceptions about the language, and that they felt comfortable with. By assessing the functional status of variation from the perspective of speakers, and by incorporating a large number of variants that were not obviously associated with any particular dialect or register, speakers' perceptions about the language could be incorporated into the dictionary.

# Part Four: Reflections on the community directed approach
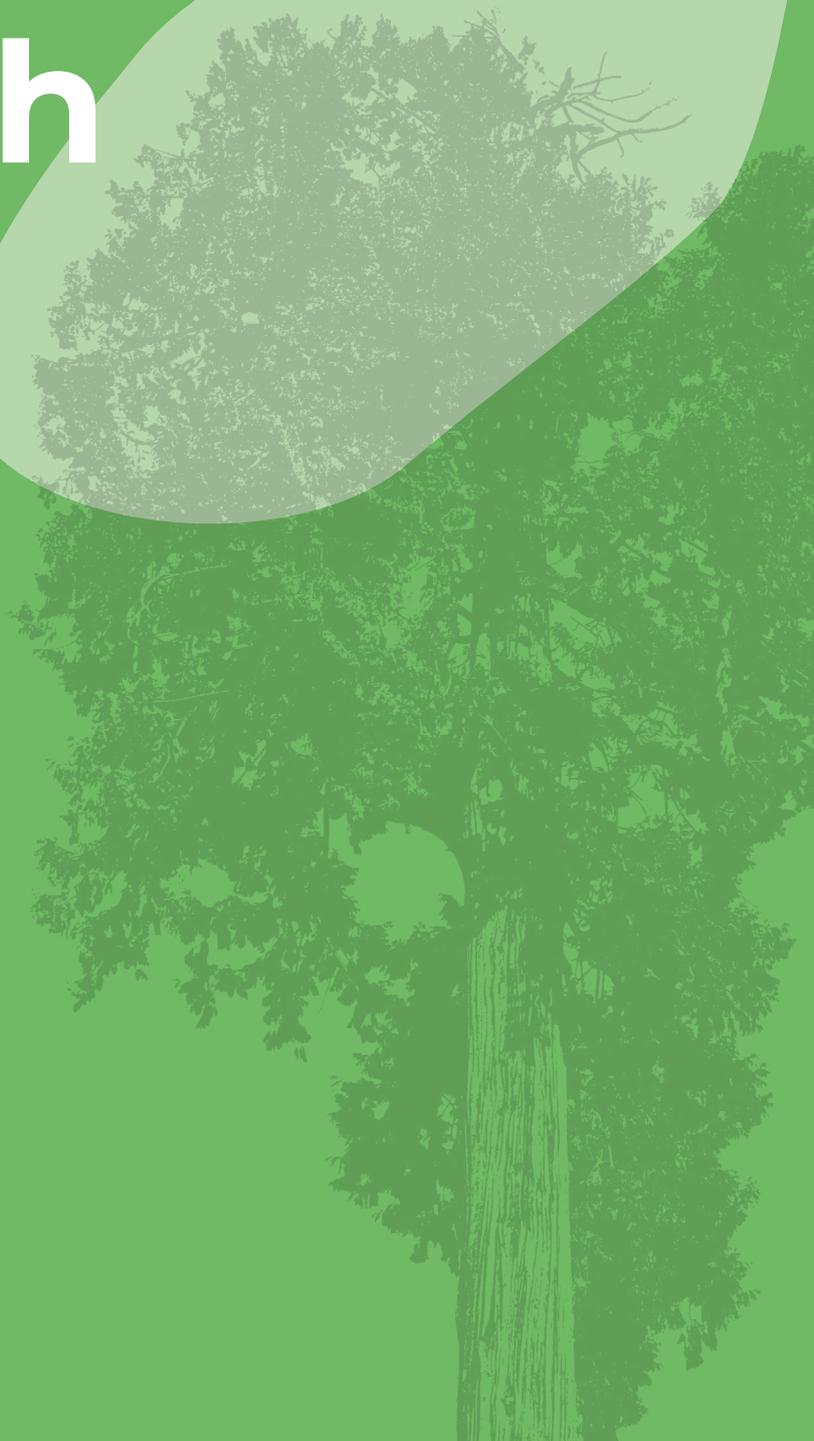
**The Sm'algyax dictionary project was conducted over a period of six years. During the most intensive phase of the project over twenty speakers were involved as language consultants. Progress of the project was discussed periodically at a range of Tsimshian forums including the Tsimshian Tribal Council Annual Assembly, the Ts'msyeen Sm'algyax Authority, and the Sm'algyax Dictionary Committee.**

Given the complexities of the relationships between stakeholders in the project, for all of us to cooperate over such an extended period was in itself no mean feat. When the first draft of the dictionary was released in 1998, fifty copies were sold in forty-five minutes, an indication of the high level of community interest in and support for the project. The five volumes of the completed dictionary (Sm'algyaxEnglish and English-Sm'algyax versions for adults and children as well as a thesaurus) totalled approximately fourteen hundred pages. This represents a major resource for the Tsimshian community both as a learning tool and as a political lever. The project was clearly successful in meeting its stated goals. The success of this project in terms of its scale and the level of community support must be attributed to the community directed approach that we took.

However, along with the successes, there were a number of challenges: personal and professional tensions for me as a linguist. They also included personal and political tensions for the community. (A few specific examples of the latter have been discussed in Part Three.)

There are valuable lessons to be learnt from the challenges and tensions that were inherent to the dictionary project. Chapter Eleven seeks to identify strategies for managing some of these challenges in order to make community directed language work more sustainable for those involved and more effective in using the limited resources available to achieve the goals of language documentation, revitalisation, and community empowerment.

# Chapter Eleven:
# Community directed language work: requirements and outcomes

## 11.0 Introduction

Linguistic descriptions frequently relegate the personalities and processes involved in data collection to the background. There are cases, for example in a reference grammar, in which this may be an appropriate choice, allowing the reader to focus on particular aspects of language structure. In the case of community directed language work, where personalities and processes take on extra significance, it can be helpful to bring these aspects of the research to the fore.

In September 1996 I first approached members of the Tsimshian community about collaboratively developing a dictionary for their language, Sm'algyax. At that time I had already been working on developing a dictionary for over a year and a half, using previously published sources. The project was the basis for my PhD dissertation. It was another year and a half before the dictionary project really got underway in the Tsimshian community. During that time, and indeed for the duration of my involvement, I was on a very steep learning curve.

Linguistic analysis was important to the development of the dictionary. Sm'algyax is a somewhat polysynthetic language with a large phoneme inventory and a number of different dialects. These factors had to be managed in order to produce a coherent and useful document. These are the types of issues that my university department expected me to tackle, and the issues that were to form the basis of my dissertation.

For all their practical importance however, the linguistic issues involved in the production of the dictionary were in fact somewhat secondary. The greater challenge for me (as a doctoral candidate with deadlines to meet, and later as an academic with papers to write and lectures to give) has always been my working relationship with the Tsimshian Nation.

Tsimshian people have been the subject of anthropological and linguistic study for over one hundred years. Many times they have been referred to in academic writings in ways that offend or misrepresent them. Sometimes researchers base their discussions on texts that others have collected, never consulting with anyone from the community. Other times researchers come and go, seeming to leave no trace of their learning behind.

By the time I appeared on the scene in the mid-1990s, the Tsimshian Nation was evolving avenues for community directed research. Researchers who had worked in the area for some time were invited back to contribute their knowledge through running courses for teacher trainees or others who were interested in participating. Some were involved in developing materials for the language program. The dictionary project was another step down the road to Tsimshian-controlled research on Sm'algyax through the formation of the dictionary committee. There were theoretical linguistic problems to solve, as well as fine political lines to tread.

In §11.1 the issues identified as significant during the dictionary project are reviewed and the practice of the community directed approach in the dictionary project is summarised in §11.2. Systemic issues that impact on community directed language work and their effects on the Sm'algyax dictionary project from my perspective are discussed in §11.3. Fieldwork can be a challenging undertaking. In a community directed setting, lack of control on the part of the researcher is more clearly felt than in researcher directed settings. My feelings towards my role in this project were sometimes ambivalent. Because they had a huge impact on me and to a· certain extent restricted my participation in the project, I have included a discussion of my personal experiences in §11.4. Finally §11.5 provides some suggestions for building on the experiences of the Sm'algyax dictionary project to ensure that future community directed work is sustainable and effective.

## 11.1 Review of issues associated with the project

Community directed documentation for endangered languages, especially for small indigenous communities where codification of the language has not taken place, is the overarching theme of this book. In the past, dictionaries of small indigenous languages tended to be 'field dictionaries' designed for language workers, translators and linguists, a highly educated and specialist group. Today, dictionaries on these same languages have a new and growing audience within the communities who 'own' these languages. The dictionaries are being used as learning aids at all age levels and by a variety of users. The design of dictionaries specifically for this context is a relatively new area that is becoming increasingly important as communities seek to strengthen and protect their languages. This development reflects a change in communities' perceptions of the state of these languages.

Modem Sm'algyax includes a number of varieties. During the dictionary project, differences between speakers were overtly identified and discussed. At times this led to debate about the authenticity or validity of variation. Because the development of the dictionary involved codification of the language, the Tsimshian community was concerned about the way variation should be represented. In particular, it proved to be important to distinguish between variation that the community recognised as valid, and variation that was due to incomplete language learning or language attrition.

The writing system was a focus for much of the debate about variation in the language. It was through the process of writing down Sm'algyax words that the mass of detail associated with variation in the language really became apparent to everyone involved. However, there were two types of issues that were important to distinguish here. In addition to individual, stylistic and dialectal differences, some variation in the representation of Sm'algyax words was the result of no more than variant spelling. The Sm'algyax writing system is still evolving. Although a set of graphemes has been developed and is used in the community, conventions relating to its use are not well defined. A preliminary set of conventions for spelling Sm'algyax words were a significant outcome of the dictionary project. These conventions are not going to be the last word on the matter. However,  because they are encoded in the dictionary, they do form the basis for future developments in the writing practices of the community.

Sm'algyax is a polysynthetic language, making use of a large stock of dependent morphology (much of it occurring as clitics) in the production of individual sentences. However, writers tend not to write 'really long words'. They treat many clitics as independent orthographic forms. In order to represent the varying status of these forms in the dictionary it was necessary to develop a comprehensive part of speech inventory for the language (the bulk of previous work on Tsimshianic languages had been on either phonology or syntax). The form classes of the language, based on their phonological and grammatical status, provided the framework for categorising words in the dictionary.

As a bilingual dictionary intended for language learners, it was necessary to develop some procedure for analysing the meaning of Sm'algyax words. There were two issues involved in this. Firstly there were issues of translatability. Some semantic domains are much more elaborated in Sm'algyax than in English. The reverse is also true. In either case it was not enough to provide one word glosses, so principles for providing useful representations of the meanings of Sm'algyax words were important. Secondly, there were issues relating to polysemy and homonymy. When confronted with a word such as *aks* 'water, drink, wet, tide, any kind of liquid', some basis for dividing the meanings and showing their relations was required.

One last area which received quite a lot of attention from the community was the area of lexical development. People were aware that there were many goods, activities, and concepts that were not represented by Sm'algyax words. This was the result of the shift to English during a time when many new goods and technologies were incorporated into Tsimshian life. There was no problem in generating new words from a strictly linguistic perspective since any fluent speaker was well supplied with the necessary morphology for this task. It eventually became clear that what was lacking were mechanisms for sharing new words between speakers so that they could be incorporated into the language in a comprehensive way.

The issues cover the full spectrum of linguistic inquiry – from phonetic analysis to sociolinguistic patterns of innovation with the community. All of these issues were at some time the focus of discussion during the dictionary project. In each case it was crucial that a satisfactory perspective on the issue could be developed: a perspective that reflected both the values and understandings of the Tsimshian community, and one that shed light on some way of moving ahead. At times it was possible to find a perspective that worked to everyone's satisfaction. At others it seemed as though one perspective had been followed at the cost of others. Sometimes, as in the case of the spelling system, it became clear that there would be no stable answer for the time being. These temporary and partial solutions did not always sit particularly well with members of the dictionary committee, or with me, or in some cases with the wider community. However, they were an accurate reflection of the relationship between the language and the community, and as such add significant depth to the dictionary we made.

## 11.2 Approaches taken to the issues associated with the project

As I worked with the Tsimshian community to develop the SLD I became aware of a number of socio-linguistic and practical issues that were having a significant impact on the experiences of Sm'algyax speakers.

Sm'algyax speakers and other members of the community generously shared their experiences and concerns with me. At different times this included: the issue of supporting lexical expansion; the significance and status of dialect differences; the effects of residential schooling on language ability and language attitudes; and the difficulties associated with seeking to restore Sm'algyax to the second and sometimes the third generation of non-speakers.

These issues bear directly on the form and contents of the dictionary. In approaching these issues I sought to begin with the understanding that Sm'algyax belongs to its speakers. Consequently, the perceptions, preferences, and priorities of Tsimshian elders directly guided the development of the dictionary. In most cases, practical issues arising from the development of the dictionary were resolved through consultation with the Dictionary Committee. In areas such as the design of the dictionary, and the use of the writing system, theoretical proposals based on research and reflection were presented to the Committee for their comments. By working together we developed a set of conventions which were both relevant to the Tsimshian community and easy for them to use.

The dictionary project has involved a number of different tasks. There have been both descriptive and soci-olinguistic issues to consider. The project called for a balance between theoretical and practical responses in each case. There were times when there was conflict between what appeared to be the obvious right answer (to me as a linguist) and what turned out to be useful in practice (see for example the ordering of entries (§5.5.3) and the 'phonetic' representation (§5.5.1)). The theoretical focus ensured that the material in the dictionary was presented in an orderly and well motivated way. The practical focus ensured that the dictionary was accessible to Sm'algyax learners and the wider Tsimshian community.

The development of the SLD was also a descriptive and data-driven undertaking. By working through published materials on Sm'algyax, and with language consultants from the Tsimshian Nation, a lexical database of nearly 4,000 entries was developed. In order to prepare the database for publication as a dictionary, analysis of the phonology, morphology, and syntax of Sm'algyax was required.

## 11.3 Systemic issues in community directed language work

The focus of any work within the discipline of linguistics is language, and within the sub-discipline of descriptive linguistics, the focus is specifically on language data. It can be easy to overlook the social and cultural significance of language in this descriptive undertaking. In the discipline of anthropology, field-workers are encouraged to reflect on their experiences and their responses to the community in which they work. This can be treated as a significant part of their learning. My experience of linguistics has been that people reflect on and share their feelings about fieldwork experiences in quite limited and generally private ways. I have been fortunate to be able to explore the fieldwork experience with a number of other linguists. I have also been made aware of the importance of establishing good working relationships with language communities by hearing about the conclusions which First Nations people reach about linguists in working with them.

Recognition of the insight that can be gained from acknowledging personal experience and feelings in the fieldwork process has prompted me to include a discussion of them here. I first address some of the tensions that reflect systemic issues, then comment on more personal dimensions.

Language loss means different things in different contexts. The two main contexts in which I was involved during the dictionary project were the academic life of my university and profession and the community life of the Tsimshian Nation. Differences in one's view of the meaning of language loss flow on to and are influenced by a range of factors.

Within academia, the most compelling argument that can be made for obtaining funding for the study of endangered languages is that they are unique and irreplaceable windows into human cognition. If we can understand how language works we can understand much more about how people classify and relate to the world. Unfortunately this means that applications for funding are more likely to succeed if they address theoretical issues at the expense of basic descriptive work.

In fact it can be very difficult to obtain funds for basic descriptive work, although as Dixon (1997:138) notes, with between 2,000 and 3,000 languages endangered but undescribed, the task is an urgent one. It is, however, expensive. Dixon (1997:138) conservatively suggests that the preparation of language documentation cannot be completed in under three years and costs around (US) $200,000 at 1997 values. This work is typically conducted by individuals (with peer review of publications and through presentations).

Although it is expensive and hard to find funding for, the development of accurate documentation in conjunction with typological and comparative work is a realistic goal for most endangered languages, and a goal that can be compatible with community directed language work.

From the perspective of the Tsimshian community, our (European-based, academically developed) understanding of human cognition is irrelevant. Community members are motivated to do language work by their desire to affirm and strengthen their identity and their language. Realistic goals from the community perspective are language awareness programs, the development of documentation, and ongoing dialogue about the status and use of the language within the community. Work within the Tsimshian community proceeded through consensual decision making and had a communal focus.

For communities with endangered languages in more affluent countries, funding may be available for school programs and perhaps some publications. Funding bodies are likely to respond to calls for assistance in 'saving languages'. As with the goal of understanding human cognition, saving languages is not a viable short term goal. However, in contrast to academia, understanding human cognition is not considered to be the immediate goal, saving a language may be viewed as a more immediate need by communities with endangered languages.

These conflicts had significant financial consequences for my attempt to combine linguistic research in the university setting with community directed language work. I have already identified the competing demands of the university and the dictionary project in practical and theoretical terms. The work of the dictionary project was completed with a combination of community funding, financial support through the university and paid employment in other areas (particularly casual teaching at universities in Melbourne).

Community funding covered living expenses and travel for approximately thirty per cent of the fieldwork and the work involved in later revisions to the dictionary. The rest of the expenses associated with the project were covered through financial support from the university or by funds I raised through other work. Friends and family also contributed generously at various times.

Overall, the lack of a reliable source of funding had a negative impact on the project. The ambiguity inherent in my dual status as a student and a worker within the Tsimshian community meant that the obligations of the Tsimshian Nation towards me, and my obligations towards them, were harder to sort out. For many months towards the end of the project it seemed to me as if the Tsimshian felt I owed them the revised version of the dictionary because the draft dictionary got me my PhD and they'd been paying me to do it. Meanwhile, I was resenting the amount of unpaid work I was contributing to the project and was simply unable to give it any more time because my living expenses had to be met from other sources.

These are serious problems for many linguists working in academia who want to contribute their skills to community directed projects, and they do not cease with the completion of the PhD. As the discussion in this book has shown, communitydirected language work is crucial to language revitalisation efforts and within that framework the status of linguists is restricted. For example, the Ts'msyeen Sm'algyax Authority consistently placed the funding of teacher salaries as the highest priority. Papers and dissertations I prepared as a result of my access to the language were understood to directly compensate me for some of my work in the community.

In fact the compensation available through publications is indirect and unreliable. It is true that publications are a significant factor of one's ability to get an academic job or win a research grant but these involve lengthy processes and a great deal of additional preparation. From the conventional academic viewpoint, work in community directed projects is basically unpaid work and impinges on time that could be spent on career enhancing publications.

It is possible in some cases to simply work as a linguist with a proper salary in projects that are more or less community directed. Situations vary greatly depending on local conditions. Within Australia for example, funding is available through language centres to employ linguists on community directed projects for language revitalisation. If this had been a possibility in the Tsimshian community, my own experience of the dictionary project would have been a much easier one. As it stands I have concluded that it is not viable to continue to work in this ambivalent way. For the time being I prefer to contribute my skills without any payment as the benefits of partial payment are outweighed by the obligations it seems to entail.

In conclusion, the stated goals of both the academic community (understanding human cognition) and the Tsimshian community (saving Sm'algyax) were not realistic in the short term. It was to my advantage that the academic community was happy to accept my partial contribution to the linguistic enterprise and a disadvantage to everyone involved in the dictionary project that we did not have a more realistic understanding of the time, effort and likely outcomes of the dictionary project from the outset.

Overall, I do not find it surprising that there are not more linguists out in the field catching up with those other 2,000 or 3,000 endangered languages. Until there are more viable funding options and until it is possible to properly reconcile the goals of each camp, linguists continue to face the choice of: job insecurity and professional dissatisfaction (if they attempt to keep a foot firmly in each camp); alienation from language communities (if they strictly avoid work that is in conflict with academic goals); or total alignment with the community, at the expense of their 'old life' (if they abandon academia for the field). None of these options is sustainable for most people, and so it seems, in spite of the satisfying and worthy nature of language documentation work, nobody can do it for long. §11.5 explores what might need to change to make language documentation sustainable.

## 11.4 My experiences relating to the project

One of my fondest memories of fieldwork in Prince Rupert has nothing to do with fieldwork at all. It is of driving away from town, down into the Skeena River Valley, at the beginning of a drive to Terrace – the next town 'up the line'. Passing the city limits of Prince Rupert (where there is a sign warning that it is illegal to shoot deer within city limits) always seemed to coincide with a general release of tension, but my spirits really lifted as the Skeena Valley came into view.

If that's how free I felt on leaving Prince Rupert I seemed to have felt pretty constrained while I was living there. What were the constraints on my life during this time and why did they seem to chafe so roughly?

Well, the obvious place to start is the geography. Prince Rupert is located in rugged country, with dense temperate rainforest and steep mountains all around. When I came back to Australia I realised that one of the things I'd been missing was a sense of a big sky. In Prince Rupert the sky is small. So, coming out into the Skeena Valley provided, for one thing, a change of scenery.



Aerial view of the Skeena River, BC, 2008

Prince Rupert is also quite a small town. The population is about 17,000 people, approximately half of whom identify as belonging to one of the First Nations of the area. Never having lived in any other small town, I can only imagine that the racism endemic to daily life in Prince Rupert is on a par with that found in similarly comprised towns elsewhere in the developed world. Most non-First Nations people thought that what I was doing was a pointless waste of time. And, unless I was willing to frame my work in a charitable and patronising 'doing what's good for them' kind of light, they could not understand my motivations for being there. Driving away from the town meant driving away from the racism I was supposed to share as a non-indigenous person.

For my entire first fieldtrip and the first two months of my second trip I was unable to work with speakers on the dictionary project. It felt like the world's longest job interview. I was aware that people were observing me. Was I able to treat Tsimshian people with respect? Was I able to act cooperatively? Was I able to muck in and behave naturally? Like the whites, Tsimshian people found my motives rather mysterious. What did I think I was doing, taking it upon myself to begin to make a dictionary for them? Driving away from town also meant driving away from the bind of being compelled to act as naturally as possible.

The most pressing constraint I felt was the inability to speak and act freely. As a city dweller I am used to passing anonymously through life. The feeling that I was being observed was exacerbated by the fact that whenever I left the house I was likely to be seen by several people who knew me (or at least knew of me). I found it impossible to speak really freely about my experiences with anyone.

There were three reasons for this. Firstly, my experiences as a white person were inevitably viewed through a lens of racism by other Euro-Canadians. Secondly, Tsimshian people tended to view themselves as the source of my struggles. For example, on leaving to come home after the first fieldtrip one language teacher said "You won't want to come back to us dumb Tsimshian." to which I replied that the only reason I would be coming back was because of them. Finally, I never knew where my comments might end up.

Everyone in the Tsimshian community was related to everyone else. The white community ran on gossip. In Melbourne (or even on a regular day at the university) it is possible to go to a cafe and speak freely about any topic with the expectation that no-one in the room has any knowledge of what is being discussed. In Prince Rupert this was impossible, and as an outsider, I was ill-equipped to assess a roomful of people in any case. Both communities were used to speaking guardedly in open/public settings and expressing themselves sometimes vehemently in private. As an outsider I did not really feel free to rely on individuals in private settings. In effect I had no in-group to whom I could express my thoughts freely. Both groups apparently expected that I would enter into the others' social networks. In effect, I fell 'in between' the two communities, with no real sense of belonging in either.

These factors made my experiences in Prince Rupert uncomfortable. I also struggled for much of the 1997 and 1998 fieldtrips with SAD (seasonal affective disorder), which left me feeling depressed for extended periods of time. This meant that the support I did receive mattered a great deal to me. I continue to have quite ambivalent feelings about both the Euro-Canadian and Tsimshian communities in Prince Rupert. In both cases I found some friendship and support that I valued immensely. But this was not enough to balance out the more challenging aspects of my time there.

## 11.5 Sustainable community directed language work

Community directed language documentation has the potential to be a transformative process in work on endangered languages, both for communities and for linguists. Finding ways to work together generates hope.

Addressing issues that are important to the community as well as analytical issues give documentation a broader audience and a greater depth. Both community members and linguists learn a lot from the process.

However, as the discussion in §11.3 and §11.4 shows, there are a number of factors that limited my ability to participate in the project. On reflection I would not undertake community directed language work under these conditions again. The personal cost was simply too great. Community directed language work is a complex and demanding process and it is important to try to ensure that it is sustainable for all involved. The remainder of this section explores some ways forward with this issue.

A great deal more than descriptive analysis goes on in community directed language documentation. Among the skills required in a project of this kind are:

- computer skills (ensuring that the data is recorded accurately and managed effectively)
- conflict resolution skills (so that people can work together and the project does not get bogged down in a whole range of disputes)
- grief counselling (so that community members can bear to be involved).

None of these areas need necessarily be the responsibility of the linguist. Indeed apart from specific computer skills, they are far from being the linguist's areas of expertise. Nevertheless they are an intrinsic part of the process of community direct language work.

In a more general way the well being of the community as a whole has a huge impact on the progress of the project. For example, for most of my fieldwork in 1997-1998 it was typical that at every second meeting or so a member of the dictionary committee would be absent because they were attending a funeral. This observation suggests the need for supportive community structures including:

- adequate health care (so that people have the time and energy to participate in the project)
- education that values traditional culture as well as providing relevant skills (so that people have the capacity to participate fully in the tasks involved in project)
- sustainable economies (so that people can afford to be involved).

This list of additional requirements clearly shows that community directed language work is actually a form of community development. It has effects on, and is affected by community issues well outside of the obvious immediate focus on language.

There will never be an ideal time to begin community directed language work. These other issues are ongoing and difficult for individuals to solve alone. It would be defeatist to wait for them to be solved. However, a language project, if it is community directed and well implemented, is likely to contribute to changes in these other areas. The other key conclusion is that community directed language work is most likely to be sustainable and successful if it is part of a broader strategy of community development and empowerment, drawing both on the skills and capacity of the community and on a range of outside resources.

Even within a supportive context, community directed language work is challenging. Given this, how can it be conducted in a way that is most sustainable for the linguist and the community? A few strategies for managing the demands of community directed language work are suggested in the following paragraphs.

For the linguist it is useful to consider how much involvement with the community is viable and what sources of financial support are available. Conflicts and interpersonal tensions are inevitable in any work involving groups of people. They can be intensified through cross-cultural misunderstandings and the effects of long term oppression on community members. For these reasons, personal support is also likely to be important, partic-

ularly during phases of intensive work. Finally, in situations where fieldwork involves international travel and extended periods away from home it is useful to consider how much disruption can be tolerated and how it can best be managed (for example, fewer longer fieldtrips may or may not be better than more short trips).

For the community it is useful to be aware of all of the steps involved in the project and to assume responsibility for seeing they occur. Assuming full responsibility for the project ensures that the project proceeds when resources are available and that there are realistic timelines. Awareness of issues such as grief over language loss may allow these issues to be addressed more directly and with appropriate resources. If the project bas been thoroughly planned it should be possible for members of the community to take an active part in the work of language documentation. For example, it may be possible to develop a skill-sharing model where community members gradually take on all of the tasks involved.

Finally, systemic changes that would support community directed language work include the availability of adequate funding, more realistic expectations about likely outcomes and realistic workloads, and changes to social and economic structures within communities (such as health and education) so that community members have resources to direct towards language work.

It is important not to underestimate how much is involved in community directed language work. It is equally important to acknowledge how much it can mean. The SLD project clearly showed that community directed language work can be linguistically rigorous, as well as empowering for community members. The challenge is to find ways to make this process sustainable for the future.

# List of works

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**Giant kelp (Macrocystis pyrifera)**
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