Proposal For the Use of Cognitive Linguistics in Hupa Language Revitalization

by

Jocelyn Coderre Ahlers

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Committee in charge:

Professor Leanne Hinton, Co-chair
Professor Eve Sweetser, Co-chair
Professor George Lakoff
Professor Johanna Nichols

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Abstract

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Of the approximately 5-6,000 languages currently spoken throughout the world, some 90% are expected to be moribund, that is, to have no children as speakers, within the next century (Krauss 1992). In many of these cases, the community of speakers has begun to consider the possibility of remedying this threatened situation. One such community is that of the Hupa, a Native American tribe in Northern California, which speaks the Hupa language, belonging to the Athapaskan language family. Currently, there are approximately 10 speakers of the Hupa language. These speakers are heavily involved in a number of language revitalization programs within the tribe.

The purpose of this dissertation is to present ways in which the field of cognitive linguistics (see e.g. Lakoff 1987, 1992; Lakoff and Johnson 1980; Svorou 1993; Sweetser 1988) can be an invaluable tool in the language revitalization process, especially in the realization of the goal of revitalizing a language which accurately reflects the traditional values and worldviews of the culture to which it belongs. This begins with a consideration of the ways in which culture itself can serve as a grounding mechanism within the metaphoric and metonymic systems of a language. With this theoretical construct in mind, a detailed study of some of the metaphors and types of metonymy which appear within the Hupa language can take place. This data informs a discussion of classroom practices, and ways in which metaphor and metonymy can be used to create more accurate and culturally
grounded speakers. An understanding of metaphoric and metonymic systems can also be of use in language modernization, a practice which is a necessary part of many language revitalization programs, including that of the Hupa.

Thus, the goals of this dissertation are twofold. The first involves a detailed study of the role of culture in cognitive metaphor and metonymy. The second involves a consideration of how this knowledge can be used in researching the Hupa language and in Hupa language revitalization programs. This knowledge can be applied to other languages, as well, in endeavors to encourage their survival.

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Preface

Hupa, the language from which the data below are taken, is facing a situation of severe language endangerment which is recapitulated in language communities across the globe. This situation has led, inevitably, to a reduction in the scope of domains throughout the language. One of these realms is that of the conceptual metaphor system, which allows the understanding of one (typically abstract) domain in terms of another (typically concrete). This reduction can be seen in the data below. In each example, a different kind of metaphor loss of reduction can be found. In P.1, the first example presents a form gathered from P.E. Goddard's *Hupa Texts* (1904). The following line ("present: none") indicates that it has proven impossible to elicit this form from present-day Hupa consultants, either by asking for a translation from English to Hupa, or by requesting an English translation for the Hupa form. In example P.2, the metaphor used for expressing intelligence has changed to one which more closely resembles English, indicating a likely borrowing. Finally, in P.3, the metaphoric interpretation has been reduced in its abstractness. In the original/older translation, (lit.) "it came into my head" meant "I got an idea". At the present time, however, the same phrase is used to mean "I heard something".

P.1 Goddard:  *kin-ngw-xq-iqw-tcwe*  
[awake (thematic subject) -make (indef.; first person singular subject; third person singular object')] "I notify him"

present: none

P.2 Golla:  *k'itise:-xw*  
[('moving) over things-at']
"smart/intelligent"
present:  

kyang xole:n  

['abdomen/guts/mind are-numerous'] "smart/intelligent"

P.3 Goddard:  
hwe-de-ai ye-wiñ-ya

[(into) my+head come (definite past; momentaneous; perfective; general diectic subject)] "I got an idea"

present:

"I heard something"

(See Appendix A for transcription conventions.)

In each of these examples, there is evidence of a rapid shift in the metaphorical system of this language. While one such example could indicate normal linguistic change over time, all of these, taken together with others that I have collected, are an indication of something much more drastic, and can be taken to be part of the general process of language death.

The goal of this work is to lead the reader to an understanding of what, exactly, cognitive metaphor (as seen in the examples above) is, how culture plays a role in the development of such metaphors, the concerns of language revitalization activists (people who work with communities who wish to revive their dying languages), and how cognitive linguistics can play a role in addressing those concerns. These are very diverse issues to be brought together in one work. However, they are all tied together in important and indissoluble ways.

I came to be interested in the project of language revitalization through cognitive metaphor, and so I will be introducing readers to the field of cognitive metaphor first. There is often concern in communities which are revitalizing their languages that modernization will change them unrecognizably, distorting the spirit of the language. A
study of the metaphors of such languages could address this concern by bringing the
cognitive heart of a language to light. It is this thought which underlies this work.

In order to more closely consider whether, in fact, a study such as this could be
helpful (or, indeed, possible), I began to do fieldwork with the Hupa language, which I
will introduce and discuss in Chapter 1 after the section on metaphor. I also realized that an
understanding of the basic goals and difficulties of language revitalization would be
necessary, and I introduce an outline of these in section 4 of Chapter 1. Finally, in order
for the reader to understand the part which linguistics has played in the study of dying
languages in the United States, I end Chapter 1 with a discussion of the changing role of
linguistics.

With this background information in place, I move in Chapter Two to a
consideration of how, exactly, culture plays a role in grounding metaphors. This is
necessary to my project in that, if there is a desire to preserve the ways in which language
is reflective of culture, and I argue that a study of metaphor can play a role in such a goal, I
must show that culture and metaphor do interact. I then present, in Chapters Three and
Four, an overview of the kinds of metaphorical and metonymic processes which exist in
the Hupa language, so that readers can understand in more detail the language upon which I
have based my work.

In the last two chapters, I lead the reader through a discussion of the project of
language revitalization, examples of revitalization around the world, and the concerns
which crop up regularly in such endeavors. I end with a presentation of specific ways in
which the study of metaphor and metonymy can address these concerns. It is important to
hold the goal of that last chapter in mind throughout the rest of this work, because that is,
in the end, my goal—to have shown, in the theoretical realm, the ways in which culture
and metaphor interact, and to present, practically speaking, options for using that
knowledge in the language revitalization setting.
Acknowledgments

As with any work of this magnitude, there are numerous people to whom thanks is due. First, there are two groups of people whose input has been invaluable—the Hupa tribe, and the UC Berkeley linguistics community.

I must thank the Hupa tribe for opening to me its classrooms, its language groups, its linguistic archives, and its homes. Special thanks are owed to Ruth Beck, with whom I had the privilege of working during my first summer of fieldwork, and who I wish could see this work; Minnie McWilliams, Jimmie Jackson, Calvin Carpenter, and all of the members of the Wednesday night language group; Danny Ammon, for his linguistic help and encouragement; and Les and Marie Ammon, for their unfailing hospitality and marvellous surffish. This work comes from them, and is ultimately for them.

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I must also thank the friends and family who have heard about this and been unstinting in their support for much too long: my family and family-in-law, Leela Bilmes, Suzanne Wertheim, Mary Teichert, Nastia Snider, Carolina Lau, Aline Voldoire, and the moms group. And especially to Zev Handel for countless debriefings over lunch.

Finally, always, to Rick and Tess, my constant mainstays: my thanks and love.
Chapter 1: Introduction

Section 1: Cognitive metaphor

Section 1.1: Introduction to cognitive metaphor

When doing cross-linguistic metaphor research, it quickly becomes clear that there are varying degrees of commonality among metaphors from different languages. (Throughout this work, the terms "metaphor" and "cognitive metaphor" will be used interchangeably to refer to a mapping between two cognitive domains. This phenomenon will be examined in depth further on.) Some metaphors appear again and again, in language after language, with relatively little variation among them. In other instances, languages appear to have metaphors in common, but the surface realizations (that is, the ways in which the metaphors are used in conventional language) of those metaphors are different. And in still other cases, a given concept is understood in terms of entirely different domains from language to language. These observations lead to questions about the universality of specific metaphors. It seems safe to say that the phenomenon of metaphor itself is universal, in that every language which has been looked at has provided evidence of cognitive metaphors. However, why is it that certain metaphors seem to be constructed similarly in numerous typologically and genetically unrelated languages, while other metaphors appear in only a few languages?

Issues having to do with universality in metaphor have important implications both for metaphor theory, and, practically speaking, for the language preservation/revitalization classroom. Within metaphor theory, there has recently been ground-breaking work on the idea of universal metaphorical primitives (basic metaphors which are directly grounded in everyday human experience) by Joe Grady, in his doctoral dissertation (Grady 1997). He claims that such primitives are combined in various ways to form the entities which have
been referred to in the literature as "cognitive metaphors" (see e.g. Lakoff 1993, 1987; Lakoff and Johnson 1980; Lakoff and Turner 1989). Grady's theory can be built on by pointing out that these primitives are not the only building blocks of metaphors, but that other basic metaphors, grounded in cultural experience, rather than basic, everyday, universal human experience, also provide material for the formation of more complex metaphors (the exact workings of this process will be explored in Chapter 2).

The question of universals in metaphor also has important implications for the language revitalization classroom (see Chapters 5 and 6 for a detailed discussion of the implications and uses of metaphor in the classroom). In considering language preservation/revitalization, one of the most important issues for the people involved is to revitalize the use of an "authentic" version of the language—a version which still reflects all of the richness of the culture behind the language, even in the face of often overwhelming influence from surrounding languages and cultures. Metaphor can be a useful tool in this endeavor. Addressing cross-linguistically common metaphors can give students an opportunity to see how their knowledge of a dominant language can be usefully translated into their language of heritage. And a study of culturally grounded metaphors can give students a way to learn and emphasize those features which make their language unique. In any case, studying and documenting the metaphors of a language, and understanding the place of those metaphors vis-a-vis those which appear in other languages, is vital in the creation of a productive language revitalization classroom atmosphere.

Before looking specifically at the issue of universality in cognitive metaphor, it is necessary to examine the phenomenon of cognitive metaphor in general. In English, it is possible to say the following:

1.1 Car sales have risen sharply in the past year.
1.2 Stock prices plummeted.
1.3 Housing prices are finally going down.
None of these sentences is out of the ordinary, and in fact, most people would consider them to represent examples of everyday literal English. In Hupa, it is possible to find sentences which are very similar:

1.4 midhulen mitso: nahdiyaw jadah  jena tesiya  "The price of milk went cow  milk  price  too much  up  going  up."

cow  milk  price  too much  up  going  up.

1.5 midhulen mitso: nahdiyaw ninj’un tesiya  "The price of milk went cow  milk  price  low  going  down."

cow  milk  price  low  going  down.

(Note that it is possible that these sentences are calques of English metaphorical sentences. See Appendix A and Chapter 6 for discussion of issues having to do with metaphorical borrowing.) Until very recently, the English examples would have been treated as examples of literal language, and the term 'metaphor' would not have been played a role in the discussion. This is because the word 'metaphor' has traditionally been defined as a novel or poetic expression in which words are used outside their conventional meaning to express a concept which is somehow similar to the idea being talked about. This definition leaves no room for the acceptance of the above conventional sentences as examples of metaphor.

However, in recent years, the term 'metaphor' has come to be redefined in such seminal works as Metaphors We Live By (Lakoff and Johnson 1980). In this work, Lakoff and Johnson state that they "have found...that metaphor is pervasive in everyday life, not just in language but in thought and action. Our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature." (3) This observation about the nature of metaphor changes the terms of the debate drastically. Among other points, it indicates that one place to look for evidence of metaphors is in
everyday language, which is precisely the place where, by definition, it had once been thought not to appear. It also redefines metaphor as something which is not simply a matter of language, but as a phenomenon which is intimately related to human experience. In this new study of conceptual metaphors, as they have come to be called, the term 'metaphor'

has come to mean 'a cross-domain mapping in the conceptual system.' The term 'metaphorical expression' refers to a linguistic expression (a word, phrase, or sentence) that is the surface realization of such a cross-domain mapping (this is what the word 'metaphor' referred to in the old theory). (Lakoff 1993:203)

This definition indicates that metaphor is a pervasive cognitive system which involves the understanding of one domain of experience (the target domain) in terms of another domain (the source domain). Between these domains there exist a series of mappings and lines of inferential reasoning ('inferences'), which we can use to reason about the target domain (see, e.g., Gentner and Gentner (1982) and Gibbs (1985, 1990, 1993) for discussions of experiments indicating the cognitive reality of metaphor). To clarify this, let us return to the examples presented above. These are (for ease of discussion, the literal English translations are presented here in place of the Hupa):

Car sales have risen sharply in the past year. (1.1)

Stock prices plummeted. (1.2)

Housing prices are finally going down. (1.3)

Cow milk price too much up going. (1.4)

Cow milk price low going. (1.5)

In all of these examples, words such as "up", "risen", "plummeted", and "down" are used to describe the "actions" of entities which are not really capable of actual vertical physical motion. This is due to the metaphor which has been called MORE IS UP (Lakoff and
Johnson 1980). (In the naming of metaphors, I follow the standard convention, which is to formulate the name as TARGET IS SOURCE, with the name of the metaphor written in small capitals.) In this metaphor, the source domain is the concept of "up", and the target domain is "more". Thus, we have the following correspondences:

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>TARGET</th>
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<tbody>
<tr>
<td>up</td>
<td>more</td>
</tr>
<tr>
<td>down</td>
<td>less</td>
</tr>
</tbody>
</table>

The use of an equals sign, does not indicate that these concepts are "equal" in some way, or that there is a similarity between them; rather it is a shorthand indicating that the target domain is understood in terms of the source domain. By this is meant that the structure of the source domain—that is, our knowledge of the entities involved and our inferential reasoning about the relationships between those entities—is mapped onto the target domain, and used to organize our understanding of that domain. Note also that there is not a reciprocal relationship between the two domains. Metaphorical understanding of one domain in terms of another is unidirectional, e.g. quantity is understood in terms of vertical location/height, not the reverse. The name MORE IS UP represents the totality of these correspondences, as well as of the inferences discussed below. Thus a metaphor is a set of correspondences and inferences, rather than simply being the mapping which is explicitly stated.

These mappings give rise to such sentences as "the price of milk went up". But what about examples like "stock prices plummeted"? In this case, there is an inference in the source domain which is mapped onto the target domain. This inference has to do with our knowledge about the semantics of the word "plummet". We know that plummeting typically involves a fall from a relatively high position to a relatively low position, that this fall is precipitous, often unexpected, and that such falls tend to have tragic consequences.
(consider the situations in which this verb is typically used, as in "she plummeted to her death"). This knowledge is mapped from the source domain to the target domain, and it is therefore possible to infer that the stock prices being discussed were originally fairly high, that they ended up being fairly low, that the drop in price was not expected, and that it potentially caused some financial ruin to investors in the stock market. All of this information is taken from the source domain.

When analyzing the usage of terms having to do with height in circumstances where they are used to discuss relative amounts of something, it can be seen that such uses are extremely prevalent and consistent in everyday language. In fact, it is difficult to express some of the ideas above without using this metaphor. This is true of a large number of other domains as well. Cognitive metaphor is a pervasive phenomenon in everyday language and thought. It must be stressed that metaphor is not simply a matter of linguistic use. As Lakoff and Johnson put it,

metaphor is not just a matter of language, that is, of mere words. We shall argue that, on the contrary, human thought processes are largely metaphorical. This is what we mean when we say that the human conceptual system is metaphorically structured and defined. Metaphors as linguistic expressions are possible precisely because there are metaphors in a person's conceptual system. (Lakoff and Johnson 1980)

This means that the study of metaphor, does not merely involve studying the kinds of language that are used in everyday communication, but also the kinds of reasoning which go on vis-a-vis the domains which are being talked about. In his book Body in the Mind, Johnson states:
metaphors are sometimes creative in giving rise to structure within our experience. That is, they do not merely report preexisting, independent experience; rather, they contribute to the process by which our experience and our understanding...are structured in a coherent and meaningful fashion... It is by virtue of this metaphorically imposed structure that we can understand and reason about the relevant abstract entities (Johnson 1987:98).

This is an important point; it means that metaphor is used in the process of reasoning. It is not merely an issue here of studying the use of language, but of examining the ways in which people think about certain experiences, as well as the ways in which they categorize those experiences.

The metaphors discussed above involve mapping a simple gestalt experience or structure onto another domain. In the metaphor MORE IS UP there is not a great proliferation of detailed visual knowledge about the domain of "up". However, there is another kind of metaphor which does map a large amount of such detail from one domain to another, and I will to discuss these briefly before turning to a discussion of the grounding of metaphors. These detailed metaphors are called "image metaphors" or "one-shot metaphors" because they often involve mapping some kind of familiar image onto another object, and because they are not used again and again in novel situations to reason about a target domain. An example of such a metaphor in Hupa can be seen in the following phrases:

1.6 min-ning-xun-ding ['its-face-close (to where it is)-place']
"by the sweathouse entrance"

1.7 mida' nin-yay ['(to) its+mouth-come (definite past; perfective; third person singular subject)']
"he came to the door"
In both of these examples, a sweathouse is visualized as a face. The low, rounded door of a sweathouse is mapped onto the mouth of the face. Lakoff describes image metaphors as follows:

These [metaphors] contrast with the metaphors I have discussed so far, each of which maps one conceptual domain onto another, often with many concepts in the source domain mapped onto many corresponding concepts in the target domain. Image metaphors, by contrast, are 'one-shot' metaphors: they map only one image onto one other image (Lakoff 1993).

These images, however, are by no means simple. They contain a wealth of detailed information about spatial relationships, size, shape, even color. While conceptual metaphors forego this kind of detail to focus on broader mappings between domains, image metaphors consist entirely of these details, and do not allow the same kind of reasoning processes that conceptual metaphors do. We will be seeing these metaphors from time to time as I lay out the metaphors of Hupa, but the discussion of this work will focus on conceptual metaphors.

Section 1.2: Grounding

In looking at metaphors like MORE IS UP, one must answer the question of why such metaphors arise in our conceptual and linguistic systems. This question raises the issue of experiential grounding. The notion that all metaphors are in some way grounded in everyday human experience is central to the cognitive approach to metaphor. Lakoff and Johnson state this most strongly in Metaphors We Live By, when they say, "...we feel that no metaphor can ever be comprehended or even adequately represented independently of its experiential basis" (19, italics original). Thus, when considering any metaphor, the experiences which give rise to that metaphor must also be considered.
Before launching into a theoretical discussion of what the term "grounding" entails, let me first exemplify the concept using the now-familiar metaphor MORE IS UP. In this metaphor, the source domain of VERTICALITY has come to be correlated in some sense with the target domain of QUANTITY. It is possible to speculate as to the reasons behind this correlation. This metaphor is based on our experiences with physical quantities of items. If, for example, a person pours more water into a glass, the water level rises as the amount of water increases. If there are a number of books in a pile, and more books are added to that pile, the vertical height of the top of the pile goes up. Thus, in countless daily experiences, human beings experience a correlation between having more of something, and having the top level of that object go up (Lakoff and Johnson 1980; Johnson 1987). This correlation between these two domains is in many ways metonymic in nature. That is, the two domains appear together in all of the instances mentioned above, so that the domain of VERTICALITY can come to stand for the domain of QUANTITY. However, this metonymic relationship becomes metaphorical when it is used to refer to situations where the two domains are not both present in the same experience, as when one speaks of stock prices going "up". In such a case, there are no experiences of a physical entity "price" moving in a direction which could be categorized as "up". However, the correlation between the two domains, formed and reinforced by the kinds of experiences mentioned above, still holds, and can be used to metaphorically describe the situation.

Because human bodies are very much the same regardless of where they reside, because the physical world also has the same laws from place to place, and most importantly, because the combination of these two facts means that human beings everywhere tend to interact with the world, at the basic level, in much the same way, it can be hypothesized that metaphors such as MORE IS UP should be found fairly universally; even if the actual metaphor itself is not universal, if a metaphor is found wherein the domains of VERTICALITY/VERTICAL LOCATION and QUANTITY are metaphorically correlated, the concept "up" would always be connected to "more", rather than being
mapped onto "less" (cf. Grady 1997). This is because human experience does not provide a large number of instances where the more there is of something, the lower it goes, while it does provide numerous experiences where "more" and "up" are experientially connected.

Human experience is not so rigid that it provides only one connection between any given two domains, however, so there are times when more than one source domain can be used to understand the same target domain, leading to what might seem like conflicting metaphors. This can be seen in the following examples from English:

1.8 Both Thanksgiving and Christmas are coming up in the next couple of months.

1.9 We're coming up on that meeting.

In example 1.8, the events of Thanksgiving and Christmas are conceptualized as moving towards the speaker across a temporal landscape. In sentence 1.9, the speaker is moving towards the meeting, which is understood to be a feature of the temporal landscape (cf. Clark 1973; Lakoff 1993; Moore ms). These two metaphors are both grounded in the experience of having any motion, either of an object towards an observer, or of an observer towards an object, take place in time as well as space. That is, when moving towards something, it will take a person time to get there, that person will arrive at each more distant point at a later time than she arrived at closer ones, and that person will arrive at her goal later than the time at which she started.

TIME IS A MOVING OBJECT

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>TARGET</th>
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<tbody>
<tr>
<td>moving object</td>
<td>event in time</td>
</tr>
<tr>
<td>landscape</td>
<td>time line</td>
</tr>
<tr>
<td>space behind the speaker</td>
<td>past</td>
</tr>
<tr>
<td>space in front of the speaker</td>
<td>future</td>
</tr>
</tbody>
</table>

10
TIME IS A LANDSCAPE

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>landscape</td>
<td>time line</td>
</tr>
<tr>
<td>landmark</td>
<td>event in time</td>
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<tr>
<td>moving object</td>
<td>speaker</td>
</tr>
<tr>
<td>space behind the speaker</td>
<td>past</td>
</tr>
<tr>
<td>space in front of the speaker</td>
<td>future</td>
</tr>
</tbody>
</table>

(cf. Lakoff 1993)

Although both of these kinds of motion have to do with the time it takes for something to change position, they are grounded in two different experiential schemata, in that the first example is grounded in the experience of having something move towards a person and that person having to wait until the object arrives, and the second example is grounded in the experience of moving towards something, and having it take time to get there. Nevertheless, both of the source domains are mapped onto the same target domain, namely that of TIME. Thus, we can call the first of these metaphors something like TIME IS A MOVING OBJECT, and the second TIME IS A LANDSCAPE (cf. Lakoff 1993). These examples make the important point that while metaphors must be internally coherent, they do not have to be coherent with each other; that is, our conceptual metaphors need not be globally coherent as a single system.

This basic idea of grounding is fundamental to the study of conceptual metaphor. For a long time, in cognitive theory, metaphors were assumed to be grounded in experiences which range from simple gestalt images, such as can be seen in the example of MORE IS UP, to experiences or objects which are much more complex, as can be seen in the metaphor exemplified by the sentences below, THEORIES ARE BUILDINGS (cf. Lakoff and Johnson 1980 and Grady 1997).
1.10 The foundation of his theory is weak.

1.11 You'll need to buttress those ideas if you want to prove your point.

1.12 The cornerstone of cognitive metaphor theory is the idea of grounding.

1.13 You can build upon that central point.

This metaphor was believed to be grounded in our experiences with buildings—the fact that they are built on foundations which must be strong in order for the building to stand, the concept of the role that a cornerstone plays vis-a-vis the rest of a building, and the use of buttresses to strengthen a structure (Lakoff and Johnson 1980). However recently Joseph Grady (1996; 1997) began to question the validity of this grounding, pointing out that those aspects of a building which are most central to our interactions as humans with such structures are not used in the metaphorical mappings. Humans interact more, and more directly, with windows, staircases, and corridors than with cornerstones and buttresses, yet those features of buildings do not appear in conventional realizations of this metaphor. Thus, sentences such as the following could be understood in the right context, but are definitely not part of our general usage of English.

1.14 ?The windows of her theory are opaque.

1.15 ?His theory has lots of long, winding corridors.

1.16 ?She hasn't built the staircases of her ideas wide enough.

(Grady 1997)

This caused Grady to raise the question of what kind of grounding was, in fact, being used for metaphors such as this. Furthermore, it is difficult to see what experiential connection children have between theories and buildings, thus bringing into question the experiential basis of this metaphor. Grady (1997) states:
there are many [metaphors] mentioned in the literature which have not been accounted for in this way [i.e. by experiential grounding], and which are very hard to explain in terms of experiences which could motivate them directly. The metaphor LOVE IS A JOURNEY, for instance—illustrated by numerous examples like *Our relationship is running out of gas* and *We're at a crossroads in our marriage*—would not seem to be based on any particular experiential correlation between romantic relationships and journeys. Since there are reasons for ruling out apparent structural "similarity" as the motivation for the metaphor, we are left without a good explanation for the existence of the linguistic examples (13).

Thus, Grady began an investigation of the types of grounding which could explain the existence of such metaphors as THEORIES ARE BUILDINGS and LOVE IS A JOURNEY.

In his study, Grady concluded that there are metaphors, which he has called *primary metaphors*, which are grounded in everyday human experience (for example, MORE IS UP), and that these metaphors can be used in the creation of more complex metaphors such as THEORIES ARE BUILDINGS. He argues that these primary metaphors are based on "simple, real-time experiences which relate in particular ways to our goal-oriented interactions with the world" (21). This observation challenged the theoretical understanding of the grounding and formation of metaphor. Metaphor was understood to be a connection between two potentially vast domains of knowledge, with one of those domains, the source, being used to understand and structure the target. While it is true that complex metaphors can connect vast domains, Grady's theory indicates that they do so via the combination of primary metaphors. There was also a belief that the source domain was in some way more concrete, and hence more basic, than the target domain. Grady's study indicates that this is not the case. He states:

[I]inguistic evidence shows that the types of concepts which are paired in primary metaphors have distinctive properties: *Primary source concepts*, like Heaviness, (which provide the vocabulary and imagery of the metaphors) are characterized by
schematic *image-content*—content tied to perceptions and sensations—while
*primary target concepts*, like Difficulty, (i.e. the intended topics of primary
metaphorical language) refer to basic cognitive operations, judgements, and
responses (1).

Thus, what he is concluding here is that both the source and target concepts are basic, in
some sense. The source concepts of primary metaphors are related to basic physical
experiences, while the target concepts have to do with the basic cognitive experiences tied
to those physical experiences. This means that metaphors such as *LOVE IS A JOURNEY*,
which are clearly not grounded in such physical and cognitive experiences, must arise due
to some other mechanism. That mechanism, and its impact on the study of metaphor both
theoretically and practically, will be discussed in Chapter 2.

**Section 2: The Hupa language**

*Section 2.1: Background information*

Hupa is an Athapaskan language spoken on the Hoopa reservation in Northern
California. As an Athapaskan language, it is related to a diverse number of languages
ranging from, for example, Eyak in Alaska, to Navaho in Arizona and New Mexico. The
Athapaskan tribes comprise, according to anthropological and linguistic estimates, the
penultimate migration to the New World, arriving some 8,000 years ago. This migration
moved south from Alaska, with one group moving down the west coasts of Canada and the
United States, and a later group directly into the Southwest. These routes describe the
range of Athapaskan languages today (Krauss 1976).

Hupa itself has at this point a limited number of speakers. Below, I describe in
detail the process of the death of the Hupa language, and in Chapter 5, I recount the efforts
which have been made to reintroduce the language and to create a new community of
speakers. At this point, there are probably less than ten fluent speakers whose first language was Hupa. All of these speakers now use English as their language of everyday communication and have done so for probably the last fifty or sixty years. In my first summer of fieldwork in Hoopa valley (the summer of 1995), I was privileged to work individually with a speaker named Ruth Beck, who has since passed away. She was in her mid-eighties when we worked together, and had not spoken the language daily since her teens. She grew up in Hoopa Valley, but left it for a significant period in her young adulthood, pursuing work. In the following years, I attended adult evening Hupa language classes when I was able, and there worked with three other elders: Jimmy Jackson, in his mid- to late-eighties, Calvin Carpenter, in his early eighties, and Minnie McWilliams, in her late seventies or early eighties. All of them stopped speaking Hupa as their primary language when they attended the valley’s boarding school during their high school years. Jimmy Jackson and Minnie McWilliams are siblings, and Calvin Carpenter is their cousin. They all grew up in Hoopa Valley, but have left it for extended periods at various times throughout their lives for a number of reasons (e.g. military service and work).

Section 2.2: Hupa language loss: An overview

A number of researchers have noted that, compared with other California tribes, the Hupa tribe escaped relatively unscathed until late in its history. This was due in large part to the isolation of Hoopa Valley, and the therefore minimal White contact there. In 1850, the Hupa were temporarily inundated with gold seekers, but strikes there were quickly depleted, and the number of outsiders fell to a few whites who stayed to farm. In 1855, a military post, Fort Gaston, was established in the valley, in order to "maintain order", and it remained the sole authority in the valley for a decade. Relative to other areas of California, hostilities were fairly minimal. Bushnell states that casualties were relatively slight, about 20 from 1855 to 1860 (Bushnell 1968:1110), but Kroeber believed that
census numbers "indicate that 20 years of contact with the Americans had been heavily disastrous to the Hupa men. Bullets, not disease, killed in these first years" (Kroeber 1953:131). However, in 1864, the central territory of the Hupa was designated a reservation, and whites who were living on that land were reimbursed for the property they were forced to relinquish. So, while soldiers continued to be stationed at Fort Gaston, the rest of the white population was made to leave. Thus, this first influx of white settlers was relatively brief, and then dwindled to only soldiers.

From 1873 to 1877, Hoopa Reservation was under the control of missionaries. However, even though the school, Sunday school, and church appeared to do well during that time, Bushnell argues that these missionaries did not make significant inroads during the time at which they were there (Bushnell 1968:1111). During this time, too, Hupas mostly remained at their traditional village sites. It wasn't until the allotment system, which divided the reservation into land parcels to be distributed among families, was introduced in 1887 that these living patterns were disrupted. Because of this, families began to disperse throughout the valley. This indicates that the beginning of a strong cultural disruption did not come until the late 1800's.

By the early 1900's, there were a number of Whites living on the reservation. These were typically either men who had married into the tribe, or who had purchased land from Hupas. Because of this, the potential for cultural change increased progressively throughout the 1920's and 1930's, even though Bushnell argues that this change was still slow (again, in large part due to the relative isolation of Hoopa Valley). It wasn't until the booms which came after World War II that things began to change quickly in the Valley. In the next two decades, the lumber industry came to Hoopa in force, and electricity, cars, and the telephone were introduced into the Valley, and with them, easier access to the larger cities on the coast, such as Eureka. By this time, farming, gathering, hunting, and fishing—all part of the traditional ways of earning a living—were almost entirely gone. During this period, there was also an increase in the number of intermarriages between
Hupas and Whites, and the latter came to outnumber the Indian population by the mid-1950's.

Thus, while disease and rapid population loss did not play nearly as crucial a role in Hupa history as they did in other parts of California, once contact with White culture came, it came with a vengeance. As with other parts of the state, the institution of a boarding school in the Valley played a central role in the acculturation of Hupa children. The first government school was established in Hoopa Valley in 1871. Attendance was fairly low. There was a great deal of protest among traditionalists in the tribe, who believed "that these institutions were contributing to the undermining and disintegration of native culture. At Hoopa, the traditionalist influence prevailed and ultimately caused the school to be closed in 1876 due to lack of attendance" (Castillo 1978:114-5).

However, this victory was short-lived.

With a shift in federal policy from simply isolating the Indian to "uplifting" and "civilizing" him, a boarding school for the Hupa and neighboring tribes was established on the reservation in 1893. All pupils were required to reside at the school with home visits limited to once or twice a month. ... Instruction was in English and conversing in an Indian language was strictly forbidden. ... Runaways were a chronic problem reflecting the resistance of many of the Hupa children and often their parents to the imposition of this institution... Nevertheless, it is probable that the school with its forcible inculcation of white culture was one of the more effective instruments in the campaign to eradicate as many aspects of the aboriginal life as possible (Bushnell 1968:1110-1).

This boarding school lasted until the 1930's, when it was converted into a public elementary day school, and a four-year high school was eventually added. Although Bushnell states: "[w]hile the Hoopa school was no longer deliberately employed as an instrument for de-Indianization, it served increasingly as an agent for non-coercive
accluturation" (Bushnell 1968), I have spoken with tribal elders who remember being punished for speaking Hupa while in school.

The Hupa language itself was necessarily affected by these events. Even though White influence in Hoopa came relatively late, today there are only a handful of fluent speakers of Hupa left, and all of them are over the age of 70. In a report of the Department of the Interior, written in 1877, the author states that although the Hupa were little more than half of the population of the reservation (the rest of the occupants belonging to other tribes in the area who were relocated to Hoopa when the reservation was formed), the Hupa language served "as the French of the reservation, the idiom of diplomacy and of intercourse between tribes", and was also "in general use within each rancheria" (Powers 1877:72-3). Thus, Hupa as a language was clearly still in currency at that time, and was being spoken by a large population. It should be noted that this population was commonly multilingual, as can be seen in Powers' observation that he "found many Indians speaking three, four, five, or more languages" (Powers 1877:73), although it is interesting that English was generally one of these languages, indicating its importance even this early. In 1903, Goddard notes that a few adults were able to read English (Goddard 1903:11).

By the 1930's and 1940's, Hupa was beginning to lose ground, as the younger generation (having attended boarding school) increasingly spoke English among themselves, typically reserving the use of Hupa for communication with their elders. And by the 1950's, "only the older people spoke Hupa as a first tongue and the younger generation was likely to know at best only a few native words, often the profane ones" (Bushnell 1968:1112-3). By 1978, Wallace observes, "[t]he native language [i.e. Hupa] is still spoken, though many of the younger Indians know only a few words and phrases; and even most older people who speak it well feel more at ease in English" (Wallace 1978:176). This is close to the situation which I found in doing fieldwork at Hoopa; the elders with whom I have been able to work have a fairly good command of Hupa, but are
not comfortable using it, and typically will not do so for any extended conversation, even with another native Hupa speaker.

So it can be seen that, in the course of approximately 70 years, from the 1920's to the present, Hupa has gone from being a language of primary communication among Hupas to being a language only remembered by some elders, and almost never used as a language of daily communication. This goes a long way towards explaining the kind of reduction in the scope of metaphors in Hupa that was presented in the preface. However, this is not at all the end of the story. In recent years, there have been a number of efforts made towards Hupa language revitalization. These include intensive summer classes, ranging from a long weekend to a month in length, involving children of all ages; evening classes in which elders who speak Hupa make themselves available to anyone who comes with a desire to learn Hupa, or to learn about Hupa; several very successful Master-Apprentice teams (which will be described in depth in Chapter 5); and, most recently, high school language classes on Hupa. All of these are enthusiastically supported and attended by speakers and non-speakers alike, and several of them have led to the creation of young fluent and semi-fluent speakers of the language, indicating that there is hope for a renaissance.

Section 3: Language death theory

Looking at the history of Hupa language loss gives some clues as to how a language could disappear from use so rapidly. However, the answers to the issues raised in the preface also require a look at linguistic theories of language death: how it happens, different types of language death, features a language as it becomes moribund, and so on. While it is true that no studies to date have specifically addressed the question of metaphor loss and reduction in a language death situation, some of the conclusions of these studies
can be extrapolated to the metaphor situation as presented in the Hupa examples in the Preface. More importantly, such studies give some indication of the kinds of factors that lead to language death, which in turn gives a sense of how to reverse the process, as well as ideas about the kinds of roles that the study of metaphor and cognitive linguistics can play in this reversal.

A good place to begin is by considering the categorization of different kinds of language death proposed by Campbell and Muntzel in their 1989 paper, "The structural consequences of language death". The first kind of language death that they outline is what they call sudden death: a situation in which a language disappears from use so quickly that there is no time for it to be affected by either normal language change processes, or by contact with an outside language. This describes the situation of many of the languages of California, particularly in the southern part of the state, where European contact was early and devastating. Most of the tribes which were associated in some way with the Mission system no longer have any living speakers of their languages, and in a number of cases, have not had any speakers in more than a generation.

A slightly less drastic kind of language death is called radical death. In this case, "language loss is rapid and usually due to severe political repression, often with genocide, to the extent that speakers stop speaking the language out of self defense, as a survival strategy" (Campbell and Muntzel 1989:183). This kind of language death can leave people who are called rememberers, who were never competent speakers, but who have learned and remembered isolated words and fixed phrases of their language of heritage (the term rememberers can also be used to refer to speakers, including fluent ones, who don't use their language anymore, or who haven't for a long time). Radical language death can also leave speakers who were once fully competent, but, because they have not used their language as a language of daily communication in a long time, are no longer fluent in the same sense as speakers who do use their language daily. In other words, a once fully competent speaker in a radical language death situation is somebody who has, for any one
of a number of reasons, not been able to use his or her language of heritage as a language of daily communication for some time. This means that the kind of fluency which comes from daily use is no longer possible. Many people have had the experience of learning a language, and perhaps living somewhere where we used that language daily, and feeling quite comfortable with it. However, as soon as they leave that situation, their command of the language is drastically reduced, even though a repeat exposure to it would allow them to regain competence fairly quickly. This is true of these speakers as well. The problem is compounded by the fact that often there is no situation in which they can immerse themselves in their language in order to regain the full competence that was once theirs.

This kind of language death is the best description of the kind of language loss which has been observed in Hoopa Valley. The elders who are able to speak the language do, for the most part, have pronunciations which reflect the kinds of transliterations seen in Goddard, for example. They also appear to possess some of the morphological complexities which are part of any Athapaskan language, although, in many cases, they do not actively use some of the more complex forms unless pressed. Their command of the lexicon is good vis-a-vis words which are attached to common items or actions, but for more esoteric knowledge, my consultants have frequently had to spend a great deal of time searching their memories, in a number of cases unable to arrive at an answer. Most importantly, the elders with whom I have worked do not, for the most part, converse in Hupa, even amongst themselves in a language classroom setting, and when asked to produce a lengthy, connected text, most are uncomfortable doing so. (However, I was able to use, for comparison, a large corpus of texts collected by P.E. Goddard in the late 1800's, as well as more recent collections by Woodward and V. Golla.)

Campbell and Muntzel also state that "radical death can lack the age-gradation proficiency continuum more typical of gradual language death situations" (Campbell and Muntzel 1989:184). This is true of the Hupa situation as well. All of the speakers of Hupa are elders who are above the age of 75 or so. I have heard of a few rememberers, but no

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speakers, of somewhat younger ages, but even those Hupas are above the age of about 60. This indicates that language death was rapid, essentially happening between one generation and the next.

These observations about the effect that radical language death has on language production can lend some insight into the metaphor data which was presented in the Preface. In the cases where the metaphors were simply lost, the kind of lexical reduction which Campbell and Muntzel mention, and which I have observed among Hupa speakers, is likely to be part of the explanation. In the case of the word for "intelligent", when the older lexical item was lost through lexical reduction, a new word was created, probably on the basis of English, the dominant language in the valley. In the case of the two phrases "he thought of" and "we made him think of", the kinds of syntactic/morphological simplification which are mentioned above lead to the retention of the morphologically simpler phrase and the loss of the morphologically more complex expression of the metaphor.

Although the issue of metaphor in particular has not been addressed by researchers working in language death situations, these scholars have observed a number of phenomena which take place in such situations. These are worth mentioning, if only to give an idea of the magnitude of the effect of language attrition and death upon the language itself, and therefore of some of the challenges to be considered and faced in language revitalization efforts. Many researchers feel that "[d]emise can be predicted...only at the terminal stage, where it is obvious, what with a last speaker surviving in California or on some Dalmation island" (Hoenigswald 1989:353). However, others have been making efforts to attempt to define what kinds of features can be observed in a language death situation before the language is in a moribund state, while saving the language is somewhat easier.
Broadly speaking, Lise Menn has applied language acquisition research to language death situations, in order to discover whether the two processes are in some sense inverses of each other. It is worthwhile quoting her at length here.

With respect to any pattern or rule of a language, we may distinguish four broad levels of acquisition: (0) ignorance, (1) rote or formulaic knowledge, (2) pre-conventional or overgenerative knowledge (the level at which overgeneralizations are produced), and (3) full conventionalized knowledge. ... The overregulations of level two ... and, more generally, the tendency to use locutions of maximal semantic transparency have long been understood as characteristics of an intermediate stage of language acquisition which are pruned back to/towards the norm principally through sufficient exposure to counterexamples and/or examples of alternative options. ... Less generally recognized is level one, at which we find the countervailing tendency to rely on unanalyzed (rote) forms, or on formulaic utterances. Formulaic utterances are commonly referred to as "unanalyzed", but this may not always be the case—many an idiom, complex lexical item, or minor syntactic pattern is at least partially analyzable; what's critical here is that it is not synthesizable, that is, not productive for its users. ... We tend to be able to see level one performance most clearly in second language acquisitions, where communication pressure on the older language learner probably throws it into sharper relief (Menn 1989:340).

There is a lot to unpack in this statement vis-a-vis the Hupa situation, and the metaphor data from the preface in particular. First, in considering the stage to which Hupa speakers belong, it can be said that most of the remaining native speakers fall into level three (full conventionalized knowledge) most of the time. However, this in only true the majority of the time. For a number of the phrases and words which they use, Hupa speakers operate at level one, that is, the level of rote or formulaic knowledge. However, is this different than most "normal" language speakers? For all of us, even in our native languages, there are
words and phrases which we never bother to analyze, which leads to the occasional "ah-ha!" experience when the underlying meaning of a phrase suddenly becomes clear for one reason or another. This could be pinpointed as being the difference between the rote knowledge of a full speaker of a language (that is, one who operates almost entirely at level 3 all the time), and a slightly less competent (I am using this term in its technical sense to refer to the level of the linguistic abilities of a given speaker) speaker of a language (who operates a level three sometimes, and at levels two or one other times). The latter kind of speaker would be much less likely to have this kind of "ah-ha" experience, because they would be less likely or able to deconstruct the phrases and words which they know by rote. Menn also points out the importance of synthesis here, in distinguishing levels of speakers. She believes that a level three performer would be able not only to pull apart (at least to some degree) most of the phrases and idioms that she uses, but would be able, in cases where the pattern is productive, to, in fact, produce analogically related phrases or idioms.

These observations, although not aimed at a discussion of metaphor, can be applied to metaphor data. In the same way that constant rote learning of everyday phrases and idioms of a language, and the concomitant inability to produce more, is considered a sign of incipient language death, a rote production of phrases which are metaphorical in basis, but an inability to produce novel extensions based on those metaphors, or to understand novel extensions produced by others, can also be considered a sign of incipient language death.

Menn also points out that "[r]egularity, frequency, perceptual saliency, and redundancy all contribute to the discoverability of the form-meaning correspondences of a language" (Menn 1989:341). As above, she is not addressing issues of metaphoricity. However, this too has a bearing on metaphors in a language death situation. In such a situation, as with Hupa, the language is not being spoken every day (or even every week), and is not being used in the kinds of conversations which allow for regularity, frequency, and redundancy. This indicates that there would be much less input data, for new learners
of the language, and therefore that it is much more difficult for them to discover regularity in source-target domain associations. Thus, it would be difficult to discover, on some level, the metaphors of a language, making speakers less likely to utilize these metaphors in new and creative ways.

Another observation which applies readily to issues surrounding metaphor loss has been made by Hoenigswald. "Languages about to disappear are sometimes said to suffer style reduction. ... This is only to be expected whenever during the period of bilingualism a particular style—that is, speech on particular kinds of occasions—is left to the other language" (Hoenigswald 1989:348). Some kinds of speech (e.g. extended telling of personal stories) are more often characterized by creative use of everyday metaphors; in other words, novel extensions based on metaphors which may otherwise be more typically expressed in semi-set words and phrases. Such styles encourage the analysis of such everyday metaphors, and extensions into new realms of expression of these metaphors. However, as the use of a threatened language shrinks, and no longer includes these particular speech styles, the opportunity to practice this kind of metaphor use also disappears. This contributes to a situation in which everyday metaphors become dead or frozen—no longer accessible to speakers as full cognitive structures, and merely present as idioms. This can lead to the kinds of loss of metaphor seen in the data from the Preface.

Having spoken about the ways in which observations about structural changes to language can be applied to metaphor, the role played by socio-cultural factors can be considered as well. Two interconnected factors which play a large role in language maintenance are the interpersonal relationships between speakers—both among peers, and between older, fluent speakers and younger language learners—and the attitude of speakers towards change within the language as it is transmitted.
[T]he constellation of language maintenance and structural innovation derives not just from the social demands for use of the in-group language embodied in specific personal relationships, but from a tolerant linguistic ideology on the part of the proficient interlocutor. ... This raises a question of the social and sociolinguistic functions of purist ideologies (Woolard 1989:360-1).

Some researchers point out that change in language, within reason, can represent a healthy attempt on the part of the language to survive in a shifting environment. Given that fact, conservative attitudes towards language change on the part of fluent speakers can actually be more destructive than slightly more lenient stances. This is due to a number of factors. First, in some of these cases, older speakers actively discourage the use of the language by those who do not use it perfectly. This means that a potential younger generation of speakers, who could carry on conversations in their language of heritage, or who would like to learn to do so, feel that they should not use the language at all, since their knowledge is, in some way, flawed. It is also true that language naturally changes to meet the challenges of existing in a changing world. Thus, if speakers discourage such change, they may find that their language no longer has the resources to express thoughts about everyday experiences and activities. In this case, use may fall off as speakers find that they must turn elsewhere for linguistic resources simply to carry out everyday conversations.

However, we must consider whether speakers can change any aspect of a language without having the language suffer in some way. Woolard points to some cases where certain kinds of changes appear to have allowed a dominant language to encroach upon the traditional language, while other kinds of change did not.

It is interesting to note, for example, that Haugen's American Norwegian speakers tolerated considerable lexical borrowing [from English] and considered their language distinct as long as the phonological and syntactic systems remained distinct; their tolerations of borrowing gave way to shift [from Norwegian as a primary language, to English]. Gumperz and Wilson (1971), in contrast, found
tolerance of extensive syntactic convergence in their Indian village, as long as the lexicons remained distinct; there the separate languages seemed to lead a stable and continuing existence. It may be that certain types of convergent change are indicative of threat to language survival while others are not (Woolard 1989:361-2).

If this is true, it would indicate that the syntax and phonology of a language are not close to what constitutes the "soul" of that language in the same way that the lexicon is. We will see in Chapter 5 that this observation, drawn from the research of linguists vis-a-vis speech communities, in many ways parallels the gut feeling that speakers have about what makes their languages unique.

While it may seem from this discussion that flexibility is a trait which is possessed by a language, or not, and which is necessarily a good thing, it is important to note that this is not some kind of "survival of the fittest" situation. Thus, it is not the language itself which survives because of some factor we could call 'flexibility' inherent in the language, it is the adaptation of the speakers to the situation, and the linguistic adaptation which arises from this, which can lead to language survival in a threatened situation.

However, does that survival comes at a cost, and if so what is that cost? Although this issue will be discussed in much more detail below, it is raised here in order to plant the seeds for future consideration. Wurm has a great deal to say about this:

Perhaps the most serious problem for the fate and nature of a language which is often an unwritten language, or has only recently been reduced to writing, results from influence upon its speakers by speakers of another language who are culturally more aggressive and more powerful in some way. ... Such an influence usually leads to the partial or complete adoption of much of the culture of the latter people by the former, who in the process lose much, if not all, of their traditional culture—or at least it is profoundly changed or modified. This tends to have far-reaching results for the language of these people: a. It may disappear and be replaced by that of the culturally more aggressive people...; b. It may be relegated
to culturally inferior and unimportant roles and functions or, in some rare instances, to some special uses; c. It may be heavily influenced especially in its vocabulary and to some extent also in its structure by the language of the culturally more aggressive people; d. It will lose a number of its characteristics which are rooted in the traditional culture of its speakers and become in many ways an imitation of the language of the culturally more aggressive people. It no longer reflects the unique tradition and original world-view and culture of its speakers which has been lost, but more that of the culturally more aggressive people who have influenced its speakers (Wurm:6-7).

There are many cases in California where case (a), in which speakers lose their language and use English instead, has occurred. In a number of those instances, situations like (b) occurred first, in which people used their language of heritage for a time, with English taking over more and more roles, until it eventually became the language of choice. In Hupa, (c) did not occur, in large part because there was no situation of long-term bilingualism, preventing structural borrowing from taking place. It is situation (d), however, which Wurm calls a "pseudo-death" (13) that is of most concern to Natives interested in language revitalization. When bringing a language back to the status of daily use, what would it mean to have that language merely reflect English in some way, rather than being a unique mode of expression in and of itself? This is the question that many people interested in language restoration ask, and one to which a study of cognitive metaphor can provide a key to the answer, by focusing on those aspects of a language which, in part, express the world-view of the culture which speaks it.

But if the language does not in some way change to accommodate the new world in which it exists, what happens then? Wurm has something to say about this:

[Changes in environment would mean that the cultural and social settings in which a given language had been functioning, usually for a very long time, have been replaced by new and quite different ones as a result of irresistible cultural contact]
and clash, with the traditional language unsuited for readily functioning as a vehicle of expression of the new culture. [This can engender] negative and destructive attitudes towards this traditional language by the carriers of the newly introduced culture and speakers of the language serving as its means of expression (Wurm:3).

There are at least two separate points here to unpack and discuss. At the end of this quote, Wurm points to the attitudes that are often engendered in such a culture clash situation, attitudes which, at least at some stage, are almost invariably negative or, at the best, ambivalent towards the traditional language and culture. Metaphor, in such a situation, would be affected in much the same way as the rest of the language—the repertoire shrinks as the use of the language becomes more rare.

The more interesting point made by Wurm is his statement that "the traditional language [is] unsuited for readily functioning as a vehicle of expression of the new culture" (Wurm:3, my emphasis). Note the use of the word "readily" here. This does not mean that a language cannot become functional in such a situation (cf. modern Hebrew), merely that such a shift would not necessarily be easy or smooth. Underlying this statement is the assumption that languages are in some way tied to their cultures, a notion which will come up again as we continue. Due to this connection, it is true that a language cannot simply and easily express all of the ideas which are important to an alien culture. And this leads to an important question: what happens to a language when it becomes able to express all of the ideas of the newer culture, and loses its ability to express some of the ideas of the traditional culture? Is that language still "the same language" that it was, or a "modernized" version of the same language? Or is it merely a tool for translating the dominant language into other sounds and constructions? It is here that looking at metaphor should be seen as intrinsic to language death studies. When metaphors that are connected to culture disappear or become frozen, what does that say about a general state of cultural and linguistic shift? All of these questions become important when working on language revitalization efforts. Such questions are involved in the issues which are most central to this work: those having
to do with the relationship between language and culture, and the revitalization of language as a tool for maintaining ties to traditional culture.

**Section 4: Linguistics and the study of Native American languages**

Throughout the world, the plight of many languages seems dire. Michael Krauss predicts that some ninety percent of the world's languages will become moribund (that is, no children will be learning the language as a language of daily communication) or will die within the next century (Krauss 1992). In this situation, where are the linguists? Given that linguistics is the study of language, and given the straits into which the world's languages have fallen, what should the role of linguistics be? In order to adequately address this question, we must first look at what the role of linguistics has been.

Linguistic study in the United States, at least as it is relevant to the study of Native American languages, falls, broadly speaking, into three main eras. The first is the initial era of fieldwork, characterized by the gathering of data by a large number of researchers, some of whom were not linguists at all, and many of whom had primary training in fields such as anthropology. After this, there came a transition to focusing more on the theoretical implications of the data which had already been gathered. In many cases, as linguists focused on subtle distinctions of grammaticality in English, field data was not considered to be very important, since native speaker intuition on the part of the linguist was seen as the most foolproof kind of data; English became the central language in American linguistics. This trend continues to the present, although in recent years, linguists have returned to a more cross-linguistic approach, this time with, in many cases, one big difference—rather than seeing the world's languages only as objects for study, linguists are beginning to see themselves as resources for the members of the linguistic communities with which they work. Needless to say, these shifts have huge implications for the field of language restoration.
This discussion is a synopsis. This subject has been handled ably and in depth by a number of linguists, to whose works I would refer my readers, should they wish to learn more about the history of the study of linguistics. (See, for example, Haas 1978; Harris 1993; Lakoff 1989.) What follows is an outline of the major trends within the field as it has been practiced in the United States. This outline does not address the movements in related fields such as education, and within relevant subfields of linguistics, such as applied linguistics and sociolinguistics.

Let us begin by looking at the inception of the study of Native American languages, before there really was an Americanist field of linguistics. Some of the earliest extant linguistic work was collected by Spanish Missionaries to the Americas. In many cases, these grammars are all the documentation that is left of these languages. This was not, however, a theoretical enterprise. Missionaries collected these grammars in large part for the purpose of understanding the languages enough to proselytise in them, or to translate passages of the Bible, for example. The focus was not on understanding these languages and their unique structures. Indeed, these languages were often forced to fit the mold of the classical languages that the missionaries knew best, namely Latin and Greek. Of course, it was not only missionaries who were collecting linguistic data: "Throughout the seventeenth century ... two kinds of activity, (1) the missionaries' writing of grammars and associated materials and (2) the explorers' collection of vocabularies, continued unabated" (Haas 1978:111). Many people who came into contact with Native cultures made an effort to record something of the languages which were spoken. This early stage of collection did not involve linguists per se. Anyone who was exploring and who came into contact with a tribe could and did collect data about that tribe, often including cultural artifacts, descriptions of ceremonies, drawings, and, of course, lists of words and sentences.

In the field of linguistics at this time, there was a huge breakthrough in the study of diverse languages. In Europe, the discovery that languages as separate as Sanskrit and Russian were related, and that this relationship could be shown through linguistic data, led
to an interest in comparing other groups of languages in order to find out whether such historical relationships could be determined. This led "to an increased sense of the need for language recording so that, even if the languages should disappear, studies of their relationships could be made." (Haas 1978:112) Thus language came to be seen as a kind of scientific artifact, to be collected in the field and then brought home for further analysis. Linguists were also no longer relying on working with written documentation of older languages, which had been the trend for so long. They were now considering all of the living languages which were available for study, and worrying because many of those languages, at least in the Americas, might not be around forever. Thus began the era of field linguistics.

This meant that there were two major trends in American linguistics in the nineteenth century. The first was field work, the collection of vocabularies and grammars from tribes throughout the country. The second was a related concern. This had to do with the need to find a way to write down the languages being collected such that all sounds, including the unusual ones (that is, sounds not shared by Indo-European languages), were adequately represented, and could be deciphered by another person looking at field notes. This led to the creation of the American Phonetic Alphabet, which was not, of course, without its complications. While most field workers were familiar with this alphabet, and used it in one form or another, many had their own personal addenda. Any given person's notes could use symbols which were personally invented, or which were used by other field workers to mean something else. It also often happened that a given researcher would change his conventions from language to language, depending on the needs of the moment.

This shift to a focus on the collection of languages for scholarly purposes meant that what was collected and by whom it was collected changed as well. Researchers such as Kenneth Hale
"were in fact field linguist[s], i.e., scholar[s] who wrote down linguistic information from the lips of the native speakers solely for scholarly purposes" (Haas 1978:177). These new researchers went into the field themselves to gather the data that they needed for their work. This work became the focus of planned trips into the field, and attracted the interest of people like Powell, who was the director of the Bureau of Ethnology as well as of the Geological Survey. Thus, there was a complete turnaround in the attitude of those who were working in the field towards the groups that they were working with. These field workers came with an interest in looking at such groups and their culture as a whole, as something interesting to learn about for the sake of knowing, rather than for the sake of conversion or subjugation. This lead to an interest in collecting not only bits of language, but also texts, that is, cultural artifacts of a linguistic nature. This indicates a shift of another sort, in that linguists who once stayed home and worked on texts from (in many cases) ancient and dead languages, researchers whom Haas has called "armchair linguists", more and more often were heading out into the field to work on language collection themselves.

Thus the stage was set for Franz Boas to come onto the scene. His approach to linguistics became known as "linguistic relativism" (or cultural relativism when applied to culture in general). He believed that analyzing Native American languages based on the template of European languages distorted the observations, and did not provide a true picture of what was taking place in these situations. This meant that field workers had to consider each language anew, attempting to discover its internal mechanisms without preconceptions based on the other languages which they knew of. Because of Boas' influence (and the further influence of his students, e.g. A.L. Kroeber), as well as the strength of his belief in linguistic relativism, "throughout the better part of the twentieth century scholarly work on American Indian languages was conducted almost entirely by field approach" (Haas 1978:177-8).
It was not just language which was of interest to Boasian field workers. These researchers collected both linguistic data and information about the culture in which the language was situated. The latter information was considered to be on a par with the linguistic information itself in terms of importance. In fact, many field workers of this time were trained in fields such as anthropology, rather than linguistics proper.

The typical outcome of this kind of fieldwork was a monograph; a scholarly work, intended for consumption by other scholars with a similar background, a background which would allow them to understand the work. It was not intended for the general public, and (more importantly for this discussion) it was not intended for the use of the tribe which it discussed. The question of how tribal members might feel about this, and of whether they might want access (intellectual, not physical) to this information, was not considered. This marks one of the biggest differences between field workers in the early part of this century and many field workers today.

While there was a shift, in the middle part of this century, to a focus on theory rather than documentation, it is important to point out that there have always been centers which have kept the torch burning. Haas points out that although by the middle of this century, Boas and Sapir were dead, "[i]n the meantime, many of their students had attained positions at major universities throughout the country. Some of these still had a primary interest in the study of American Indian languages" (Haas 1978:119). And at the University of California at Berkeley in the 1950's, researchers Mary Haas and Murray Emeneau "founded the Department of Linguistics and the Survey of California and Other Indian Languages, with the result that, for many years, linguists receiving their training there usually focused their primary research on California languages" (Hinton 1994:249).

Although the study of Native American languages, via fieldwork, did continue through to the present day, the field of linguistics as a whole began to go in another direction, emphasizing (to put things rather simplistically) theory rather than data. Bloomfield proved to be a pivotal figure during the beginning of this transition. At this
time, American linguists began to have a greater and greater impact on the directions that the field was taking. Up to that time, historical linguistics, as practiced in Europe and as focused on the Indo-European language family, had been the pride of the field. Now, it became clear that linguistics, to continue as a field, would have to address the issue of developing a general descriptive or synchronic model for the study of language. This was especially clear in Americanist linguistics, where researchers were focusing on fieldwork and on describing the languages that they were working with. Thus, we see here a marriage of sorts between field research and the development of theory.

Bloomfield himself took the importance of field research very seriously. Although he came from a background in the study of foreign languages and Germanic and Indo-European philology, he believed in the value of culture and ethnoology for the study of linguistics. However, in spite of his interest in fieldwork, and his respect for the study of culture and ethnoology which had, to date, gone hand in hand with linguistic research, Bloomfield focused more on theory. Because Bloomfield was a strong adherent of the behaviorist school, believing that behavior is conditioned, it was fairly easy for him to ignore the kinds of cultural and cognitive issues which his predecessors had found so important. The fact that he was so focused on description of the languages which he saw, and therefore on their preservation, also made it fairly easy for him to ignore some of the messier aspects of linguistic anthropology.

This shift was of concern to other linguists. Issues of meaning and cognition moved from their place as an integral part of linguistic studies in the New World, and became something which would be done "someday", when the phonological, morphological, and (eventually) syntactic issues had been dealt with. Meanwhile, they were to be the concern of other fields, such as psychology and anthropology. These were the beginnings of the rift which was forming between these fields of study. And thus was the stage set for the entrance of Noam Chomsky, who moved the field further towards a preoccupation with strict theory.
Chomsky's background was different from that of the field linguists mentioned above. [His] exposure to the field came almost entirely through [Zellig] Harris, and Harris was a card-carrying Bloomfieldian, but in extremis, representing, in many ways, the best and the worst of the program. He had a fixation on esoteric, if not peripheral, issues, and a preoccupation with methodology which far outstripped even that of his contemporaries. He, too, had a somewhat unusual background for a Bloomfieldian—coming not from the rolled-up-sleeves-and-loosened-collar world of anthropology, but the bookish, intensely logical world of semitic philology—and, except for Hockett, he was the only linguist of the period seriously exploring the mathematics of language. Chomsky's education reflected Harris's interests closely. It involved work in philosphy, logic, and mathematics well beyond the normal training for a linguist (Harris 1993:38).

Chomsky's honors and master's theses were not, like those of his contemporaries, grammars of a Native American language, involving fieldwork; they were grammars of Hebrew. And his doctorate involved a highly abstract discussion of transformational grammar, with his data drawn exclusively from English. This focus on English represents a huge shift at a time when most linguistic work involved other languages, and in the United States, in most cases, Native American languages. Haas states bluntly that "[f]ield work was of little interest to ... Chomsky" (Haas 1978:120).

Harris summarizes the shift which was occurring by saying that "[w]hat most [Bloomfieldians] didn't notice ... is that Chomsky changed the focus of linguistics radically—from discovering good grammars to justifying and evaluating them. Linguistics was slipping from a primarily descriptive enterprise into a theoretical enterprise directed toward exploring the general principals underlying descriptions" (Harris 1993:41). This meant that the data which linguists were working with were either introspective data, or, at the outside, data which had already been collected. It also meant that, rather than looking
broadly at a number of languages with which a researcher might be working, theoreticians directed their attention deeply to one language, addressing issues which had, in Bloomfield's world, been brushed under the rug—issues such as finding appropriate theoretical frameworks for the linguistic description of the syntax and lexicon of a language.

And one more important discussion became open, namely that of the issue of universality. The interest in universality also served to draw attention away from interest in collecting linguistically diverse data—if there were linguistic universals, they could just as easily be found in English as in some other language, and English was, of course, more readily accessible to most of these new (American) linguists. Thus, there was a shift from fieldwork back to "armchair linguistics". Linguists at this time were not permanently and completely discounting the need to study diverse languages. They simply thought that the focus should first be upon English, and then the grammar this study would produce, with all of its universal features, could be applied to all other languages, leading easily and rapidly to the production of grammars for them, as well (R. Lakoff 1989:941).

This has remained the trend in linguistics for a number of years, continuing into the present. However, fieldwork, and an interest in cross-linguistic studies, has continued to flourish in some areas. For example, the study of linguistic universals has, in some cases, been conducted by those who have gathered a great deal of cross-linguistic data in the process of formulating theories (J. Greenberg and J. Nichols are two excellent examples of this kind of work). And in more recent years, the field of language revitalization has entered the scene. Linguists who are interested in the role of a language within its speech community are greatly concerned with the kind of language loss which has been rampant in the last century. Another important consideration in the rise of this branch of linguistics is the political climate which currently exists in North America. The centuries leading up to this one, as well as the first half or more of this century, were characterized by persecution, either explicit or implicit, of minority groups such as Native Americans, as well as of the
languages spoken by these groups. Native Americans were hard hit in particular, as, even when attitudes towards them did not demand physical obliteration, there was a sense that they should be assimilated into White culture, an assimilation which entailed giving up their languages. In more recent years, however, there has come to be an acceptance, however unenthusiastic on the part of some, of Native languages and cultures, creating a space in which those languages and cultures can be celebrated. This means that, in many cases, Native Americans themselves have become activists on behalf of their languages and cultures.

This has made it possible for linguists who are interested to become, not the documenters that they were in the first part of the century, nor the theoreticians that they have been since then, but active participants in the lives of the languages and communities which they have heretofore studied as, in many cases, outsiders. This participation has taken a number of guises. First, linguists and anthropologists have been documenting Native American languages for centuries, and until recently, that documentation was intended for, and used by, linguists and anthropologists. This is changing. These records are increasingly being used by Natives for their language revitalization efforts. And, in some places, linguists are helping to make these materials available, both by unearthing them and telling Natives about them, and by training Natives to give them the tools necessary to interpret sometimes incredibly obfuscatory material. Hinton states that "[t]hese materials [those collected at the University of California over time] are put to good use by Native California communities; publications, field notes, and audiotapes made by these field workers have all been gone through by tribal members who are seeking to study, retain, or renew their languages of heritage" (Hinton 1994:249). These materials, once intended for the linguistic community, have come to be available and used much more widely as linguists redefine their role vis-a-vis the communities whose languages they have studied.
This renewed relationship with language speaking communities, and its increased depth, can lead to conflicts between the demands of academia and those of the community with whom an academic is working. Hinton summarizes these difficulties in the following passage:

Despite the tremendous usefulness to the native communities of the linguists' work, conflicts in the motives and goals of linguistics and Native Californian communities have sometimes made the relationship between the two groups less than ideal. (1) 

*Who is the audience?* Linguistic field work and publication is usually done for the sake of an audience of linguists rather than an audience of tribal members. The primary interests of the linguistic audience are in such matters as linguistic theory and language comparison, while the community audience is interested in language learning and preservation. ... (2) *Authorship versus application* ... (3) *Theory versus Data.* Over the last forty years or so, linguistics has become more technical than it was during the first half of the century, with the result that scientific jargon and theories have made linguistic publications less intelligible to the public than when Sapir and Kroeber were doing their great work. ... The language community is interested in the data that linguists have collected, not in the theories they have expounded. Frequently linguists have collected only the data that is relevant to the particular theoretical point they are trying to make, so that the more theory-oriented a linguist is, the less relevant his work is to the goals of the language community.


All of these issues must be addressed by a linguist so that she can try to find a balance between the twin demands of academia and language preservation. One hallmark of this new movement of linguists towards community involvement is the swinging of the scales away from academia. This means that more time is devoted to writing grammars which are accessible to community members (as well as weighty theoretical tomes which are useful only to the academic world), or to creating dictionaries, or to gathering data which goes
beyond that needed to prove a theoretical point, but which is useful to the community in its
language preservation efforts (for example, in the past, collected lists of words and verb
paradigms were a central part of linguistic field work; today, many linguists also collect
daily conversational phrases, which can be more useful in language revitalization efforts
than a list of verbs in all of their tenses and aspects).

Another reason for this shift in interest within the linguistic community is that in
recent years, there has been an expansion of linguistic interest to fields such as
sociolinguistics and pragmatics. As linguists have studied the roles that languages play in
their communities, they have come to see the need for language management of some kind,
and to address themselves to that issue. An increased interest in creolistics and language
contact phenomenon has also played a role in this realization, as well as in the formulation
of theories of language death. As the field has expanded, linguists have come to realize that
documentation, so that a language can be studied after death, is not the only weapon in the
arsenal against language death, and that there is actually something to be done in many
cases to aid communities which wish to retain their languages. This development of the
field of linguistics has been a two-way street. As linguists have become interested in
sociolinguistics, pragmatics, and language contact studies, they have come to see the role
that they might play in working with communities. And that work, in turn, has led them to
become ever more knowledgeable in their chosen fields.

This work also means that linguists have had to redefine what skills are necessary
to truly be a linguist, and in many cases, to obtain those skills on the fly.

Linguists are being shaped by the needs and goals of language communities; we are
educated as much by the community members as we are by the universities. The
new generation of linguists realizes that in some ways their university education has
been deficient in teaching them how to do the sort of applied work that is asked of
them. Linguistics tends to focus on writing and analysis, words and sentences,
which are not the most important aspects of language maintenance and learning. In
the California communities, the needs focus more on language learning than language analysis. ... The new California linguist should be well-educated in such fields as discourse, and the psychology and sociology of first-language teaching, and the theories and methods of second language learning. The old field of Language and Culture, once but no longer seen as central to linguistics, needs to be learned by the new California linguist as much as ever (Hinton 1994:253).

Thus, rather than being passive bystanders to the process of language loss, linguistics finds itself in the role of helper, as language speakers and communities begin the rescue process. And we find that the field of linguistics has so much more to offer in this effort than was previously thought.

A discussion of some of the revitalization efforts throughout the state gives an idea of the kinds of programs which linguists have created in collaboration with community members. In spite of the dire situation, more and more communities are finding hope in the work that they have been doing on language preservation, and the success of the kinds of programs listed below is a large part of the reason for that hope. One of these programs is the Master-Apprentice Language Learning Program, funded by the Native California Network. This program's original training team included four linguists (Leanne Hinton, Martha Macri, Jean Perry, and Claire Kramsch), all specializing in either Native American languages, or language acquisition, or both. A native language speaker is paired with a younger tribal member who has shown an interest in his or her language of heritage (in some cases, the apprentices have already worked with language materials themselves).

This team agrees to spend 20 hours a week together, creating an immersion situation in which only the language is used for communication. It is in this part of the endeavor that linguists play a role, in suggesting ways in which such an immersion situation might be created and maintained, and in explaining why immersion works so well, and what exactly it is. As this program has continued (very successfully, I might add), experienced apprentices, who have actually had to maintain this immersion situation, often have further
suggestions for getting their masters to use only their language of heritage. In this way, the learning becomes a collaborative effort involving both the linguists and the community members.

Another very successful program has been the Breath of Life, Silent No More Language Revitalization Workshop, held at UC Berkeley in June of 1996, and again in 1997 and 1998. This program involves Native Californians whose languages no longer have any speakers. Its goal is to introduce the participants to the language resources held in the myriad archives of the university, and to give them the basic linguistic training necessary to make use of those materials, as well as to suggest ways in which dusty old manuscripts can be turned into vital language. This requires an introduction to phonetics and (a far greater difficulty) phonetic transcription, as well as some help with understanding the differing transcription conventions of various linguists such as Harrington, Kroeber, and Sapir.

This conference was jointly run by Leanne Hinton (a linguist at UC Berkeley), and L. Frank Manriquez (Tongva/Ahachemem), and involved the help of a number of graduate students from the Berkeley Linguistics Department, as well as other departments on campus and from UC Davis. The participants learned a great deal about linguistics, and about the ways in which archival materials can be useful in revitalization efforts, but we faculty and students were also shown a great lesson, about who the most appreciative audience of our work is. There is no one in the world who has more at stake and is ultimately more concerned with the quality of our work than the members of the speech communities themselves. The work of Harrington, Merriam, Kroeber, Barrett, and others has never been respected as thoroughly by linguists or treated with such passionate gratitude by them as it is today by Native Californians. The workshop was so powerful an experience that I believe it will affect the way those students who were lucky enough to be part of it will do their own research. I think they will never forget their present or future audience—the
communities who will, as our workshop participants did with the work of previous
generations' researchers—someday cradle and care for our linguistic materials like
their own babies (Hinton 1996b:16).

Having been a student aide at two of the workshops, I can attest to the deep truth of this
statement.

Although, at many times, and from many points of view, the language situation in
California seems dire at best, and hopeless at worst, linguistics, if practiced in the right
way, and with the collaboration of the communities being worked with (rather than on),
can be an incredible and invaluable tool in the language revitalization effort. I have
mentioned in this discussion some of the subfields of linguistics which have been brought
to bear in this effort, such as sociolinguistics, discourse studies, pragmatics, language
acquisition (first and second), and language contact studies, as well as, of course, the
growing study of language death and revitalization itself. The goal of this dissertation is to
present another linguistic tool as a member of this arsenal: cognitive linguistics. I have
argued, obliquely so far, and will argue far more forcefully below, that cognitive linguistics
has a role to play in the creation of curricula and programs which will be useful for
language revitalization. This dissertation is located in the juncture between theoretical and
practical linguistics, between a text written for a professional, academic community and a
work intended to be accessible to the Native communities from which it draws so much of
its data and inspiration. Thus, it has been important to present this history of the role of
linguists, since this work is one more in an ever-increasing group of works which balance
between two worlds. Far from being a hopeless situation, the language situation in
California should be viewed with hope, and with a continuing commitment by both the
language communities themselves, and by linguists who could be of aid in the struggle to
preserve the languages of California.
Chapter 2: The role of culture in metaphorical grounding

"[U]nderstanding does not consist merely of after-the-fact reflections on prior experiences; it is, more fundamentally, the way (or means by which) we have those experiences in the first place. It is the way our world presents itself to us. And this is a result of the massive complex of our culture, language, history, and bodily mechanisms that blend to make our world what it is" (Johnson 1987:104).

Section 1: Introduction

In the discussion of metaphorical grounding in basic human bodily experience (Chapter 1, section 1.2)—an experience which is fairly universal, given the similarities between human bodies and physical environments (that is, sensory apparatus, basic ways of interacting with the world, and basic laws of physics governing the way the world works)—room must be made for the basic day-to-day cultural experiences which are also part of human experience. The relative importance of culture in terms of its impact on language and thought is an issue which has long been debated in linguistic circles, and that entire debate will not be recounted here. However, there are some important points to bring to light. During the early part of this century, there was a great deal of interest in the interaction between language and culture, culminating in the idea which has come to be called 'linguistic relativity'.

The original idea, variously attributable to Humboldt, Boas, Sapir, Whorf, was that the semantic structures of different languages might be fundamentally incommensurable, with consequences for the way in which speakers of specific languages might think and act. On this view, language, thought, and culture are deeply interlocked, so that each language might be claimed to have associated with it a distinctive world-view (Gumperz 1996:2).
This idea, at first glance, seems to be in conflict with the notion of experiential grounding as discussed above. Such a view indicates that, in a number of ways, our physical experiences are mitigated by our cultural backgrounds, and thus that in many cases, even our most basic experiences are affected by our language and culture. Whorf states this clearly in the following: "We are thus introduced to a new principle of relativity, which holds that all observers are not led by the same physical evidence to the same picture of the universe, unless their linguistic backgrounds are similar, or can in some way be calibrated" (Whorf 1940:5). It is true that languages do, in fact, express what appear to be fundamental spatial relationships, for example, in very different ways, and therefore that speakers of these languages categorize similar experiences differently when speaking of them. However, one must consider whether this linguistic categorization represents some more fundamental cognitive categorization.

There are those who believe that the study of cognitive science has proven these theories to be wrong, as we can see in the following: "[T]he ideas [of linguistic relativity] seemed entirely and abruptly discredited by the rise of the cognitive sciences in the 1960s, which favored a strong emphasis on the commonality of human cognition and its basis in human genetic endowment" (Gumperz 1996:3). However, cognitive science has not, in fact, discredited these ideas. Nor does it truly want to remove the notion of cultural grounding from the playing field. The following quotes all reveal the place which culture still holds for those who are studying conceptual metaphors, in spite of the fact that there has, in most cases, been very little focus on what exactly the role of culture in metaphor is. "The most fundamental values in a culture will be coherent with the metaphorical structure of the most fundamental concepts in the culture" (Lakoff and Johnson 1980:22). "Our physical and cultural experience provides many possible bases for spatialization metaphors. Which ones are chosen, and which ones are major, may vary from culture to culture" (Lakoff and Johnson 1980:19)(cf. also the quote at the beginning of this chapter). In each of these instances, culture is put on a par with physical experiences in affecting metaphor.
This observation is key, especially in the world of language revitalization, where a
cornerstone in culture is often cited as one of the main reasons for restoring a language.
Thus, if metaphor is a place in language where culture has an effect, the study of metaphor
will be crucial in language restoration efforts.

Joseph Grady's discussion of primary metaphors has not, to date, taken this
potential cultural element into account, in part because the definition of primary metaphors
does not entirely admit of a cultural component. He states that, "Primary source concepts
are a class of universal, experientially basic properties, relations, actions, and processes,
which have particular significance in our interactions with the world" (Grady 1997:151-2).
It will prove, however, to be important to take into account the potential input of cultural
experiences in the study of metaphor. For example, Grady discusses the usage of such
terms as "cornerstone" in sentences such as This idea is the cornerstone of my theory. In
this case, the word "cornerstone" is not in any way specified by the primary metaphors
which go into the composition of THEORIES ARE BUILDINGS. Grady states that this kind of
usage, "when a term is used as an instantiation of a more schematic concept in a mapping,
and requires no additional underlying conceptual structure to explain its metaphorical
semantics" (Grady 1997), can be called 'free specification'. Thus, fundamental cultural
experiences can determine which terms are chosen to fill in when there is a chance for free
specification to take place. An example of this can be seen in certain instantiations of the
metaphor which has often been referred to as LOVE IS A JOURNEY. In many instantiations
of this compositional metaphor, a car is referred to, as in We're running out of gas, or
We're spinning our wheels. Grady argues that this is an instance of free specification,
given that there is no fundamental experience in our lives which connects being in cars with
being in love relationships. I would add to this statement that it is more than fortuitous that
cars were chosen to represent a situation in which the two lovers are in close proximity, in
an object which requires them both to move in the same direction at the same speed. There
are other cultural objects which could fulfill this requirement. However, in this culture,
cars are a fundamental part of our day-to-day lives. They take up a huge amount of our time, money, and energy. They are, in fact, part of our daily cultural landscape. Thus, it makes sense that, when looking for something to fill in a free instantiation such as this, members of this culture would turn to something which is basic in their experience, even if that experience is cultural. That is, one way in which culture serves as a form of experiential grounding in metaphor is in constraining the kinds of terms that will be used in free instantiation such as this.

There are two other potential ways in which culture can play a role in the experiential grounding of metaphor. The first occurs in situations where a language has a metaphor grounded in a basic human bodily experience that is not central enough in other cultures to have been used as a basis for a primary metaphor. There are a vast number of experiences which could qualify as grounding experiences under Grady's definition. However, no given language/culture uses all of them as the basis of primitives. Some show up in language after language. Others, seemingly as grounded, appear more often in cases where they are, for one reason or another, culturally salient. The second way in which culture can play a role in experiential grounding has to do with grounding a metaphor in an activity which is culture specific, and which is also, of necessity, very important to the culture in question. Both of these types of cultural grounding can be seen in the following example. In Japan, the traditional tea ceremony holds a place of great cultural importance. One aspect of this ceremony focuses on the correct way to boil water for tea. In boiling ceremonial tea water, it is important not to let the water come to a full rolling boil, but to stop it just at the point where the surface of the water seethes. This kind of knowledge is of the sort referred to above, where this is an activity specific to Japanese culture, and this type of knowledge, having to do with the proper way to boil tea, is a specific component of this activity. Another important aspect of Japanese culture has to do with not acknowledging an embarrassing situation that another person is in, so as not to humiliate that person. The basic bodily experience of holding emotions in check is one
which all human beings have felt at one time or another, but in Japanese culture this is important enough that it has combined with the knowledge above from the tea ceremony to form a phrase which translates literally as "make tea with bellybutton". This phrase is used precisely to describe situations where somebody has embarrassed himself, and an observer does not want to acknowledge this fact by manifesting amusement overtly, in spite of being aware of it. In this phrase, several pieces of knowledge have combined, all of them cultural. First, in Japanese, the locus of the emotional self is conceptualized as being in the belly, thus the use of "bellybutton" above. Combined with the information presented above, this phrase describes the feeling of holding emotions in check in terms of tea water, just below the boiling point, where the boiling is not immediately obvious, but is definitely felt. Thus, the above phrase is entirely grounded in experiences which are, in one way or another, particular to Japanese culture.
Section 2: Compositionality

The complex metaphors which I have discussed have been termed "compositional metaphors" by Grady. (Grady 1997) It is now possible to explore the issue of how, precisely, compositional metaphors are formed. What kinds of basic metaphors combine, and in what ways, to create the compositional metaphors which we use every day? Metaphors which involve a complex make-up have been discussed in a number of works on cognitive linguistics (Johnson 1987; Lakoff 1992, 1996; Lakoff and Johnson 1980, 1989). However, the issue of compositionality per se has been dealt with most clearly and explicitly in Joseph Grady's work (Grady 1997; Grady et al 1996). He states that "[m]any or all complex metaphors are compositional in nature ('compounds'); the simpler submappings of which complex metaphors are compounded are 'primitives'" (181). Of course, these primitives can be used by themselves, as we saw above in the case of MORE IS UP, for example, but there are many cases where metaphors which are used every day are clearly, when looked at from this point of view, compositional in nature. Understanding these more complex metaphors to be compounds of primitives allows researchers to consider the experiential grounding of metaphors which, on the surface, do not appear to have a clear grounding in and of themselves.

In order to see more clearly how this works, let us return to an example which has been discussed before, namely THEORIES ARE BUILDINGS. Grady argues that this metaphor is, in fact, a complex metaphor, composed of at least two primitives—ORGANIZATION IS PHYSICAL STRUCTURE and VIABILITY IS ERECTNESS. These primitives are independently motivated metaphors, and can occur outside of this combination, either by themselves, or in combination with other primitives. Grady presents the mappings for the first of these metaphors as the following:
He argues that this metaphor is grounded in our experience of structures as involving a complex interrelationship between parts. This is an experience which is encountered every day as humans deal with their own bodies, as well as with other complex structures in their environments. As children explore complex physical structures and the ways in which the parts of those structures interact and are interdependent, they are simultaneously forming complex ideas about how those structures work, thus making such explorations a "primary scene". This term is defined by Grady to mean precisely these kinds of day-to-day experiences where a physical realm and an emotive realm are both activated together. The second primitive which goes into composing THEORIES ARE BUILDINGS is structured as follows:

<table>
<thead>
<tr>
<th>VIABILITY</th>
<th>ERECTNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract object/situation, etc.</td>
<td>Physical object</td>
</tr>
<tr>
<td>Functionality, etc.</td>
<td>Erectness/verticality</td>
</tr>
</tbody>
</table>

This, too, has grounding in everyday human experience, in that there are many entities (including people themselves), which are living or aware or usable when they are erect, and when they stop existing in one or all of those states, the objects fall down and are non-functional. Thus, both of the primitives which together form the metaphor THEORIES ARE BUILDINGS are independently existing, grounded metaphors.
Metaphors such as the ones presented above can be unified, so long as no features of the metaphors conflict. Grady states:

The fundamental mechanism by which metaphors combine can be thought of as analogous to unification. ... [T]wo metaphors may combine to yield a metaphorical image which is more specific than either of the originals. ... The statement of a metaphor resulting from the unification of component metaphors includes all the information from the component metaphors; in this sense, unification of metaphors is a monotonic process. At its simplest, the result of unification is simply the list of all correspondences and propositions from the component metaphors (Grady 1997).

Thus, the final mapping of the metaphor which has been called THEORIES ARE BUILDINGS, which would include the propositional knowledge that in all erect structured objects, there is an asymmetrical dependence (that is to say that in a complex object, some parts rely on other parts to remain standing or to perform their functions) of some parts on others, looks like the following:

<table>
<thead>
<tr>
<th>VIABLE, COMPLEX, ABSTRACT ENTITY</th>
<th>ERECT PHYSICAL OBJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complex abstract whole (object)</td>
<td>Complex physical whole (object)</td>
</tr>
<tr>
<td>Members/&quot;parts&quot; of organized whole</td>
<td>Physical parts</td>
</tr>
<tr>
<td>Logical/causal relationships</td>
<td>Physical arrangement</td>
</tr>
<tr>
<td>Persistence</td>
<td>Erectness/verticality</td>
</tr>
<tr>
<td>Asymmetrical dependence of some elements on others</td>
<td>Support</td>
</tr>
</tbody>
</table>

(Grady 1997:50)

This kind of analysis has been completed for a number of metaphors in the English language, including the metaphors which are present in proverbs (Lakoff and Turner...
1989), as well as the complex of metaphors which are related to MORE IS UP and GOOD IS UP (Lakoff and Johnson 1980).

Until recently, the role of cultural grounding in metaphor has been mentioned, and to a certain degree taken for granted, but never fully explored. In Grady's dissertation, which contains the most detailed discussion of grounding and compositionality, the role of culture is not really addressed at all. In fact, as we saw above, his definition of primitives does not refer to cultural grounding, and his discussion of the combination of primitives to make more complex metaphors focuses on those complex metaphors which are entirely formed from primitives. He states that "complex metaphors are related by the primitives they share, and distinguished by the primitives they do not share" (Grady 1997). This definition appears to indicate that complex metaphors are simply compounds of experientially grounded primitives, without cultural input, since primitives are taken to be universal. Grady also argues, "[s]tatement in terms of primitives allows the most specific comparison of complex metaphors—either variants within a language, or cross-linguistic examples. Both commonalities and differences among metaphors can be accounted for specifically by reference to the primitives which complex metaphors either do or do not share" (Grady 1997). Another factor in the formation of metaphor, a factor which can lead to important observations about cross-linguistic differences between metaphors, has to do with the input of cultural grounding in the formation of complex metaphors. This addition is not at all incompatible with Grady's work, and in fact, it builds upon his theory.

Before presenting a categorization of the kinds of compositions which are possible, the players in these combinations must be defined and exemplified. The first is, of course, primary metaphor. In using this term, I follow Grady's definition, as discussed in detail above. The next kind of metaphor which plays an important role in composition is an extension of the category of primaries. I call these 'cultural primaries'. These metaphors are grounded in human bodily experience, as are the primaries which have been discussed. However, they do not appear as universally as those primaries. Given metaphors appear in
only a smaller subset of languages, and could thus be described as experientially based primaries which are language/culture-specific. One example of this kind of metaphor involves the stomach or heart coming to stand for the seat of emotion. Different languages use different organs for such an understanding, and it can be argued that this comes from the human bodily experience of feeling something strongly, and having that feeling be associated with a racing of the heart, or a clenching of the stomach. These strongly perceived organic changes are basic physical responses to the changes in body chemistry that accompany intense emotions, and they serve as the basis of the association of the heart or the stomach with emotion in general. The basic experience is the same, but cultures throughout the world choose different organs, or, sometimes, no organ at all. It also happens that organs such as the liver, which we now know does not really draw attention to itself when it is acting, can also be used to stand for the seat of emotion, which is due to the fact that it is one of the larger organs in the chest cavity, and thus could be assumed to be the cause of the physiological sensations attendant upon strong emotions.

Within the compositions that I discuss below, I also explore the role of culturally-specific activities. These are, as they sound, activities which take place in one or a few cultures, and which are central in some way to the culture which performs them. This centrality is vital, in that these activities must be cognitively pertinent enough to be able to form an experiential base. Thus, these activities will change from culture to culture, although their basic cognitive role, as an experience which is common to most, if not all, members of a society, allows them to serve as part of a font of cultural experience from which language can draw.

Finally, I draw on the notions of 'frame', 'image-schema', and 'idealized cognitive model'. All of these kinds of conceptual models can be either universal or culture-specific, and can be used to expand upon, or to feed into, various combinations of metaphors. A 'frame' is the canonical, pre-packaged cognitive representation of a type of event relative to which a lexical item is understood and defined. To give a classic example, when
understanding the sentence, "I bought a car", in order to understand "buy", the hearer must access the relevant frame. This frame includes knowledge of a buyer, a seller, an object being sold and the money or other item used to buy it. It also entails an understanding that the buyer desires the object, and that the seller desires the money. Frames can be, and are, much more complex than this (Fillmore 1982, 1985).

In defining an 'image schema', Johnson states, "in order for us to have meaningful, connected experiences that we can comprehend and reason about, there must be pattern and order to our actions, perceptions, and conceptions. A schema is a recurrent pattern, shape, and regularity in, or of, these ongoing ordering activities" (Johnson 1987:29, italics original). In other words, an image schema is an abstracted, schematized understanding of certain relationships in the world that we use in organizing our everyday experiences. Schemas are a means by which human beings construct order in their daily experiences, and it is important to remember that, as abstract images, schemata are flexible, and can take on any number of specific instantiations, depending upon context.

An 'idealized cognitive model' is defined by Lakoff as "a complex structured whole, a gestalt", and he points out that it uses four kinds of structuring principles, those being propositional structure, image-schematic structure, metaphor mappings, and metonymic mappings (Lakoff 1987:68). This is a very general phenomenon, which can include all of the other cognitive mechanisms discussed above, e.g. frames. An idealized cognitive model involves a great deal of detailed knowledge about how we assume certain real-world situations work—when faced with those situations, we are able to compare them to the ICM to ascertain whether, in fact, we are dealing with that particular kind of situation, or not, and what to do about it.
Section 3: Culture and composition

There are at least the following ways in which culture can play a role in metaphor and compositionality. The first five of these take into account the role of culture as a grounding factor in the creation of primitives, and therefore in the creation of compositional metaphors, as well as of cultural activities and frames in expanding on a metaphorical composition. (Note that in defining compositional metaphors in this way, I acknowledge that metaphors can, in fact, be compositional if they combine either more than one metaphor, or a metaphor plus another explicit cognitive source of information, such as a frame, ICM, or image-schema.) I have also included an additional type of composition, which does not necessarily involve cultural factors in its experiential bases. For each type of composition, I present and discuss a metaphor which exemplifies the category. I take these metaphors from English and Hupa in the main, but I also integrate further cross-linguistic data. Below is a list of these six types of composition:

The role of culture in compositionality:
1. The combination of primaries (as defined by Grady) (combinations can be fairly consistent cross-linguistically, or can be culturally specific).
2. Combining a universal primary (as defined by Grady) with another primary bodily experience which a particular language has found to be central for culture-specific reasons.
3. Combining a primary with knowledge from a culturally specific activity.
4. Combining a culturally specific primary with a culturally specific activity.
5. Interpreting a primary (or a complex of primaries) in the light of a culture-specific frame, ICM, or image-schema.
**An additional type of composition:**

6. Transitivity of metaphors (i.e. \( A=B \) and \( B=C \), therefore \( A=C \)). The metaphors involved in this equation could be any of the above types.

The word "combine" is used in the sense expressed by Grady, namely that these metaphors can combine as long as there is no logical contradiction between the metaphors, and that the combination involves, in the outcome, a complex metaphor which contains all of the features of the two (or more) contributing metaphors, with the addition, in some cases, of inferences which come from the combination itself (as could be seen with Grady's THEORIES ARE BUILDINGS example in the above discussion).

1. **The combination of primaries:**

   The first type of composition involves the combination of primaries. This is precisely the type of compositionality which Grady discusses in his dissertation (Grady 1997). This kind of composition can be fairly consistent cross-linguistically, or the combination of two primitives can be language-specific. Again, this meshes well with Grady's conception of the combination of primitives. In all such cases, however, the metaphors involved are grounded in basic human bodily experience, and as such have the potential to be fairly universal. For an example of this type of compositionality, see the above overview of Grady's discussion of THEORIES ARE BUILDINGS.

2. **Combining a primary with a cultural primary:**

   The second type of compositionality differs from the above only insofar as it proposes that there are certain primaries which are not universal, in spite of the fact that they are grounded in basic human bodily experience. That is, there are primaries which exist in certain languages but not in others due to the fact that the cultures which speak those languages have, for some culturally-specific reason, found a certain bodily experience to be central in a way that other cultures have not. Such metaphors can still be defined as primary in Grady's sense, in that they are grounded in an everyday experience.
which is tied to some kind of cognitive reaction to that experience. However, that experience has not been considered to be universally important enough to show up in numerous languages around the world. Above, I mentioned the different uses of heart/stomach/liver as seats of emotion as an example of this type of cultural primary.

3. Combining a primary with knowledge from a culturally specific activity:

In the third type of composition, I posit that cultural activities, if central enough within the culture, can also serve as a kind of grounding for metaphor, and that metaphors based on such activities can act as primaries. In so doing, they can combine, as per my definition above, with other primary metaphors. This combination means that there are two types of knowledge feeding into the final product—knowledge which is based in universal human bodily experience, and knowledge which is grounded in specific cultural experiences. Certain cultural activities can be so basic that they can function as grounding in the same way that universal human bodily experience does. Thus, such activities must be very common, and involve some kind of bodily action or reaction which is consistently associated with a cognitive state. This definition is very much like what Grady posits except that he states that only universal experience can be this common. However, there are ways in which culture can be quite as pervasive as the universal reactions of the human body to its environment (cf. Balthazar Bickel ms).

4. Combining a culturally specific primary with a culturally specific activity:

The next kind of combination of metaphors involves only culturally based knowledge, without any primaries. In this instance, a culturally specific primary is combined with knowledge from a culturally specific activity. The example of the Japanese phrase "makes tea with bellybutton" is an instance of this kind of compositional metaphor. This phrase is used in situations where a person is holding in an emotional reaction to another's mistake in order to save that person from further embarrassment. As argued above, there is a culturally specific primitive involved in this example. It can be seen in the part of the phrase which has to do with the holding in of emotions. This is an experience
which involves the bodily sense of restraint of some kind, a restraint which is paired with
the affective reaction of feeling simultaneously amused at, and sympathetic towards, the
plight of another. These together form a primary experience which can be used in the
grounding of a metaphor, whose name could be stated as something like EMOTIONAL
RESERVE IS BODILY RESTRAINT. (This probably extends beyond Japanese, cf. English
"let it all hang out"). This metaphor would involve the mapping of the sense of control of
body to the control over emotion, with a concomitant lack of control over the body being
seen as a lack of control over emotions (it would be interesting to do further research to see
how often this second mapping appears in the Japanese language).

This metaphor alone is not enough to explain the use of the phrase "makes tea with
bellybutton" in the scenario mentioned above. Why making tea? And why with one's
bellybutton? The answer to the first question involves intimate knowledge of a common
cultural activity, namely that of the tea ceremony. In the making of Japanese ceremonial
tea, it is important that the tea water not be brought to a rolling boil, but that it be stopped at
the state just before a boil, when the top of the water is seething. At this point, the water is
hot, but it is not evidencing that heat in an obvious way. This knowledge, engendered by a
cultural experience, and more importantly, made central by that cultural experience, can be
mapped easily onto the physical experience of holding emotions in check. Thus, this
cultural knowledge combines with the above metaphor, using the kind of free specification
which was mentioned earlier, to form a more detailed metaphor wherein the holding in of
emotions is conceptualized as the water which is near a boil—very hot, but not showing the
heat clearly. And finally, the "bellybutton" part of this phrase comes from the fact that in
Japanese, the belly is seen as the locus of the emotional self, in much the same way that the
heart is seen as that locus in English. Thus, the phrase "makes tea with bellybutton"
involves a cultural primary, given more detail by the use of an image from an experience
which is grounded in a culturally specific activity. These two work together to form a very
complex image. (It is also likely that a more universal primitive having to do with heat and

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emotion is involved in the choice of the tea ceremony as the basis for the free specification involved in this example.)

5. *Combining a primary (or a complex of primaries) in the light of a culture-specific frame, ICM, or image-schema:*

Another role which culture can play in elaborating metaphors has to do with the interpretation of a primary metaphor (or a complex of primary metaphors) in the light of a culture-specific frame, ICM (idealized cognitive model), or image-schema. In this case, a cultural sense of how a particular activity unfolds, or of its purpose, for example, would underlie the metaphor. Thus, although the instantiations of such a metaphor may look fairly similar cross-linguistically, the assumptions behind the metaphor will be different depending upon the cultural assumptions attendant to it. An example of this can be seen in the Hupa metaphor LIFE IS A JOURNEY. This metaphor is one which also appears in English. Examples, in both English and Hupa, can be seen in the following:

2.1 My life is at a crossroads.

2.2 I'm struggling to reach my goals in life.

2.3 Her path in life has been a fairly easy one.

2.4 *sa'a na'esiya* ['long-time walk (definite past; perfective; repetition of motion)'] "He lived a long life."

2.5 *no'whohqo na'esiya* ['good walk (definite past; perfective; repetition of act)'] "He lived a good life."

2.6 *tin nichwe'n* ['path bad'] "Road is rough, bumpy, narrow, etc." or "Life is difficult."

(Note that these are unlikely calques of English, since "walk" is not readily used in English instantiations of LIFE IS A JOURNEY.) This metaphor is composed of a number of

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primitives which work together to form the more complex whole. One of the major players
in this complex is the metaphor which relates space and time. This metaphor can be seen in
such examples as:

2.7 The holiday season is coming up fast.
2.8 We've almost come to the start of the school year.

2.9 *mijunktesya xaych'idilye* ['go (momentaneous; perfective; spatial
extension) (toward)+Jump+Dance'] "It's
getting to be time for the Jump Dance."

2.10 *LinoyundeLte nohnatse* ['meeting (lit. two or more go (momentaneous;
perfective future; plural subject)) ahead'] "The
meeting is ahead of us."

One thing to notice about this primary is that there appear to be two contradictory
mappings. In cases such as *The holiday season is coming up fast*, it is the holiday season
which is conceptualized as moving through time towards an observer who is standing still.
However, in *We've almost come to the start of the school year*, it is the speaker who is
seen as moving through time to get to the beginning of the school year, which is
conceptualized as an object on the landscape. These two metaphors, which have been
referred to in the literature as the Moving-ego and Moving-time metaphors (cf. Lakoff
1993), are both grounded in human experience having to do with actions and the time it
takes to complete them. In the first instance, if an actual object is moving towards an
observer, it takes time for the object to complete the course of its motion and reach the
observer, such that the time at which the action is completed is later than the time at which
the action is begun. The same is true when a person begins an action, or begins to move
towards something. In both cases, the observed correlation between the taking place of the
action and the passage of time is the basis for the metaphor, although the actor in each case is different.

In English, there are a number of other metaphors which feed into the complex LIFE IS A JOURNEY. These include PURPOSES ARE DESTINATIONS (I've reached some of my career goals, but I still haven't gotten to all of them), and CONTROL IS UP (He oversees his workers), for example. There is also a body of cultural knowledge about journeys which feeds into the metaphor. For example, we know that when going to any given place, it is possible to choose one of a number of ways to get there, and that some ways might be easier than others, leading to a faster, more pleasant trip. This engenders the use of the word crossroads in the above example, as well as such sentences as I've decided to take a different path in life, and to go a completely different direction. The idea that a journey often entails a goal to be reached, and that this goal will be reached at some point on the journey, is also part of our cultural knowledge about journeys. One of the entailments which typically goes with this knowledge has to do with the idea that journeys are often one-way, leading to places from which the traveller never comes back (notice that in traditional stories where the hero does come back from a journey physically, it has often been life-changing in some other sense, such that the hero has not come back the same person, or has not come back to the same life). This kind of knowledge about the purposes and goals of a journey is all part of our cultural frame of "journey". This frame involves a sense of what the path of a journey is, what its goal is, where it starts out, and where it ends up. Although this knowledge does not, of course, cover all journeys, in that any given person has made plenty of journeys which do not fit the frame, it is the prototypical frame (the "idealized cognitive model" or ICM) having to do with journeys, and when we reason about them, we do it in terms of this model.

However, what if this frame is different? In Hupa culture, the sense of what a journey entails, both in its path and in its goals, is very different from the Standard American sense of journey. In Hupa tales, it is possible to see fairly clearly what the
idealized cognitive model of a journey involves. In most of the traditional tales, the main character of the story makes a journey which is cyclic in nature. Again and again in these stories, the hero sets out to find something, searches for it, and, taking a circular path, arrives back where he started, only to find that the object of his search was there to begin with. The only time that a journey does not involve this circularity is when the hero leaves the world of regular people, and goes over the eastern ocean to the home of the Kinuxai, the people who inhabited this world first, and left when man came. Even in myths that involve leaving this world for theirs, the hero typically makes a cyclic journey first.

This is related to a sense of the circularity of life, as represented clearly in the story "At Minedakut She Pounded Acorns" (Goddard 1904), where, during the course of a journey to find his son, a father follows signs indicating that the son is growing up while on his journey (note that this also shows up in traditional Indo-European fairy tales, as well as in sentences such as *His journey to adulthood was difficult*). Leaving this world for that of the Kinuxai seems to represent a departure from the usual cycle of life and death. It is a stepping outside of the cycle, a removing of the self from the exigencies of life. However, it is difficult to do this, and most people remain within the circular path. Physical journeys carried a great deal of importance for the Hupa in everyday life. Trails were considered to be sacred, and one did not step off of them, save at designated rest places, except in direst need, and one always apologized to the trail for doing so. Metaphorical journeys, as represented by the healing process, for example, also played an important role for the Hupa.

More powerful than any herb were the words recited over it before its use. These words are not prayers but accounts of a former cure. The repeating of the words has power to cure again. It is not necessary for the unclean person to go to the ends of the world that he may become pure. It is sufficient that the priest tell how one went. The spirit of the person follows the words of the priest (Goddard 1903).
Thus, even a process like healing, involving no actual movement at all, is conceptualized as a journey out into the world and back again, and this journey is a vital part of the healing process (this is also true in, e.g., Havasupai culture [Hinton, p.c.]).

Thus, the frame for, and idealized cognitive model of, a journey is very different in Hupa than it is in English. This affects the metaphor complex LIFE IS A JOURNEY in a number of ways, one of which has to do with goals. In English, there is a clear sense of the presence of a metaphor which could be called PURPOSES ARE DESTINATIONS, which can be seen in examples such as I finally reached my goal of getting a Ph.D. However, in the Hupa frame for a journey, the goal of the journey is either unclear, unobtainable, or found at the starting place of the journey. This leads to a different sense of goals, or of the relationship between goals and journeys, which results in a different conglomeration of primary metaphors. In fact, although it is difficult to say that there is negative evidence for a metaphor (see Appendix A for a discussion of negative evidence), it is surely indicative that in both fieldwork and textual exegesis, there is no linguistic evidence of a metaphorical connection between the domain PURPOSES and the domain GOALS. This is very interesting since there are clearly any number of daily experiences in which Hupa speakers, like English speakers, need something, and go and find it at another location and get it. Hunting, for example, or gathering basketry materials, would involve experiences in which reaching a goal and achieving a purpose are tied together. However, the cultural model of JOURNEY, as an entity, is sufficiently central and important that it affects the metaphor LIFE IS A JOURNEY, rather than having the smaller, everyday journeys that people make be the basis for the metaphor. This point emphasizes the need for in-depth analysis of metaphors cross-linguistically, even when the surface data look similar from language to language. In a case such as this one, although the metaphor appears to be similar between English and Hupa, basic cultural assumptions about the nature of journeys has fundamentally affected the shape of the metaphor, determining which primaries are able to combine to form the complex whole.
6. Transitivity of metaphors:

The final type of compositional metaphor listed above involves the transitivity of metaphors. In this case, domain B is understood in terms of domain A, and domain C is understood in terms of domain B, and therefore, domain C can be understood in terms of domain A. The metaphors involved in this transitivity may be any of the types discussed above. An example of this kind of transitivity has been presented in *Metaphors We Live By*:

We conceptualize our visual field as a container and conceptualize what we see as being inside it. Even the term "visual field" suggests this. The metaphor is a natural one that emerges from the fact that, when you look at some territory (land, floor space, etc.), your field of vision defines a boundary of the territory, namely, the part you can see. Given that a bounded physical space is a CONTAINER and that our field of vision correlates with that bounded physical space, the metaphorical concept VISUAL FIELDS ARE CONTAINERS emerges naturally (Lakoff and Johnson 1980:30).

In this case, there is a transitivity in that bounded physical spaces are understood to be containers, and our field of vision is conceptualized as a bounded physical space; therefore, our field of vision can be understood metaphorically to be a container.

This kind of transitivity can also be seen in the Hupa metaphor ANGER IS SHARPNESS. This metaphor emerges in such examples as the following:

2.11 *dime:n na’way* ['sharp one person goes around (imperfect; repetition of act)'] "he’s angry"

This is one of the two common ways to describe an angry person; the Hupa word *dime:n* is also typically used to talk about literally sharp objects. This metaphor is the product of a
chain of transitivity such as the one seen above. To begin with, anger and aggression are experiences which are commonly associated. Grady points out:

[It is likely that our genetic heritage inclines us to use bodily force to deal with frustrating circumstances, even if we are too civilized to act on this instinct, or in cases where it logically can't be of help—people have certainly been known to punch walls and pound tables without any rational basis for doing so. There may be a very direct physiological link between frustration and the mechanisms of violence (Grady 1997:168).

This being the case, and there does seem to be some strong experiential correlation between anger and aggression, this kind of primitive (ANGER IS AGGRESSIVE BEHAVIOR) serves as the first link leading, finally, to ANGER IS SHARPNESS. The second link has to do with the typical way in which warfare was carried out in Hupa culture. The standard weapons of war were arrows and spears (rather than, for example, clubs or bullets—note also even more basic sharp instruments of aggression, e.g. teeth and nails/claws). Both of these instruments are sharp (and in fact, must be, for them to be useful in carrying out aggressive designs). Thus, feelings of aggression, if acted upon, would be correlated with sharp instruments (cf. English "cutting words" and "speaking sharply" to refer to verbal aggression). Therefore, if anger is understood in terms of aggression, and aggression is correlated with sharp objects, then it is possible for anger to be conceptualized in terms of sharpness. Note that the second link here, between aggression and sharpness, is a culturally based link. This kind of understanding would be much less basic in a culture such as that of the Maori, where the typical weapon of war was clubs, or in our culture, where, these days at least, a common weapon of violence is a gun.

Thus, we see that there are at least these six ways of combining basic metaphors and/or other cognitive structures to form more complex units. These combinations do not only involve primitives as Grady has defined them (metaphors which are fairly universal, being based on human bodily experience). They also entail culturally based metaphors,
cultural knowledge, and metonymies, which we shall see in Chapter 4 are often language specific. This sort of exploration of the possible ways to combine metaphors leads to a clearer understanding of the role of culture in the formation of metaphors, and gives culture a more central place than it has explicitly been given to date. This is interesting both in terms of clarifying metaphor theory, which has been my focus in this section of my dissertation, and in terms of the potential use of metaphor in the language revitalization classroom. Clarifying which parts of metaphor are cross-linguistically common, and which parts are culturally specific, can greatly aid in the teaching and learning of these metaphors, which has a great impact on second language learning in general.

Section 4: Patterns of lexicalization

Another place where one can find cross-linguistic metaphorical differences is in lexicalization patterns in the instantiations of structurally similar metaphors. The metaphorical expressions that we use in conversation are not random. Neither are they, for the most part, made up on the spot. They are part of the lexicon of the English language. Lakoff and Johnson point out,

'[e]ach of the metaphorical expressions we have talked about so far (e.g., the time will come; we construct a theory, attack an idea) is used within a whole system of metaphorical concepts—concepts that we constantly use in living and thinking.

These expressions, like all other words and phrasal lexical items in the language, are fixed by convention (Lakoff and Johnson 1980).

That is, the choice of these expressions in everyday conversation is not random on two counts. First, they are motivated by the metaphors which underlie them, and second, the expressions themselves are often dependent upon which phrases have become lexicalized. By lexicalized, I mean that these phrases are now treated as units within the language. For
example, below are some of the typical ways in which the metaphor LIFE IS A JOURNEY is instantiated in English and in Hupa:

2.12 His career path has been a lucrative one.
2.13 She’s on the fast track.
2.14 She had to overcome a lot of obstacles to achieve her goals.
2.15 He’s finally in the driver’s seat, and his life is going well.

2.16 sa’a na’esiya
[‘long+time walk (definite past; perfective; repetition of act)’] "He lived long life."

2.17 na’esiya
[‘walk (definite past; perfective; repetition of act)’] "He lived."

2.18 no’whohqo na’esiya
[‘good walk (definite past; perfective; repetition of act)’] "He lived a good life."

2.19 minejit na’asiya
[‘its+middle walk (definite past; perfective; repetition of act)’] "middle-aged, middle of his life"

2.20 tin michwe’
[‘road bad’] "The road is rough, bumpy, narrow, etc." or "Life is difficult."

In Hupə, the action of movement is focused on—how long it has gone on, how well it has been done, and so on. In particular, this movement is conceptualized as walking. This is, of course, to be expected, given that the typical mode of travel for the Hupə was to walk, although canoeing was also very a very common method of transportation. In the English metaphor, however, if a mode of transport is referred to (which is often done indirectly), it typically has to do with horses (on the fast track), or cars (she’s spinning her wheels on that project of hers). At this stage, even the phrases having to do with horses tend to be
more frozen and limited, and novel extensions of the metaphor rarely involve any form of transportation except the car.

Some of the clearest examples of conventional metaphorical expressions can be seen in idiomatic expressions (set conventional phrases within a language), many of which were long thought to be frozen. By frozen, it was traditionally meant that these expressions no longer had any connection to a source domain, that speakers did not connect the expressions with any real-world, physical experience, merely with the metaphorical meaning; that is, *spill the beans*, as an idiom, has nothing to do with beans or spilling, but is simply a way of saying "reveal a secret". However, recent studies have found that this is definitely not the case.

Initially, a number of studies found that phrases such as *spill the beans*, *let the cat out of the bag*, *blow one's stack*, and so on, appear to be treated as single units within the lexicon. For example, Bobrow and Bell state:

Discovery of the idiomatic meaning of an idiom seems to result from processing the idiom as a word. Such a processing strategy differs from that which has been suggested for literal expressions, wherein each word is perceived, its meanings discovered, and then mapped into a semantic whole such that the meanings of the individual words relate to produce a meaning for the sentence (Bobrow and Bell 1973:343).

What this means is that when a person hears the phrase *let the cat out of the bag*, that person does not have to parse each individual word, put them together, obtain from that a literal meaning, realize that the literal meaning does not work in the context presented, and then search for another potential meaning, finally lighting upon the metaphorical usage intended in the first place. Rather, this phrase is processed as a whole. This indicates that it is somehow fixed in the English lexicon, in that, as long as it is presented as a whole phrase, relatively unchanged, it is readily parsed as having its metaphorical meaning, without any search for a literal meaning first.
This frozenness is not uniform. Some idioms appear to be more fixed than others, meaning that they admit of less alteration. Gibbs and Gonzales state, "[f]rozen idioms appear to be more lexicalized than flexible ones and consequently can be accessed faster from the mental lexicon" (Gibbs and Gonzales 1985). This indicates that idioms are actually treated differently depending on their degree of frozenness. The more fixed they are, the more readily they can be treated as single lexical items. When they are less frozen, and therefore more mutable in their instantiations, the hearer must pay more attention to whether it is, in fact, an idiom which is being dealt with, rather than a phrase whose meaning must be composed from its parts.

However, these idioms, even those which fall at the furthest end of the frozenness scale, are also interpreted as complex images—images which rely on the idiom and on knowledge of the background domains invoked by the idiom. Thus, in a certain sense, these idioms are, in fact, compositional. A number of psycholinguistic experiments have indicated that when a hearer is presented with a phrase like spill the beans, the hearer does not simply parse this as to reveal a secret (cf. Gibbs 1985, 1990, 1993). When asked about the mental images which go along with the phrase spill the beans, hearers present remarkably coherent and consistent images. For example, the container which held the beans is commonly visualized as being about the size of a human head, the beans are seen as scattering all over the place, and thus as being difficult to regather, and the spilling itself is understood to be an accident. These findings support the view that idioms are not "dead" metaphors with their meanings being arbitrarily determined. Rather, the meanings of many idioms are motivated by speakers' tacit knowledge of the conceptual metaphors underlying the meanings of these figurative phrases" (Gibbs 1990:35-6). Thus, all of our knowledge about containers, and spilling small objects, as well as about secrets, and the difficulty of keeping them hidden, is invoked by the phrase spill the beans.

Note that when speakers in these psycholinguistic experiments were presented with phrases which are similar to, but are not, idioms, their images varied widely, indicating that
they were not accessing the same domains, as they appeared to be doing when presented with idioms. For example, one would expect speakers to all access the same domains for "let the pet feline escape from the cage" as they do for "let the cat out of the bag", but those speakers would not have shared conventional imagery in those domains. Gibbs and O'Brien state:

It appears, then, that the difference in subjects' mental images for idioms and literal phrases is best attributed to the constraining influence of conceptual metaphors that link idioms with their figurative meanings. People tacitly recognize that idiomatic meanings are motivated by different conceptual metaphors and this knowledge affects the mental images constructed for idioms (Gibbs and O'Brien 1990). Thus, the results of these experiments suggest that idioms are different from non-idiomatic phrases in two ways—they are accessed as units, as well as being seen as compositional phrases; and they, in turn, access particular domains of experience which appear to be common to most speakers.

With this understanding of lexicalization and idiomaticity, let us now look at some further examples of ways in which metaphors which are very similar in their structure are lexicalized differently in Hupa and English. By this, I mean that the mappings of the metaphors in question are similar, but that the instantiations of the metaphors are different. Each language uses specific phrases to represent the metaphor, and while these phrases may be similar in some cases, the extent of lexicalization differs between the two languages. One such example involves the metaphor ILLNESS IS A PHYSICAL FIGHT, which appears in English and Hupa in the following examples:

2.21 She's been battling cancer for a number of years now.
2.22 I'd like to treat this illness aggressively.
2.23 ...the war against cancer...
2.24 Cancer has hit him hard.
2.25 na'nelayh wita' haych'idun'cha' ne'en ['win (reversal of motion) my+father illness past] "My father got better."

2.26 hayditahuLwe' ['fight (definite past; reflexive)'] "illness, what afflicted him"

2.27 xos xoLwe ['phlegm fight (indefinite)'] "He has a cold."

2.28 k'iLwe:-whiwiLwe' ['evil+spirit (lit: they fight things) fight (definite past; progressive; first person singular object)] "I have a fever."

The metaphors which underlie this data are in many ways very similar. In both cases, the disease in question is being conceptualized as an enemy, and the person who is ill is the fighter. (Although notice that in English, the doctor can also be conceptualized as the one who is doing the fighting (as in the sentence I would like to treat this aggressively).) Getting better is conceptualized as beating the enemy in some way, and dying because of the illness is seen as losing the fight. In both cases, this metaphor is probably based in a more experientially basic metaphor, DIFFICULTIES ARE OPPONENTS. Grady points out, "not only verbal disagreements and arguments, but any kind of action or process where we have trouble achieving our goals can be conceptualized as a fight", giving as an example the sentence: "I've been fighting the flu all week" (Grady 1997). However, what is lexicalized, and how, is different in the two languages. In English, disease names are not lexicalized via this metaphor, while they are in Hupa (the name for a cold, or for a fever). Note that the names that I have given above are the common, everyday ways of naming these diseases. Another interesting difference has to do with when the metaphor is used.
In Hupa, this metaphor is used pervasively to talk about all illnesses and ailments. Arthritis, for example, is conceptualized as an animal, gnawing on its victim, as can be seen in the following disease names:

2.29 yutiya' sile' [lit.'it ate/gnawed-it seemed like'] "arthritis"
2.30 diwhoh hiwhungya' [lit. 'something is eating'] "cancer"

This is not true, for example, of English disease naming practices. (Although note that "cancer" derives from the word for "crab". However, this knowledge is not actively accessible to most English speakers.)

The lexicalization patterns of the Hupa metaphor, like those of the English metaphor, reflect cultural norms and values having to do with illness and healing. Traditionally, all illness was conceptualized as an invading force in the body, and healing practices were tailored accordingly. Most sickness was treated by a sucking doctor, who found the center of infection and sucked the offending aggressor out of the sick person (Goddard 1903). This treatment pattern may have led to referring to all illnesses using this metaphor (cf. also Garro 1990, 1994, 1995).

Another example of differences in entrenched lexicalization patterns can be seen in the use of body-part terminology for the domain of general spatial relationships. This phenomenon has been examined in a number of languages, although I focus here on English, Hupa, and Mixtec. I first present the Mixtec data, which is taken from a study by Claudia Brugman. She states, "[i]n Chalcatongo Mixtec, at least the following body-part terms may be used with extended senses. This is, of course, only a subset of the full set of body-part terms in the language" (Brugman 1993).
2.31 nda’a
   "hand"/"arm"

   ndukoo-ri nda’a-yunu
   ['be+seated-I arm-tree']
   "I am sitting on the branch of the tree"

2.32 ha’a
   "foot"/"leg"

   isu wa sa’a ’n yaw ha’a-yunu
   ['rabbit the make one hole foot-tree’]
   "the rabbit is digging a hole at the foot of
   the tree"

2.33 sini
   "head"

   hiyaa-re sini-yuku
   ['be+located-he head-mountain’]
   "he is on top of the mountain"

2.34 siki
   "back (of an animal)"

   se’e-ri hitu siki-mesa
   ['son-I lie animal+back table’]
   "my son is lying on the table"

2.35 yata
   "back (of a human)"

   kwa’a kundi yata-yunu
   ['go+pot. stand+pot. human+back-tree’]
   "go stand behind the tree"

2.36 cii
   "belly"

   isu wa sa’a ’n yaw cii-yunu wa
   ['rabbit det. make a hole belly-tree the’]
   "the rabbit is digging a hole in the tree
   trunk"

2.37 nuu
   "face"

   nuu-mesa ka ca’a
   ['face-table is dirty’] "the table top is dirty"

All of these terms can be used both with their literal meanings, as presented above, and to express spatial relationships between objects. We can see a pattern which is essentially similar in the English data, below.
2.38 She was facing him.

2.39 The dog is in back of/behind the tree.

2.40 He stood at the head of the line.

Before discussing the differences between the lexicalization patterns evident in English as opposed to those which can be seen in Mixtec, let me finally present the Hupa data.

2.41 *dinang* [*physical protrusion or metaphorical extendedness*+face] "facing"

2.42 *whining'* [*my+face] "my face"

2.43 *me:ne:q' ["its+back"] "behind it/its back"

2.44 *whije:y'-xw* [*my+heart-at"] "in front of me"

2.45 *whije:'-ding* [=*my+heart-place"] "(right) in front of me, facing me"

2.46 *mine:jit* [*its+middle"] "in the middle of it, in the center"

2.47 *whine:jit* [*my+middle"] "around my waist, my middle"

2.48 *miyeh* [*its+foot"] "under it, at the foot of it"

2.49 *mixe' ["its+foot"] "its foot, footprint, track"

In many ways, the Hupa and English data are more similar to each other than to the Mixtec data. In both Hupa and English, body part terms have been lexicalized in spatial uses, as they have in Mixtec, but for the most part, the uses of body part terms for spatial uses
involves a prepositional phrase (in English), or the use of a different possessive article, or even, in some cases, a small phonological differentiation, in Hupa. In Mixtec, however, the body part items when used to express spatial relationships are the same as when they are used with their literal meanings. Brugman states, "...since this grammatical subsystem [i.e. the use of body parts to express spatial relationships] does not at all resemble the system of spatial relations as expressed in Indo-European languages, this is a major area of grammatical knowledge and corresponding organization which cannot be universal" (Brugman ms:2-3). But it seems perhaps more accurate to state that the underlying conceptual systems here are not different—it is the patterns of lexicalization which differ from language to language. In Mixtec, there is a pattern of polysemy among the body parts and spatial prepositions, with a one-to-one correspondence between the two. However, in English and in Hupa, there are some differences between the body-part vocabulary and that used to express spatial relationships, although the latter is clearly related to, and based upon, the former.

This poses an interesting problem when considering the entrenchedness of these lexical items. Gibbs and Gonzales have argued, "idioms which are least susceptible to syntactic transformation (i.e. more frozen) are also those which have existed longer in the language" (Gibbs and Gonzales 1985). This suggests that within a language such as English, body-part terms which can be more readily inserted into a number of different contexts, such as face, might be less entrenched than those which must appear within prepositional phrases, such as in back of, or in front of, or at the head of. And since phonological differentiation of lexical items also tends to take time, one would expect that, in Hupa, terms such as miyeh ("under it, at the foot of it", derived from mixe', "its foot"), might be older than other body-part terms, or else perhaps more frequently used.

Until now, I have explored what could be called entrenched lexicalization patterns, namely, those lexical items whose use is conventional in some way. However, it is common to create novel linguistic expressions of metaphor. As Lakoff points out:
Each [metaphorical] mapping should be seen ... as a fixed pattern of ontological correspondences across domains that may, or may not, be applied to a source domain knowledge structures a source domain lexical item. Thus, lexical items that are conventional in the source domain are not always conventional in the target domain. Instead, each source domain lexical item may or may not make use of the static mapping pattern. If it does, it has an extended lexicalized sense in the target domain, where that sense is characterized by the mapping. If not, the source domain lexical item will not have a conventional sense in the target domain, but may still be actively mapped in the case of novel metaphor (Lakoff 1993).

The first kind of lexicalization pattern that he describes is what is discussed above—entrenched, conventionalized uses of source domain expressions to refer to the target domain. The second type is what is commonly called within the metaphor literature a novel extension. These expressions, although novel, can be readily understood by the hearer by appealing to the same metaphorical structures that are used to understand conventional expressions. "The argument that linguistic metaphor reflects underlying conceptual mappings implies that words should be able to evoke metaphorical readings even if they are not conventionally associated with these readings" (Grady 1997:32). This means that human beings can, and do, exploit these underlying metaphorical structures to play with language, and to be creative with the metaphors of their languages.

One important question which can and should be raised when thinking about the notion of novel extensions is whether novel metaphor occurs in a language which no longer has any new learners, and if so, how often? In language death situations, what typically occurs is that domains of language use fall away as speakers use the language less and less often. One area which is likely to disappear fairly quickly is that of creative language use. Speakers, and especially semi-speakers, come to rely more and more often on set phrases, meaning that they are less likely to resort to novel extensions of metaphors, when there are already perfectly good idiomatic expressions available to express the same ideas. So one
could ask whether loss or reduction of novel uses of metaphor might be considered one indication (among many) of a language's approach toward a moribund state. One might also wonder whether a return of such spontaneous and novel linguistic usages could indicate some measure of success in language revitalization efforts.

An underlying point to these questions has to do with what is being learned when a language is passed on imperfectly, or only as a second language. Are second language learners actually learning the cognitive structures which underlie conventional metaphorical phrases, or are they simply learning the idioms themselves? If the first case is true, then one would expect to find the occasional novel usage among second language learners. However, if the second is true, then one would expect to find minimal novel extensions, or if speakers do create novel extensions, they may do so on the basis of the patterns of their first language. It is likely that the answer lies somewhere in the middle. Some metaphors are probably being learned as cognitive structures and some merely as idiomatic expressions. The causes for this may be multifold. Perhaps the influence of the dominant language is a partial factor in determining which metaphors are learned more fully. Perhaps, in cases where the metaphor is strongly grounded in cultural, rather than universal, experience, the degree to which the relevant cultural experience has been retained will be a determining factor. The following chapters point towards some of the answers to the questions, but the issues raised in such a short space here go far beyond the scope of this dissertation, and will be years in the answering.

Section 5: Conclusion

Metaphor can be both a reflection of universal human experience, and it can also reflect the culture in which it is grounded. The universality of certain metaphorical mappings has been explored in other works, and I have tried here to present some of the conclusions of those works. This chapter also expanded upon some of the ways in which
culture can play a role in the grounding of metaphor. Like basic human bodily experience, certain fundamental cultural experiences can play a role in the grounding of metaphor. This chapter has also explored some of the ways in which particular cultures can choose to use fundamental bodily experiences as metaphorical source domains, while other cultures pass these domains over. All of these, in addition to culture specific frames and idealized cognitive models, play a role in making the metaphorical system of a language particular and unique.

Both the universality and the culture-specificity of metaphors play an important part in language revitalization in general and in the second-language classroom in particular. An understanding of the underlying universal nature of many metaphors can lead to an exploitation of students' knowledge of their first language in learning their second. And an examination of the role of culture as a grounding mechanism in metaphor can be important in helping students to more accurately learn their second language, and, just as importantly, to maintain the uniqueness of the language's metaphor system.
Chapter 3: The Hupa metaphor system

Section 1: Introduction

This chapter is intended both to give a sense of the complexity of some parts of the Hupa metaphorical system, and to explore which parts of this metaphorical system are universal and which are culture-specific. In the last chapter, I presented some of the ways in which culture can play a role in the grounding of metaphor, and gave examples of this kind of grounding in Hupa, among other languages. However, those examples were necessarily limited in scope, and did not present a broader idea of the Hupa system in general. This chapter, however, does not make statements about the systematicity of Hupa metaphors. Such observations are beyond the theoretical scope of this work, and will require a great deal of cross-linguistic comparison of metaphor systems to achieve. These examples will, however, give some idea of the ways in which the Hupa system is similar to the cross-linguistic patterns that have been observed by researchers elsewhere—a testimony to the power of metaphorical grounding in universal human experience—and the ways in which this system is unique, utilizing cultural primaries in creating these metaphors. This chapter is devoted solely to the metaphor system of Hupa (as seen in the data gathered both from texts and from modern speakers); the metonymic system is presented in the following chapter.

Section 2: Lexical/Phrasal metaphors

This section includes a sample of the Hupa metaphors which I call "lexical/phrasal". By this, I mean conceptual metaphors whose linguistic manifestation takes the form of words or conventional phrases used metaphorically. These words and phrases are understood by appealing to metaphorical structures as described in Chapters 1 and 2. As
the purpose of this chapter is to give a sense of the variety of the Hupa metaphor system, I include a wide range of subjects, but not a large number—enough to give a taste of the ways in which Hupa treats metaphors.

The first metaphorical expressions presented here involve the conceptualization of the mind. The locus of attention or thought is, at least sometimes, associated with a person's intestines, as can be seen in the following example. As mentioned in Chapter 2, different languages/cultures have, throughout the ages, chosen different areas of the body to represent the locus of thought and emotion. For the Hupa, this locus is the lower stomach, or guts.

3.1 *whikyang* ['my+abdomen'] "my abdomen, belly, guts, insides (also used abstractly for "mind", "attention")"

This involves a polysemy pattern whereby the word which means "abdomen, belly, guts, insides", referring to a physical part of the body, can also be used to refer to the "mind" or "attention", that is, the abstract locus of a person's focusing ability. This is similar to the use of "guts" in the English phrase "a gut feeling".

This word is also used in phrases which are understood using the metaphor THINKING IS TRAVELLING, as can be seen in the following:

3.2 *xoı-kyũų* tes-yai ['his-abdomen goes (definite past; momentaneous; one person)'] "his mind went to" (used in the phrase "women again his mind went to")

Here, the verb tes-yai is a general verb of motion in Hupa, typically meaning something like "to go around" (where "around" does not mean in circles so much as something like
the "around" in "to wander around"). Thus, the mind (as represented here by the guts) is conceptualized as an object which has the ability to move, and this movement is metaphorically understood to be thought. This is a fairly common metaphor, and can be seen in English phrases such as, "I went over it again in my mind". This phrase involves a cultural primary (guts as the locus of emotion), and a more universal metaphor (THINKING IS TRAVELLING), making it an example of composition type #2.

In this conceptualization, individual thoughts are understood to be objects which can be handled, or passed over.

3.3 mitis-na:xowinje:ye\' ['it-over+mind-goes (indefinite; general motion theme)'] "he forgot it" (i.e. "his mind passed over it")

Here the mind, metonymically representing the traveller in the metaphor THINKING IS TRAVELLING, passes over the thought-object, an action which metaphorically represents forgetting (if possessing a thought is "having" that thought, then not having the thought can be understood as forgetting it). This notion of thoughts as objects appears in such English phrases as "he gave me an idea", but this particular lexicalization pattern for forgetting is unique to Hupa.

Thoughts as objects also appear in another metaphor having to do with thinking, but in this case, thoughts are objects that move independently, coming into the head, which is conceptualized as a storage space for these thought-objects.

3.4 hwe-de-ai ye-wiñ-yai ['my+head+(into) come (perfective; past; momentaneous; third person singular subject)'] "I thought of it" (i.e. "it came into my head")
Thoughts are still objects, but they are mobile objects which can come into the thought-
space, and therefore be thought of. This is very much like the English phrases "to get an
idea", and "that idea came to me" from the English metaphor IDEAS ARE OBJECTS (cf.
Grady 1997; Lakoff and Johnson 1980; Lakoff 1993; Sweetser 1990). Many of these
metaphors have similar mappings in English and Hupa, even if their actual lexicalization
patterns differ somewhat. The duality present here is similar to the one seen in the TIME IS
A MOVING OBJECT and TIME IS A LANDSCAPE metaphors (Chapter 1 section 1.2). In both
cases, there is one instance where the mind/person is moving towards objects on the
landscape, and an instance where the mind/person stands still while objects move towards
her.

Another Hupa metaphor is CAUSES ARE FORCES (WHICH MAKE THINGS). This
metaphor is part of a group of metaphors having to do with the understanding of event
structure (Lakoff 1993). The Event Structure metaphor includes such submetaphors as
STATES ARE LOCATIONS, CHANGES ARE MOVEMENTS, ACTIONS ARE SELF-PROPELLED
MOVEMENTS, MEANS ARE PATHS, and CAUSES ARE FORCES. In the case of Hupa,
causality in particular is conceptualized as somebody making something (since we
understand that the act of making often causes something new to come into being).

3.5 L-tcwe, -tcwen
"make (it), construct (it), (also..."give birth to
(him")"

3.6 ya-na-tük-ka-tcis-tcwen
["make (definite; motion theme; third person
human subject)"
"he made come between"

3.7 tcis-tcwin-te
["make (future; third person human subject)"
"he was going to cause" (i.e. "he was going to
make")

3.8 e-i_uw-tcwe
["make (first person singular subject)"
"I make
(a noise)"

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3.9 kin-n_uw-x_o-iuw-tcwe  [notice-make (first person singular subject; human object')] "I notify him" (i.e. "I make him notice")

In these forms, -tcwen, -tcwin, -tcwe, are all forms of the verb root meaning "to make". So causing a situation is understood in terms of the concrete making of an object. In the metaphorical cases, the situation or noise is conceptualized as the object which is being made or created by the person who is doing the acting. The verb root above can also be used in speaking of strictly physical situations:

3.10 tcis-tcwen  [make (definite; third person singular human subject')] "she did [made] it (food)"

This meaning is being extended in its uses above, where it is situations or non-physical objects which are being created. In these cases, the force which leads to the occurrence of a particular situation is perceived as the cause of the situation. Thus, making is a force which is used to understand causality. Creating a physical object is a force which causes that object to come into being. This metaphor is grounded in a fairly universal human experience, and we find it, as we might expect, in English (cf. "He made a loud noise." "She made me do it.").

The next set of data in this section is also motivated at least partly by an understanding of event structure, and involves a polysemy pattern which appears not simply in one root, but in two (the second appears beneath a preliminary discussion of the first):

3.11 ne-teL-ditc-tcwen  [grow (definite; third person singular subject')] "he grew (up)"

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In the first three examples, the stem -tcwen is the same as the stem in the next three forms. The stem meaning "grow" connects these meanings, in that a person and a plant both grow. The same image is connected with both—a person becomes taller as he or she grows, as does a plant. In both cases, also, the greatest "use" comes about when the object is fully grown. An adult human being is able to fully participate in society, and a mature plant is of the most use in food production—either in that it is edible, or in that it produces more edible fruit or nuts. Thus, there is a connection between the two domains.

In the example of teL-tcwen, which is used to describe smoke growing on the horizon, the stem meaning "to grow" (-tcwen) is being used for an inanimate object. In fact, this object is not, like the plants and people, growing taller—it is settling on the horizon (although smoke can rise, this description refers to the phenomenon of smoke creeping over the horizon). However, this is related to the other examples, in that the smoke has other commonalities with the growing of plants and people. The amount of smoke is growing larger, even though it is not growing up. Also, the potency of the smoke is becoming greater (this particular smoke is an indication of disease, calling for a ceremonial dance to disperse it). There is a prototype structure manifested here whereby the central example of growing involves features like getting taller, getting bigger,
becoming more potent/useful (in some sense). Thus, any example which saliently has some, if not all, of these features, could be said to grow, as in the case of the smoke. Finally, in all cases, there is a basic sense having to do with "coming into being/becoming more" which connects the meanings.

Note, also, the other meaning of -tcwen, "crave, hunger for (it)". This does not immediately appear to be related to the other meanings expressed above. However there is another verb stem which has a polysemy structure with very similar meanings:

3.17 ky_u-wiŋ-yan
   [eat (definite; perfective; deictic subject']"
   "he ate them"
3.18 L-ye, -yan
   "eat (it) up, devour (it)"
3.19 -yiw, -yan
   "grow to maturity, grow up"
3.20 -yiw
   "raise (him, a plant)"

The two major forms of the verb stem present here are -yan and -yiw. This set of meanings is interesting because in the last two stem examples, growing and raising both plants and people are related (both have the stem -yiw). This provides additional evidence for the metaphorical connection between people and plants. Again, the raising of both people and plants involves much the same types of actions—care and attention being lavished on both, feeding both in some way, and so on (note that while the Hupa were not traditionally an agricultural people, there was a sense of ownership of, and responsibility toward, food-producing trees such as oaks and pines on the part of those who had gathering rights). However, the relationship of the first example, meaning "eat", which has -yan as one of its permutations (as does the stem meaning "grow to maturity, grow up"), to the rest of the paradigm is unclear. I find it interesting, though, that this meaning is similar to the meaning expressed above in the -tcwen stem, a stem which appears to have much the same polysemy pattern as this one. Perhaps the polysemy has something to do
with the prototypical action performed with a fully grown plant or animal, which is to eat it (although this is not, of course, true of humans). This kind of focus shift from trajector (growing) to end-point (being eaten) appears elsewhere in Hupa, and is discussed in more detail in the section on grammaticalization. It is also possible that these meanings are related by the fact that for a person to grow to maturity and pass through life, she must eat, or else she will not continue to live. This, too would be an example of a trajector (eating)-endpoint (living) shift. Thus this metaphor is another example of a cultural primary, in that the experiences that motivate it are universal, but the chain linking these multiple domains is culturally specific.

The last set of data in this section involves the relationship between the meanings "bad", "ugly", and "dirty", as well as "bad health", and can also be seen in the group of opposing meanings: "good", "pretty", "clean", and "good health".

3.21 *nict-tcwin d_o-nauw-ai n_u-hw_oñ hw-a-ne*

dirty things I do not wear good only

"I do not wear dirty things—I only wear good things (for a ceremony)"

3.22 *nichwe'n*

"it is bad, ugly, dirty"

3.23 *na-ne-i_uw-hw_oñ*

[be good (indefinite; reversal of motion; third person singular subject)] "he gets well"

3.24 *-Won (neut)*

"be good, pretty"

The two roots in this case are *nichwe'n*, "bad, etc" and *whon*, "good, etc". In the first example, the meanings "dirty" and "good" are contrasted within in the same sentence. In fact, the meanings could almost be "inappropriate" and "appropriate". Dirty clothes would be highly inappropriate for a ceremony, whereas clean clothes would be proper. In the second case, a person is becoming healthy after being ill, and the same form which means
"good", above, (-whon) is used to describe his wellness. This form is also related to the verb form meaning "be good, pretty", which is listed in example number two. Thus, the morpheme -whon is polysemous, having the meanings "good", "pretty", and "well", and it is contrasted with nīchwe'n, which has the meanings "bad", "ugly", and "dirty". In these cases, the basic meanings could be (note that another possibility is presented below) those having to do with external appearance, namely "pretty" and "ugly". Someone who is dirty is less attractive than the same person would be clean, which leads to the meaning having to do with dirtiness, with the opposite reasoning obtaining to the extension of -whon to "clean". By a metaphor which can be stated as EXTERNAL APPEARANCE IS INNER ESSENCE, an extension to the meanings for "good" and "bad" is made, such that a person who is ugly would be a bad person, and a person who is pretty is good. This metaphor is much like the one which in English licenses such expressions as "the situation got ugly" and "dirty politics". Finally, health is related to these meanings in the second example, which uses -whon to mean "good health". This is due to the fact that a person who is healthy looks better than a person who is ill. It is emphasized by the fact that cleanliness is less likely to be related to disease than dirt. Thus, there is an ICM in which a number of positive attributes are associated with beauty, while a number of negative attributes are associated with ugliness.

It is also possible that the ideas of "good" and "bad" are the basic notions here, from which all else is derived. Health is a good thing. Attractiveness is a good thing, leading to a good bride-price and many suitors, if you are a woman, and your pick of brides, if you are a man (and wealthy enough). Cleanliness is also a good thing, associated with beauty and health, and dirtiness has the opposite connotations. This scenario is equally likely. I presented the other hypothesis first simply because in that case the source domain is one which is more concrete. However, in this case, "good" and "bad" are such basic notions, in that humans typically place a positive value judgement on those things that
they enjoy, and a negative value on those which they don't, and play such a large role in daily life, that it is entirely possible for them to be source domains.

While these metaphors are grounded in universal human experiences, uses such as example 3.13 do not appear in, for example, English. Thus, the full ICM, though similar to English in some respects, is, in others, specific to Hupa. This means that they are an example of a cultural primary, as discussed in Chapter 2.
Section 3: Image metaphors

This section includes examples of some of the image metaphors which exist in the Hupa language. As mentioned in Chapter 1, image metaphors do not work in quite the same way as more typical conceptual metaphors. Image metaphors are very rich, and are not used so much for reasoning as to create a detailed visual scene. Lakoff and Turner state,

not all metaphors map conceptual structures onto other conceptual structures. In addition to the metaphors that unconsciously and automatically organize our ordinary comprehension of the world by mapping concepts onto other concepts there are also more fleeting metaphors which involve not the mapping of concepts but rather the mapping of images (Lakoff and Turner 1989:89).

In the case of image metaphors, the structures which are being mapped are those of mental images, rather than those of mental domains. An example of this can be seen in the following:

3.25 mis-sits

3.26 wandiwhsits’

3.27 whisits’

In these examples, the morpheme -sits' means "skin, hide". The bark of a tree is conceptualized as the skin of an animal which arises from the fact that the structure of a tree is much like that of an animal, in a basic sense. The inner core of the tree, the wood, can be correlated with the insides of an animal or person. The bark, which contains and protects the inner part of the tree, can be correlated with the skin of an animal or person.
There is even a similarity between the bleeding of a person whose skin has been punctured and the sap "bleeding" from the tree if the bark has been harmed. Thus, the image of a person and the image of a tree can be superimposed, with the basic structures of each being equated, leading to the acceptability of the use of the word for hide or skin to mean "bark". Skin, due to its salience for human beings (given both that humans have skin, and that the animals they eat also have skin which must be removed so the animal can be eaten and can be tanned for wearing), is likely the central meaning here.

Another example of an image-metaphor in Hupa can be seen in the description of the sweat-house.

3.28 mit-da-niñan ['(to)+its-mouth-carry (definite; perfective; third person singular subject)] "to its mouth [door of a sweathouse] he carried"

3.29 mida'ninyay ['(to)+its+mouth+came (perfective; definite; third person singular subject)] "he came to the door"

3.30 mida' ['its+mouth']"its mouth"

Here, the morpheme mida' (which Golla's transcription of what Goddard renders as mit-da) means "mouth". In the second form, the verb stem -yay means "to walk". The sweat-house is seen as a human face, with the round hole which is its doorway being referred to as the mouth. This maps onto the human face having a single round hole, lower in the face, which is the mouth. This structure is mapped onto the sweat-house door. Another use of this image metaphor can be seen in the following:

3.31 minin'-xanding [="its+face-close+place+(to where it is)"]
"roof entry or smokehole of a sweathouse"
In this case, the use of the word face (*minin*) to describe the surface of the sweathouse comes from the same image metaphor that licenses the use of the word for "mouth", above.

Another image metaphor can be seen in the multiple uses of the verb root, below:

3.32 *yit-dtc-tcwit* "**shoot** (first person singular; start off from a position of rest)"

3.33 *-tcwid* "**to reach**, do with extended arm"

The verb root here, written *-tcwit* by Goddard and *-tcwid* by Golla, involves the image of an arm reaching out from the body. This image is mapped onto the trajectory of an arrow being shot from a bow. Thus, in this case, it is not so much the arrow itself which is mapped via the image metaphor, but the causing of the arrow to move along a trajectory by shooting it.

All of these cases involve grounding in cultural experiences which provide the information needed for the kinds of rich images used in such metaphors. This is typical of such one-shot metaphors in that such cultural experiences provide more detail than the sorts of image-schematic Gestalt information often taken from more universal primaries, and thus those cultural experiences provide a more rich domain from which to take the details necessary for an image metaphor.

Section 4: Grammaticalization

This section includes data which indicate polysemy patterns which have arisen due to the process of grammaticalization, as defined by such researchers as Traugott (e.g. 1986, 1989) and Sweetser (e.g. 1988, 1990) (cf. also Bybee 1988; Bybee and Pagliuca 1985; Bybee, Perkins, and Pagliuca 1994; Fleischman 1982, 1983, 1989; Heine, Claudi, and Hunnemeyer 1991). Traugott defines grammaticalization as "the dynamic,
unidirectional historical process whereby lexical items in the course of time acquire a new status as grammatical, morphosyntactic forms" (Traugott 1988). This statement has several implications. First, in almost all cases where we have the etymologies, grammatical items have come from lexical sources (all other cases involve reanalysis). It is possible to speculate on the order of the development of meanings in any given case of grammaticalization (cf. Traugott 1986, 1989; Sweetser 1988, 1990; Fleischman 1982, 1983, 1989). Thus, in the following examples, postulations are included as to which of the meanings came earlier, and which are the later meanings.

In many cases, the process of grammaticalization is motivated at least partially by metaphors. In such cases, the metaphors involved are Grady-type primaries, in particular the time metaphors which we have discussed, and the Event Structure metaphor. This parallels the process by which more general lexical items are involved in grammaticalization (such as verbs meaning "come" or "go", rather than verbs such as "trudge" coming to be tense and aspect markers). In other words, the process of grammaticalization more typically involves items which carry general, image-schematic information, and which can thus come to refer to more abstract processes, such as the passing of time, without extraneous information (such as manner, in the case of "trudge", or extra cultural information in the case of cultural primaries). Because of this we expect to find, and as we do, that the metaphors involved in grammaticalization fall into the category of Grady-type, or universal, primaries.

The first set of examples of grammaticalization involves the understanding of temporal concepts in terms of spatial ones. This understanding is not rare among the world's languages. Often, tense markers derive from verbs of motion (Ahlers ms; Bybee 1994; Clark 1973; Emanatian 1992; Fleischman 1982, 1983, 1989). This development is based on a conceptual metaphor having to do with the relationship between TIME and SPACE. Lakoff describes this metaphor as follows:
Ontology: Time is understood in terms of things (i.e. entities and locations) and motion.

Background condition: The present time is at the same location as a canonical observer. ...

Special case 1: The observer is fixed; times are entities moving with respect to the observer. ...

Special case 2: Times are fixed locations; the observer is moving with respect to time. (Lakoff 1993)

The first case allows in English such expressions as "Christmas is coming up fast", where the person speaking is waiting in one place for the event of Christmas to arrive. The second case leads to such statements as "We're coming up on that due date". In this instance, the person speaking is the one who is moving towards the due date, which is conceptualized as a landmark on the landscape. This metaphor leads to the use of verbs of motion, such as "go" and "come", to talk about temporal notions. An example of this can be seen in the English use of the verb "going to" to indicate futurity, as in the sentence "I'm going to stay right here until he shows up". In this case, the speaker is not actually in motion at all. This kind of meaning comes about due to sentences like "I'm going to cook dinner", where the "going" has two potential meanings—one in which the speaker is going to get up and go to the kitchen to cook, and the second in which the speaker will cook dinner in the future. This is because the future meaning is, in this case, inherent in the other meaning; by the time the speaker actually arrives in the kitchen to do the cooking, it will be further in the future than the time at which he made the statement. This relationship is metonymic in that movement in space saliently involves movement in time, and therefore can come to stand for it, leading to the polysemy within the verb "to go", which has both a motion through space meaning and a motion through time meaning (Heine et al 1991). These types of examples are the most commonly discussed in works such as those mentioned above.
These metaphorical mappings also characterize Hupa use of prepositions to mark verbal aspect. Most aspect markers are morphemes which are fully integrated with other verbal prefixes, while tense is marked (if at all) by suffixes, which are rare in Hupa verbs (in fact, only tense is expressed in suffixes). The metaphorical aspect markers which I have found are not entirely grammaticalized in that they are not necessary markers, and they do not appear within the verb itself. In Hupa verbs in general, the root is the last morpheme to appear, preceded by pronouns, aspect markers, and particles. The two possible tense markers -te (future) and -ne’én (past), appear after the verb root (and are almost the only particles which are able to appear in this position). The morphemes discussed below do not appear before the verb root within the verb itself. In some cases, they are still separate words, appearing separated from the verb and before it, or they are added to the end of the verb, in the place usually reserved for tense (see examples 3.35 and 3.36, below). This indicates that these morphemes have not entirely undergone the process of grammaticalization, in that they have either not become bound to the verb, or they have not taken the usual place for an aspect marker. These words also frequently appear, typically in the same phonological form, with their earlier spatial meanings.

The first set of examples involves the morpheme -ding, which, in its spatial sense, means "at that place". It is most frequently used in place names, for example in Tish-tang, the name of a camp-ground near Hupa, where the morpheme -tang comes from -ding (having undergone a phonological change due to its use as a place name). It can also be used as a simple preposition, though, as in the word xonta-dîn "to the house", and t_o-diîn, which literally means "water-at", and is used to designate "river". However, through the course of examining Goddard's texts, it can be seen that this morpheme can also be used in a temporal sense, where the place being spoken of is a place in time, rather than in space.
3.34 hwa-ne-na-wit-dal-diñ  
[= 'sun+runs along-place']
"in the evening"

3.35 xù-Le-dùn-diñ  
[= 'night+just past-place']
"early in the morning"

3.36 y_u-diñ-hit  
[= 'at that time-place-while']
"after a while"

(Since these examples are taken from Goddard, the dashes correspond to syllable breaks, while in the literal translations, dashes correspond to morpheme breaks.) In all of these cases, a "place" in time is being spoken of such that time is understood as a landscape, and the person who is moving through time has come to a particular temporal place in that temporal landscape. In example 3.35, the person has come to the place where the sun runs along. By this the narrator does not mean the far west. The action of the sun running along is understood to refer to the act of the sun setting, which is representative of evening, and the morpheme -ding is used to indicate that the person is at the time of sunset. The same holds true for the second example, where the passing of night is seen as a salient aspect of the morning, and the actor is at the time when night passes—namely, dawn. The third example shows the importance of the presence of the morpheme -ding. In this case, -ding is actually redundant, since the morpheme -hit is present, indicating "at that time". However, the spatial morpheme is included, perhaps as emphasis, although it is also possible that it is obligatory in such cases—more field work will be required to determine its exact motivation.

Originally, the morpheme -ding was likely used first as a spatial marker, meaning "place", and then had its uses extended to the temporal uses seen above via a metaphor much like the ones discussed by Lakoff (1993), Sweetser (1988), Traugott (1986, 1988), Fleischman (1983, 1982, 1989), Emanatian (1992), and Bybee (1994, 1988, 1985). As discussed earlier, time can be conceptualized as a landscape. In this metaphor, events in
time are landmarks along the path, as in the example, "We're coming up on that meeting."
In that case, the meeting is a landmark which is being approached by the speaker. In
Hupa, then, it is possible to say that we are "at the place" of the meeting, meant in a strictly
temporal way. As with the go-future in English, it is probable that this use developed
originally from some kind of metonymy, since at the time of the meeting, the actors would
also be at the place of the meeting. However, given the sunset example, where it is not the
far west being referred to, it seems clear that -ding now has a purely temporal meaning as
well. In her book, Svorou gives an example of an Abkhaz postposition a-ç'ë, which
means "at". She states that it "has a number of uses encoding the location of the TR
[trajector] inside, at the region of, or in contact with the LM [landmark]" (Svorou
1993:143). When used with a stative verb, this postposition also indicates the continuous,
which could be taken to mean that the actor is "at" the place of the stative. In some ways,
- ding seems to be similar to this. However, it does not indicate that somebody is at an
action, rather that they are at a time (which could, theoretically, be associated with an
action) (cf. English before and after, which were once spatial and now are only temporal).

Another spatial preposition which has temporal uses is kût, which literally means
"on". It can be used spatially in such examples as:

3.37 xonta kût ['house on'] "on the house"
3.38 miq'it ['its+on'] "on it, on top of it, resting on it"
3.39 whiq'it ['my+on'] "on me, on my head, body"

(There are two transcription styles here. The kût of the first citation, and the -q'it of the
second two represent the same morpheme. In the second two examples, the initial syllables
mi- and whi- are possessive morphemes.) The morpheme kût can be used not only
spatially, but in an extended, temporal, sense as well.
3.40 *kût xu-Le-dûn* "in the morning"

(on) morning-place

3.41 *kût tcin-niň-yai* "he got there"

(on) he got there

3.42 *hai-ya-hit-djit kût kiL-dje-xai-wil-lai* "and then, they commenced to

and then (on) fight (indefinite; fight"

progressive; start from

a position of rest)

3.43 *d_o-wiň-sa-ai miL kût na-iňxût* hai-y_o x_o-liň-ka-ne-en

a little while then (on) dropped (definite; that man his pet-used to be

down to a position

of rest)

"A little while later, that man dropped in the pet which used to be (i.e. it's dead

now)"

All of these examples are taken from Goddard's texts. In each case, the word *kût* was not translated—Goddard only translated this morpheme when it was being used in its spatial sense. This is interesting given that in his *Morphology*, Goddard gave examples of *kût* translated temporally as "now", as well as the phrases *kût de "soon"* and *kût tiň xo lićtc"very quickly"* (Goddard 1905:333). In the texts, this morpheme is being used with an extended temporal sense which indicates something like "at that particular moment", a punctative use. So, in the first example, a free translation would be something more like, "at that moment in the morning", or "first thing in the morning". In the second example, the use is almost redundant, since the time of someone's arrival is necessarily a momentaneous event. The same is true of the third example, where the moment of the beginning of a fight is being described. And in the final example included here, the exact instant at which the dropping of the pet occurred is being described.
In the examples of *kùt* throughout Goddard’s texts, the most common by far were temporal uses. Instances in which *kùt* was being used in its locational sense were rare. This indicates that, although *kùt* cannot be used as a morpheme within the verb to indicate aspect, it is fairly far along in the process of grammaticalization, since its most common use is in its more grammaticalized temporal one.

In describing the metaphor system of Hupa in this way, it is useful to attempt to differentiate between the temporal uses of *kùt* and *-ding*. Why, when their spatial meanings are relatively similar, did one of them take on the nuance of punctativeness ("at that precise moment"), while the other came to mean "at that time, around that time"? This has to do with the boundaries of the spatial uses of the two words. The two spatial meanings in question are "on" and "at that place". "On" refers to a more precise, and small, location than "at that place". This precision was transferred to the temporal use of *kùt*, and the lack of precision to the temporal use of *-ding*. This example shows once again that the image schemata and inference patterns from the source domain are preserved in the target domain mapping (in this case, the real-world knowledge of the precision, or lack thereof, inherent in "on" and "at that place", get transferred to the temporal uses of the morphemes in question) (cf. for example, Sweetser 1988, 1990; Traugott 1986, 1988).

Yet another example of a spatial adposition being used temporally is that of *-xw*, which means "at approximately, in the direction of", and is a locative mainly used in fossilized compounds. Some instances of this type of usage can be seen below:

3.44 *La’ay-xw*  "immediately, at once, right then; nothing but, only"
3.45 *Lah-xw*  [’one-at’] "merely, just, only, (in an) ordinary (way)"

This word has two basic groups of senses—the first is the "at once" meaning, and the second is the "only" meaning. The second meaning is more easily explained than the first.
It is related to a conceptualization of counting in which each number is visualized as a location to which a person goes. Thus, something which is "at one", is only gone to once, and therefore could be described as "nothing but", or "only". This then undergoes the same kind of extension of meaning which occurred in English, whereby doing something once seems to indicate that it is not a very important activity, so it could be described as "ordinary", or "merely".

The other meaning of this word, "at once", also appears to be much like the English word, both in morphology and meaning. The morphological breakdown of the word shows the meaning "one-at". This is very like the English "at once". This phrase first went through a stage where it meant "at the same time". This later came to be extended to a meaning which was something like "at the same time as what I am doing now", which can be taken to mean "at once" (OED). It is probable that the Hupa meanings went through the same progression, or that they immediately developed into the "at the same time as what I am doing now" sense, in that what the speaker is doing now could be considered "once" in the view of counting which I mentioned above, and therefore, something which is being done "at" the place in time "once" is simultaneous with what is going on now.

There is one more Hupa spatial preposition which has had its meaning extended to describe temporal situations. This word has a physical sense which literally means "in front of".

3.46 *whije:-ding* [*my+breast-place*] "(right) in front of me, facing me"

3.47 *which-ing-ah* [*my+breast*] "in front of me (as a protection)"

3.48 *mitc-teiń-a* [*its+breast*] "before (the dance)" (in "before (the dance) one night will pass")
In these cases, the *mi*- and *whi*- are possessive pronouns, and *tci/ch'ijfe:* are the forms of the root in question. I will discuss the body-part preposition development which is present here below. In this context, the important thing to point out is that a spatial preposition, describing the position of an object with reference to a person, has come to describe a temporal situation, which is the temporal position of a time with relation to another time. This conceptualization occurs due to the metaphor which was discussed earlier, where TIME is understood in terms of SPACE. In this case, something which is "before" a person is in front of them. The same thing is true in an understanding of time where a person is facing the future event which (depending on the version of the metaphor being accessed) is either moving towards the speaker, or towards which the speaker is moving. In any case, that event bears the same relationship to the time of speaking as an object does to a physical person standing in space. Thus, as in English, the preposition "before" can be used both to indicate spatial relationships (a use which is becoming archaic in English), and temporal ones.

I now turn to an example which reflects a development which Traugott has discussed in depth in various papers (Traugott 1982, 1986, 1989, 1988).

(from Goddard's texts)

3.49 *miL* "then, after, from"
also "in" (in "fifth month in she always comes")
and "when" (in "the waves began when")
and "with it" (i.e. "by means of it")

(from Golla's dictionary)

3.50 *miL* ['with'] "(starting off) from"
3.51 *hayah-miL* [=there-after'] "then, after that, and then" (connective particle)
3.52 mine:jixomiL  [=from mine:jit-xw-miL 'the middle of it-at-from, after'] (connective particle) "afterwards, then (after a while)"

3.53 miL  [=='with' after a phrase]  "when..., after..."

The first two meanings listed are prepositional meanings, followed by three sets of textual meanings. Since Traugott points out, "a theory of synchronic semantic relatedness, i.e. polysemy, together with a theory of possible semantic change, can be used to do semantic reconstruction" (Traugott 1986), it is possible to deduce which of these meanings came first as well as the path of development. The direction of change which Traugott postulates, which aids greatly in the explanation of the polysemy pattern seen above, is that of "subjectification". She states, "over time, meanings tend to come to refer less to the objective situations and more to subjective ones (including speaker point of view), less to the described situation and more to the discourse situation" (Traugott 1986). In an earlier article, she stated, "meanings with largely propositional (ideational) content can gain either textual (cohesion-making) and expressive (presuppositional, and other pragmatic) meanings, or both, in the order propositional > (textual) > (expressive)" (Traugott 1982). This is the order of meaning development that we expect in this case. Any definitions which have to do with describing the real-world situation, the physical relationship of characters to one another, should come first in the development of the polysemy structure. Following these should be meanings which relate parts of the text to one another, and finally, any meanings which convey the speaker's attitude about the situation should develop last.

The first meanings from Golla which are listed above, "with it, by means of it, accompanying it", are clearly propositional, in that they describe the relationship between objects or people in the real world. These meanings relate to the meanings "with it" and "in" which are seen in the Goddard texts. The specific use of "in" here refers to a person
who always comes during a certain month. It is therefore arguable that these two meanings are essentially the same, since a person who always comes during a certain month, comes "with" that month. The next meaning, "from", developed from this meaning. It comes from the use "(starting) from". A person who is starting from a place is, in the beginning at least, with that place. This connection led to this further propositional meaning, which again describes the relationship between a place and the people or things coming from that place.

The next series of meanings are all textual in nature. They relate to the discourse of the story by connecting the parts as they are being told. Meanings such as "when" and "after" relate different actions to one another temporally. The meanings "then, after that, and then" are all (as Golla points out) connective particles which relate parts of the text to one another, as are the meanings "afterwards, then (after a while)". The literal meanings of the word mine:jixomiL ("afterwards") could be paraphrased as something like "after the middle part of that time", and therefore after any actions which took place or started at the beginning of the time. These textual meanings are more common throughout Goddard's texts than the propositional meanings. However, unlike kât, above, the propositional meanings were not uncommon. Of those, the most common is the meaning "by means of which" to indicate instrumentality (a meaning which comes directly from the image-schema for with, since to do something by means of an instrument requires that the actor be in the presence of the instrument at the time).

It is also possible, in the case of this word, to examine the image-schematic structure which is carried through all of the meanings, both propositional and textual. Sweetser states, "it is precisely the (metaphorically structured) image-schematic inferential structure which is preserved" in cases of grammaticalization (Sweetser 1988). She argues that this image-schematic structure is kept throughout the grammaticalization process, and that the details are filled in for each individual definition of the word in question. Therefore, in a case such as this, it is possible to identify such a structure, which is then
elaborated according to whether its use is propositional or textual. In this case, the image-schema is related to the basic image-schema for "with", with the trajector and landmark in the same location. In the case of the meaning "(starting) from", there is a second stage at which the trajector is seen to have left the landmark which it once was with. These two image schemata get carried over into the textual realm as well. The uses which mean something like "then, and then", and "when" involve the first image schema above, where the trajector and landmark are conceptualized as existing in the same space. Thus, the two events being spoken of in the text (for example in a sentence like "he was walking and then he saw...") are conceptualized as occurring at the same time (such that the above sentence could be paraphrased as something like "he was walking when he saw", which carries the simultaneity meaning more clearly). The meaning of mil "afterwards" comes from the second image-schema, namely the one in which the trajector leaves the space of the landmark after having been there. In the textual sense, this means that the action which occurs happened after something else, but close enough to it to be associated with it in some way.

So we see that Hupa provides clear examples of the kind of shift spoken of by Traugott. This lends further, cross-linguistic, evidence to her argument. It also supports Sweetser's argument about image-schema preservation, since this, too, can be found in this
example, as well as in the *kūt/-ding* examples above, where I invoked image-schema preservation as the reason for the temporal semantic difference between the two.

Another set of data which provides an example of grammaticalization in Hupa involves prepositions which derive from body-parts. The analysis of these is similar to that of Mixtec body-parts by Brugman (1993), and necessarily involves metaphor theory.

The only adequate analysis of the locational uses of Mixtec body-part terms is by reference to systematic metaphorical processes. A consequence of this conclusion is the theoretical position that "not just the semantic component, but also the grammatical component, of a language, can be affected and even in part constructed by metaphor" (Brugman ms:2).

This is true of all of the Hupa cases of grammaticalization above. The body-part prepositions in Hupa are especially reflective of the findings in Mixtec. However, unlike Brugman's examples, the Hupa examples do not form an entirely coherent set. In some cases, they are in this section because they deal with an extension of body-part meanings, rather than because body-parts form a complete set of locational prepositions.

The first such example is the Hupa word meaning face:

3.54 *-dinang* ['physical protrusion or metaphorical extendedness+face'] "facing"

3.55 *whiq'eh-dinang* [= (following)+me+after-physical protrusion or metaphorical extendedness+*facing* (sloping, inclined)] "facing behind me, lined up behind me, agreeing with me"

3.56 *whining*' ['my+face'] "my face"

In the final word, *whining*'*, the *whi-* is the first person possessive, "my". The final part of the word, *-ning*' represents the meaning "face". This morpheme can be seen in the first
two examples, as well. In each of those cases, the word "face" is being used with the locational sense of the word. The body-part "face" comes to stand for the entire front of the body, and therefore becomes a word which indicates the direction in which the front of the body is pointed. In discussing the development, cross-linguistically, of the word "face" into a spatial marker, Svorou, following Heine, argues that this use reflects an anthropomorphomorphic model, which "corresponds to the configuration of human body-parts", as opposed to the zoomorphic model, which would lead to the use of the word for "head" in this place, since the head is the front of a four-legged animal (Svorou 1993:74).

The next of this set of examples is the word "behind", which can be used both to refer to someone's back, or to the area behind the person.

3.57 me:ne:q' ['its+back'] "behind it/its back"

In both cases, the me- prefix indicates the meaning "its", and the morpheme ne:q' means "back" or "behind". The body-part "back" has come to stand for the area associated with it, namely the area behind a person. As with the case above, this is actually more a case of metonymy, since the back comes to stand saliently for the area with which it is associated. However, since this word can be used to talk about a spatial relationship with reference to something which cannot clearly be said to have a back, this meaning has extended beyond strictly metonymic usages. Svorou would also call this example an instance of the anthropomorphomorphic model (Svorou 1993). I am not entirely sure that I agree with all aspects of this distinction between anthropomorphomorphic and zoomorphic, which assigns the use of the word "back" to the anthropomorphomorphic model, and words such as "buttocks" to the zoomorphic model, since the buttocks are also a salient feature of the human back, and could therefore also be considered anthropomorphomorphic.

The next example involves the front of the body.
3.58 \textit{whije:y'-xw} ['my+heart-at']

"in front of me"

In this case, the morpheme \textit{whi-} is the first person possessive, \textit{je:ye'} is "heart", and \textit{-xw} is a locative preposition meaning "at". Therefore, the location associated with the heart (the chest) is metonymically associated with the area in front of it, and comes to stand for it. It is interesting to note that in the sample of languages which Svorou has collected, the heart is used to indicate the side-region or the inside-region, but not the front of the body (Svorou 1993:74). This example clearly provides additional evidence to be considered.

This is also true of the word meaning "middle", which can be used both to mean "waist" and to mean the middle of something which cannot be said to have a waist, like the world. It can also be used to describe the middle of an incident in time, which extends its meaning even further than the body-part prepositions above.

3.59 \textit{n_e-djit} "middle" (in "world middle he came")

3.60 \textit{mine:jixomil} \[\textit{mine:jit-xw-miL 'middle+at+from, after'}\]

"afterwards, then (after a while)"

3.61 \textit{mine:jit} ['its+middle'] "in the middle of it, in the center"

3.62 \textit{whine:jit} ['my+middle'] "around my waist, my middle"

The final example having to do with body-parts is one which was examined above, in another context.

3.63 \textit{mitc-tcin-a} ['its-front'] "before (the dance)" (in "before (the dance) one night will pass")

3.64 \textit{which'ing'ah} ['my+front'] "in front of me (as a protection)"

3.65 \textit{whije:'-ding} ['my+front-place'] "(right) in front of me, facing me"
As with the last instance, what we see here is a relationship between non-identical, but similar, phonological forms based in part upon the semantic patterns which have been established, above. In both of the second two examples, the *whi-* prefix indicates the meaning "my". So in the final example, the morpheme *je:* means "breast". This is related to the morpheme which is represented as -*tci-* in the first example (this is Goddard's transcription; since he divides his words according to syllable, there is not a double consonant -tc- in this form), and the same morpheme -*ch'i-* in the second example (a Golla transcription; note that the difference between *je:* and *ch'i:* is principally one of voicing). Therefore, the word for "breast" comes to stand saliently for the area right in front of the breast (either real or imposed via image-metaphor). The preposition does not simply mean "in front of", but can also have the meaning of "facing me", a meaning not present in the form which derives from the word for "heart". This could be due in part to the need to differentiate between two words which otherwise mean pretty much the same thing.

There is one last interesting pattern of grammaticalization in Hupa to present before closing this section. This involves something which I call "trajector-endpoint focus shift". Many metaphorical shifts involve basic image-schemata. One such schema can be seen as follows (often called source-path-goal (Lakoff 1987)):

```
source ------------------------------> endpoint (target)
trajector
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This image schema is invoked in a number of diverse prepositions and relationships, for example: "to", "from", "give", "send", "throw", and so on. Each of these words focuses on a particular aspect of the image schema. That is, "to" focuses on the endpoint, while "from" pinpoints the source, and so on. This image schema underlies the semantics of prepositions, verbs, and nouns in numerous languages. Hupa, too, invokes this image
schema. One of the processes that utilizes this schema is one whereby the semantics of a word are expanded via a shift in focus from the source to the trajector to the endpoint, as can be seen in the following:

3.66 -yiw, -yan
"grow to maturity, grow up" (trajector)

3.67 tsis-d_i-yan
['grow up(definite; third person singular subject; physical protrusion or metaphorical extendedness)'] "(he) was old" (endpoint)

3.68 -L-chid
"wear (him) out, exhaust (him)" (trajector)

3.69 -chid
"get weak, exhausted" (trajector)

3.70 ch'ich'it
['die (perfective; human subject)'] "he died"
(endpoint)

3.71 -chid
"die" (endpoint)

3.72 -L-we, -we?
"fight, attack (him)" (often impersonal: "(pain, disease) attacks (him)") (trajector)

3.73 -L-we, -wen
"kill (one animal or person)" (endpoint)

3.74 tcis-siL-we
['kill (perfective; human subject)'] "he killed"
(endpoint)

3.75 tin
"trail/road" (trajector)

3.76 tin-
"to go away out of sight/get lost" (endpoint)

(Note that in each of the first three sets above, the verb stem in a word is the last syllable in that word, and in the verb root listings, the last part of the form is the verb root. These are the salient parts of the verbal morphology for our purposes.) In each of the above cases,
the final state (old age, death, killing, and being lost) can be reached via the action or thing described in the related forms (growing up, getting weak, fighting, or a trail). Thus, the final stage of a process, conceptualized as the endpoint as described above, is named using the same form that is used to talk about the process, or trajector. This pattern is common in Hupa and is, as can be seen above, exploited in a number of ways.

The metaphors explored in this section all conform to common cross-linguistic patterns. They are also all grounded in universal primary experiences. This conjunction is to be expected, since universal experiences will be reflected in common cross-linguistic manifestations.

Section 5: Conclusion

This chapter by no means represents a complete set of the metaphors found during my fieldwork in Hoopa (for that set, see Appendix B), nor is it a complete description of the metaphorical system of Hupa as a whole. Such a description would take many researchers' lifetimes to achieve. The description of the metaphorical system of English, arguably the most detailed of any language which has been studied, is itself not even approaching completion. However, this sample shows how pervasive and cross-linguistic some of these metaphorical patterns are, underlyingly, and yet how culturally and linguistically specific their outward manifestations can be.

There are some generalizations to be made about the role which culture plays in creating metaphor. In looking at the metaphors discussed above, it can be seen that those metaphorical examples classed under "lexical/phrasal metaphors" more often contain culture as part of their grounding than those gathered under the heading of "grammaticalization". The data which are examples of image metaphors are almost entirely culturally grounded. These patterns fit what would be expected given the relative consciousness versus unconsciousness of lexical and grammatical structures. Morphemnes which have been
grammaticalized appeal to much more basic linguistic structures, and therefore we would expect, as we do find, that they would also appeal to core metaphors, grounded in universal human experience. In looking at studies of grammaticalization (e.g. Ahlers ms; Sweetser 1988, 1990; Traugott 1982, 1986, 1988, 1989) metaphors such as these appear as grounding agents again and again, in cross-linguistic samples. Similarly, the kinds of lexicalized examples presented above could be expected to appeal not only to such universally grounded metaphors, but also to have the leeway to utilize cultural metaphors and experiences in their grounding. And, in fact, those examples do so. Finally, image metaphors, which rely on an image with a great deal of detail and extra information, should be, and are, grounded in the kinds of important cultural experiences about which we consciously have such information (note that humans could access that kind of detailed information about day-to-day universal experiences, but most of those experiences take place fairly unconsciously, and are represented by more image-schematic structures, while cultural experiences, with all their detail, are open to more conscious examination and utilization). Thus, some predictions are made as to the kinds of grounding that we will find in these three "types" of metaphors: in what I have called lexical metaphors, we find a mix of Grady-type primaries, and cultural primaries; in image metaphors, we find principally cultural grounding; and in examples of grammaticalization, we principally find grounding in Grady-type primaries.

It is also possible to make the more general observation that the metaphorical structures that we have seen in this chapter themselves are similar from language to language. That is, all languages have metaphorical mappings from source to target domain. And all languages have the kinds of compositional metaphors which were discussed in Chapter 2. The fact of cultural grounding as part of metaphorical compositionality can also be found cross-linguistically. And, finally, structures such as image-metaphors, body-part terminology, and trajector-endpoint shift appear in language after language. So, removing ourselves one step further from observations having to do with the cross-linguistic role of
culture in metaphorical grounding, it can be said that metaphor in general, and these metaphorical structures in particular, are cross-linguistic phenomena.

Thus, this kind of study of metaphor adds greatly to the general theoretical understanding of the phenomenon of metaphor by permitting statements about the role of culture in metaphorical grounding, about where we expect to find cultural grounding more commonly and where we do not, and finally, more generally about the cross-linguistic nature of metaphorical structures themselves. Such a study, and such an understanding, of the similar-yet-different dichotomy of metaphor looked at cross-linguistically, is vital to the teaching of a second language.
Chapter 4: The Metonymy System of Hupa

Section 1: Metonymy

4.1 We've got a lot of good heads in this room.
4.2 There are a lot of hands to help get dinner ready.
4.3 Hupa: misah-miLchwin [='its mouth stinks'] "turkey vulture"
4.4 Hupa: ke'-ne:s [='tail-long'] "tree squirrel, grey squirrel"

The above sentences and words are all examples of what is called metonymy. Metonymy is a cognitive phenomenon which, like metaphor, is reflected in all human languages. The patterns of metonymy which occur can differ from language to language, but the fact of metonymy does not. In traditional literature, metonymy is defined as a usage of language in which the name of a part of something is used to stand for the whole thing, or the name of the whole thing is used to stand for the part (also sometimes called synecdoche). Traditionally, connection and adjacency, that is, connections among the members of a domain, have also been recognized as giving rise to metonymy (e.g. "hayseed" for "country bumpkin"). The first of these (part for whole) has been considered to be more common, and can be seen in all of the examples above. In the English examples, the words "head" and "hands" are used to stand for whole people. In both cases, a salient aspect of the person is chosen to stand for the whole. In the first, the most likely context for the utterance would be when the person speaking is, for example, heading a group which is working to solve a problem. In such a case, the heads of each of the people around the table are the most salient features, since they will be thinking with their heads. In the second sentence, it is the hands of the people in question which are valuable in the situation of getting dinner ready (this is also the case in appellations like "field hand", or "deck hand", where the hand is the salient feature of somebody who is
going to do manual labor on a farm or ship). In the two Hupa examples which follow (4.3 and 4.4), the same phenomenon is present. In the first case, the mouth of the vulture (and in particular, the bad breath which emits from that mouth) is chosen as the salient feature, which makes sense, since vultures are carrion eaters, and thus highly unlikely to have pleasant breath. In the second case, the tail of the squirrel is chosen as its most salient feature. Again, this is an understandable choice, given that the tails of squirrels are long, bushy, and constantly twitching, thus drawing a viewer's attention towards the tail.

This kind of metonymy—PART FOR WHOLE—is not, by any means, the only kind of metonymy. This chapter is devoted to exploring the major types of metonymy which appear in Hupa. However, the differences and similarities between the processes of metonymy and metaphor must first be made clear. As Lakoff and Johnson have said,

Metaphor and metonymy are different kinds of processes. Metaphor is principally a way of conceiving of one thing in terms of another, and its primary function is understanding. Metonymy, on the other hand, has primarily a referential function, that is, it allows us to use one entity to stand for another. But metonymy is not merely a referential device. It also serves the function of providing understanding. For example, in the case of the metonymy THE PART FOR THE WHOLE there are many parts that can stand for the whole. Which part we pick out determines which aspect of the whole we are focusing on (Lakoff and Johnson 1980:36).

One distinction which can be made then, is that metaphor typically involves two domains, whereas metonymy only involves one. Loosely speaking, an entity in that one domain can come to be used to refer to another entity in that same domain. We will see how broadly domains can be defined, and therefore how wide the scope is for the creation of metonymy. It is important to point out that "like metaphors, metonymies are not random or arbitrary occurrences, to be treated as isolated instances. Metonymic concepts are also systematic" (Lakoff and Johnson 1980:37). That is, two objects which are not somehow saliently connected cannot be used to stand for one another. Also, metonymy is systematic in that
languages tend to prefer certain patterns of metonymy above others, meaning that those
types are fairly common within the language, and that when new metonymies are created,
they tend to be created using previously existing templates.

Section 2: Types of metonymy in Hupa

In studying the Hupa language, I have found a large number of examples of
metonymic usage. In order to more readily understand some of the mechanisms behind the
processes of metonymy, I have divided these examples into four types, which are as
follows:

1. Classical metonymy: PART FOR WHOLE or WHOLE FOR PART

4. Resemblance: A central member of a category based on resemblance can be
   used to stand for another salient member.

3. Location for the thing found there: The name of a location where an object is
   saliently found is used to name that object.

4. Associated action frame: The name of the action which is performed with or by
   an object is used to name that object.

I will now discuss each of these in depth, and give examples of each type (for further
examples of each kind of metonymy, see Appendix C). Before doing so, let me point out
that these categories are not meant to be claimed as universals. These types of metonymy
may show up in other languages, or they may not. The ways in which they are lexicalized
may also be different from language to language, even if the cognitive mechanism is the
same. It is possible to say, however, that languages have preferences for certain patterns
of metonymy over others, and I discuss this issue in more depth at the end of this chapter.
The first type of metonymy listed above is what I have called "classical metonymy". This is the most central member of the category (at least in the traditional literature), namely, the instances in which the name of a part of an object stands for that object, or the name of the whole object is used to stand for the part. These are the kinds of examples which began this chapter. Also included in this category are instances where a feature of an object can be treated as a part and used to stand for the object as well. In the same way that an object can be said to "have" one of its parts (i.e. "She has blue eyes"), an object can also be said to "have" one of its features (i.e. "She has a nasty temper"). Some examples of this can be seen below:

4.5 de:k'iwile
[="someone who is poor, weak"] "old woman"

4.6 k'isdiya:n-chwing
[="old person-sort"] "widow"

In each of these two cases, a salient aspect of the person being discussed is used to name the person. Notice that the word meaning "old person-sort" does not actually mean "old person"—its meaning is more specific than that, indicating widowhood. An old woman is conceptualized saliently and stereotypically as a person who is poor or weak, rather than simply as someone who has age.

Another example of this kind of metonymy is the Hupa word for baby:

4.7 mije'e:din
[=prob. from mije:y'-e:din 'its mind-is lacking]
"baby, child"

(Note the similarity to the etymological origin of "infant" < in-fans "unspeaking".) This designation appears to fit with traditional Hupa attitudes towards small children. Young children were treated affectionately, spending most of their time with their mothers or with close female relatives (who would not be held financially accountable should something
happen to the baby while under their care). However, "no effort is made to teach an infant to talk", and there "is no conscious effort to instruct infants ... Parents and older brothers and sisters take an affectionate, though sporadic, interest in an infant's development, but do not resort to special methods of fostering it, the assumption being that a child will learn to do things as soon as it is able and wants to." Also, a child is not given a name until 5 to 10 years of age (Wallace 1937:16-20). All of this, taken with the example above, indicates that an infant is seen as a being with great potential, once it takes an interest, which could be conceived of as gaining a mind, since the only evidence that an outside observer has as to somebody's mental capacity is her ability to show it by indicating her interest in something.

Animal names are also often derived via metonymy.

4.8 misah-niLchwin
["its mouth stinks"] "turkey vulture"

4.9 michwe:xin'-q'eh-yixolwhin
["its anus-following behind-it is darkish colored"] "meadowlark"

4.10 ke'-ne:s
[="tail-long"] "tree squirrel, grey squirrel"

4.11 michwa:n'-taLia:n
[="its excrement-is very soft"] "grey fox"

4.12 Lo:q'
"fish, salmon"

In all of these examples, save the last, a salient feature or aspect of the animal is used to stand for the animal. The examples of "turkey vulture" and "squirrel" were discussed at the beginning of the chapter, and there is only add one note as to the name for the squirrel. In doing field work in the summer of 1995, I discussed the personalities of animals with my consultant, Ruth Beck, in an attempt to understand whether there was some pattern to the personalities which the animals had in the stories which we were discussing. In the case of Squirrel, he was described as vain, because he was "proud of his tail". Thus, we can see
here that the tail of Squirrel is salient both in an understanding of his personality as a mythological being, and in the name for the animal as well.

The last example, that of the word *Lo:q* to mean "fish, salmon", provides an interesting instance of the way in which cultural salience can determine which member of a class stands for the whole class. For the Hupa, as for the other tribes living on the Trinity River, the spring and fall salmon runs were important events, and salmon provided a great deal of the food which was eaten fresh and stored for winter. While there are other fish in the river, this particular fish was without a doubt the most important in the Hupa diet, and therefore would serve as the most salient member of the class "fish", and incidentally, as the name for the class "fish".

Examples similar to this involve the names for two of the nuts which also formed a part of the Hupa diet.

4.13 *mitc-dje-xo-len* [= 'sugar pine'] "pine nuts"

4.14 *k'ila:jonde’* "hazel, hazelnuts"

In the first example, the word which can mean simply "sugar pine" is used to mean "pine nuts". Thus, the name of a tree is used to stand for the salient product of the tree. This is also true of the second example, where *k'ila:jonde’* can be used to mean either the hazel tree, or the product of that tree, hazelnuts. In these examples, the trees in question are conceptualized as a whole, and their nuts as a part of that whole, and therefore the name of the whole can be used to name the parts. Note that in English, this can occur as well, as can be seen in such examples as the words "walnut" and "apricot", which can be used to refer to both the fruit, and the tree which produces that fruit.

The type of metonymy which named "resemblance" involves the knowledge of a category which contains objects which are similar in some aspect of their appearance. Because of this category, and the fact that it allows for an association to be formed among
its members, one salient member of this category can be used to describe and name another central member. Examples of this are as follows:

4.15  
\textit{tse:l-ne:wa:n}  
\begin{flushright}  
[= 'blood-it resembles']  
\end{flushright}  
"red obsidian"

4.16  
\textit{te:-ne:wa:n}  
\begin{flushright}  
[= 'water-it resembles']  
\end{flushright}  
"black obsidian"

Both of these cases appeal to categories which are formed on the basis of color associations. In the first example, blood is a salient example of something which is red. Thus, it can be used to describe another example of a red object which is central in the category, in this case red obsidian. In the second example, the dark color of water is appealed to in the description of black obsidian. Judging by the data which I have discovered, this type of metonymy is the least used in Hupa. This could be due to the fact that it requires such a specific morpheme to be appended to it (namely \textit{ne:wa:n}, "it resembles"). There are some examples of newly created words using this morpheme, as can be seen in the word for "spaghetti" below.

4.17  
\textit{qi-ye:jo:-ne:wa:n}  
\begin{flushright}  
[= 'eel tendons-looks like']  
\end{flushright}  
"spaghetti (cooked)"

However, this usage is still not the most common way to name new items.

The last two types of metonymy rely on an understanding of the notion of "frame", as the metonymic relationships which are found in the relevant examples are based on frame relationships between the object named, and the name itself. This usage of the term "frame" is based on Fillmore (1982): "By the term 'frame' I have in mind any system of concepts related in such a way that to understand any one of them you have to understand the whole structure in which it fits; when one of the things in such a structure is introduced into a text or into a conversation, all of the others are automatically made available" (111). By this, Fillmore means that a frame is a canonical, pre-packaged cognitive representation
of a type of event relative to which a lexical item is understood and defined. One of Fillmore's central examples of this involves the English words "buy" and "sell". In order to understand either one of these (or related words like "pay", for example), one must understand the entire scenario, or frame, in which they are founded. This frame involves knowledge along the lines of: There are two people. One has goods that the second one wants, and the second has money that the first one wants. An exchange is made, and money is paid to the first person in trade for which the second person receives the goods. This entire frame is invoked when any one of the words involved in the frame is used: that is, when we know that an act of selling took place, we also know that an act of buying took place; and we can't really imagine someone having the concept of buying but lacking the concept of selling.

In metonymic relationships such as LOCATION FOR THE OBJECT FOUND THERE, a frame is invoked. In the Hupa instances listed below, each item which is named exists as part of a frame which involves knowledge such as how a thing will be used, how a person relates to the objects, and, saliently, where the object is located.

4.18 xontehL-taw [= 'the flats-the one that is around, among'] "coyote"
4.19 xoLisay-taw [= 'dry ground-the one that is around, among']
"mountain lion"
4.20 je: xo-ma'-ding [= 'on the breast-edge-place'] "shortribs"
4.21 k'iLixan-ne:ne:q'-niNT'ik' [= 'deer-behind it-what stretches down']
"backstrap" (the meat located along the spine of the deer)
4.22 xoLchwit-tah-t'an'mahsma:ts' [= 'in wet places-around, among, redbud'] "wild ginger"
In a hunting and gathering society, the conceptual frame for an animal or plant will necessarily include information about where the animal or plant is most commonly found. In fact, the location of predators may in some cases be more salient than that of non-predators, since the latter pose no threat to people who are out in the wilderness alone or in small groups. In the cases of "coyote" and "lion", the frame for each animal includes the knowledge of where it roams, and this is used to metonymically name each animal. In the cases of cuts of meat on a deer carcass, again, for anyone who has to butcher an animal, there is an entire frame of knowledge which goes along with the process of butchering. This includes information about where certain desirable cuts of meat are located, and this location can be used to name the meat itself (cf. English "rump roast", "ribs", or "loin cut", for example). And finally, knowledge of where to find wild ginger when out gathering would be very salient information in the frame of wild ginger, and could therefore be used in the naming process.

The final category of metonymy, associated action frame (AAF) metonymy, also crucially involves an invoking of frame knowledge. In these cases, rather than pinpointing the location of an object as the salient information used to name it, it is the action performed most saliently with or by an object which is used metonymically. This relies on the argument that, for many objects, part of the knowledge which is included in the frame for that object is that of knowing what people do with it, or what it does itself (if it is animate, or is conceived of as being animate in some sense).

4.23 q'an-ch'iwilchwil
   [= 'newly, recently-he is growing']
   "adolescent boy, male teenager"

4.24 kinahLda:-n
   [= 'she reaches puberty-person']  "teenaged girl"

4.25 no:na:witse
   [= 'what is shoved back']  "door"

4.26 k'iwhliwh
   [= 'I watch something, keep an eye on something']  "jealous"
4.27 me’dil
[=from me’-na’dil 'in it-they travel'] "canoe"

4.28 ta’ina:n
[=from ta’dina:n 'what one drinks'] "water"

4.29 king-d’idiLtsay’
[-'tree-it dries up'] "sapsucker" (note that English employs the same process in naming this bird)

In each of the above examples, either the action which is performed with the objects (such as with the name for door "what is shoved back") or by the object (as with the word for a teenaged girl, "she reaches puberty-person") is used as the word which names that object. There are several examples which are especially interesting, and which will therefore be explored individually. The first of these involves the Hupa word for eels.

4.30 tLi’whxa:n
[=probably from tLi’wh-sixa:n 'snake-that lies (caught) in a container'] "eel"

This name for eel invokes several aspects of the Hupa frame having to do with eels. First, it indicates that the most salient interaction of the Hupa with eels was to catch them (and then eat them). The traditional way of trapping eels was to place a basket into the water, such that a narrow entrance pointed upstream, with a wider container downstream, forcing the eels in, but not letting them out again. This also kept the eels alive and fresh until they could be taken in. Thus, as with all of the examples of this kind of metonymy, the action which is seen as most salient in connection with a particular object or person conveys some knowledge about the culture which underlies the frame.

Another example of this sort involves the main Hupa food staple, acorns.

4.31 k’iwiyal
[=‘what one keeps eating’] "food (in general)"

4.32 k’iwinya’n
[=‘what someone eats’] "acorn"
4.33 *kiwinya’n-yaːn*  [=‘acorn-eater’] "person, people, Indians"

In the first two examples, the verb roots *-yal* and *-ya’n* (which can be found at the ends of the verbs, as per Hupa morphological structure), are related stems for the verb root meaning "to eat". Thus, the word for acorn is, essentially, "food". Not only is there a metonymy here in which the action which is performed with acorns, eating, is used to name the acorns, but there is also a metonymy in which the word "food" is used to stand for the most salient food item, acorns. This is similar to the metonymy which allows the word for "fish" to also mean "salmon". In the final example of these three, the epithet "acorn-eater" is applied to people in general (this is not necessarily only used for the Hupa). This again indicates the importance of the acorn in the daily diet of both the Hupa and their neighbors, in that the eating of this staple is seen as the salient thing that people do.

Another example of AAF metonymy can be found in the Hupa word for intercourse.

4.34 *kilnesetin-te*  [=‘I handle a living being-future’]  
"I will have intercourse with a woman"

In this word, the verb stem is *-tin*, which is a reflex of the verb which means "to handle a living being". Thus, the salient example of handling a living being is the act of intercourse. This is interesting, given the other contexts in which one could handle a living being—playing with babies, hugging children, and so on. However, Wallace indicates that a large amount of physical affection directed at children was not common, nor was overt, public physical affection in general. (Wallace 1937)

The final example of AAF metonymy discussed here has to do with the word for speaking.
This verb comes from the verb stem 'a-di..-ne,-ne', which means "say something". This verb root is related to a complex of others which have the meanings "it (e.g. some animal) makes a noise, makes its characteristic sound", "play a musical instrument", and "think, feel in some way, about (it)". It is also related to the name Na-Dene (Golla, p.c.), which is the name for Athapaskan-speaking people (and shows up in the word dineh, "the people", in Navaho, a related language). This is, of course, because human language is a salient example of sound which is important to human listeners. The "play a musical instrument" example is also related to the "make a sound" meaning in the same way, in that musical instruments make, as their function, a characteristic sound. The most interesting part of this paradigm lies in the last meaning, where the verb meaning "to talk" is the suppletive form of the third person verb "to think". This makes perfect sense, since the only way to know what another person is thinking is for them to speak, and tell you.

Associated action frame metonymy is the most common of all four of the types found in Hupa. This could be because AAF metonymy fits especially well with the formal structure which the Hupa use in creating new nouns. This involves taking the third person singular verb form as a noun. This form is unmarked for person, and is therefore the most basic verb form available. Since verbs are so often used as the basis for deriving nouns, it makes sense that a metonymy which invokes actions performed with or by the object being named would be a common kind of naming procedure. Although this process of noun formation is common to all of the Pacific Coast Athapaskan (PCA) languages, Hupa appears to utilize it more pervasively than any of the others. Athapaskan languages in general have a limited stock of root nouns, but Hupa in particular has gone further than any of the others in replacing a relatively large number of the root nouns which are inherited from proto-Athapaskan into the other languages. There are a number of reasons for this. It
is common in many languages for the names of powerful animals to be taboo under many circumstances, and thus for alternate names for them to exist side by side with the original names. This has happened in northern Indo-European languages where the name for bear is not inherited from Proto-Indo-European, but is made from phrases like "honey-eater" or "brown one" (Bloomfield 1933). It is also the case in Hupa that there are naming taboos in place which dictate that when a person passes away, their name may not be used.

"The name of the person [who has died] cannot be spoken without offense, even when it is thought of in its common application as the name of an animal or object and not as the name of a person. A man of some note was called xa, "goose." After his death the word was avoided by saying Lekontclditile, "the one that likes salt." This name has established itself as the name of the wild goose, the younger people knowing no other. There are several other known examples of such creations" (Goddard 1903, 73-4).

Thus, Hupa has had many such opportunities to create new words. In many, if not most, replacement cases, Hupa has utilized this particular kind of metonymy.

Section 3: Conclusion

Examining the metonymic structures used in the nouns which exist in the Hupa language serves several purposes. It expands our general understanding of the kinds of metonymic processes which exist in the world's languages. Some of these appear in other languages fairly commonly, and some are more rare. What is interesting about the inventory of metonymies in a language's lexicon is that languages appear to have preferences for certain of these metonymic processes. These preferences are not just for particular formal structures, such as the Hupa morphological structure which is used to create nominal forms, but for certain cognitive structures, as well. Hupa appears to prefer to use the process of frame metonymy—in particular, associated action frame metonymy.
Once a language, for whatever reason, formally canonizes and entrenches in its grammar a particular kind of cognitive structure, it follows that it will continue to resort to that structure in new word formations. It is well known that productivity (that is, the ability of a word-formation device to be used repeatedly in new situations) is motivated by analogy with pre-existing forms. In English, the creation of noun-noun compounds serves much the same function as the processes discussed above. Mary Ellen Ryder, in exploring English noun-noun compounding, states that "new forms are produced based on analogy with existing conventional expressions. That is, once a pattern begins, the more established forms there are in that pattern, the more likely it is that a new form will be based on one or more of those forms, or on a slightly more abstract template based on them" (Ryder, ms). This seems to be as true for conceptual patterns as it is for formal patterns.

This knowledge has a bearing not only on understanding preexisting nominal forms in a language, but on the creation of new forms, as well. Due to the fact that "after decades of social change, and of attempts by authorities to eradicate native language use, Native California languages are spoken only by a few elders" (Hinton 1994:14), many Native California languages have stopped incorporating new words into their lexicons. When a language is not used in daily communication, speakers often do not create new words for situations which arise for which there is no preexisting vocabulary. Often, they will resort to English for the vocabulary, or simply switch to English altogether when a conversation involves such a topic. Thus, as these languages are revitalized, new vocabulary has to be formed. In Hupa, this new vocabulary is most often formed using AAF metonymy, probably since this was the most prolific of the preexisting types of metonymy. Some examples of this are as follows:

4.36  te'qi:wilq'ots'  [=in the water it is dunked'] "spaghetti (uncooked)"
4.37  'aid:-nahL'its  [=by itself-it runs around'] "automobile/train"
4.38  miq'it-k'iwiLiw  [=on top-it is smeared'] "butter"
4.39 mitah-'a:iL'e:n  [=‘amongst it-someone scatters it’] "baking powder"
4.40 jiwo1ch-n'k'iLwal  [=‘ball-he hits it around’] "baseball"
4.41 a':diL-na:k'itLtal  [=‘by oneself-one kicks around’] "bicycle"
4.42 misah-me:q'-silay  [=‘in (horse’s) mouth-inside it-it (rope) lies’] "bridle"

All of these new vocabulary items follow not only traditional Hupa formal structure for word formation (third person singular verb forms), but also the cognitive structure which was most commonly used as well, namely associated action frame metonymy.

Thus, a study of the metonymic structure of a language is also useful in language revitalization. First, it aids in vocabulary creation, as can be seen in the forms listed above. It is also useful in that examining the ways in which older forms indicate salient features of an object from a cultural point of view indicates ways in which the naming of newer vocabulary items can do the same thing. An understanding of the cultural basis for the naming of older items is also be useful in cases where that cultural context is lost or dimmed, in that it can be used to bring that context to light again. Language revitalization is an important aspect of culture preservation and revitalization, not only because language is a focus for identity, but also because linguistic forms encapsulate traditional cultural meanings, relationships, and contextual frames.

It is also possible here to make some general statements about metonymy cross-linguistically. While the names for objects, as seen above, are linguistically specific (that is to say that the Hupa use a particular phrase to name an object, while English, for example, might use another phrase), the metonymic structures themselves are cross-linguistic phenomena. The kinds of metonymies explored above can all be found in languages other than Hupa. And, of course, the fact of metonymy itself is universal. Structures such as frames, which are utilized in creating instances of metonymy, also appear cross-linguistically. So we can see that the more general metonymic structures, such as those above, are universal phenomena. However, the frames themselves to which a language
appeals, the kinds of formal linguistic structures which are used to form the metonymies (in
the case of Hupa, this is typically third-person singular verb forms, or special affixes),
and, interestingly, preferences for one kind of metonymy over another (the associated
action frame type of metonymy is greatly preferred in Hupa word-formation) are all
culturally specific. Thus, a detailed study such as this one of the metonymic structures of a
language confirms, as did the study of the metaphor system of Hupa, that there are certain
predicable universals (in this case, metonymic-forming structures), as well as places
where culture, predictably, can be used in the instantiations of those structures.
Chapter 5: Language revitalization

Section 1: Language revival/revitalization

Before discussing the ways in which cognitive linguistics can be brought to bear in the effort to revitalize languages, the concept of language revitalization must be clarified: its goals, its context, and its means. This chapter describes what language revitalization is and how it is done, and then reviews examples of language revitalization efforts in various places in the world. Chapter 6, raises some of the concerns which arise in the course of language revitalization efforts, and shows how, in the specific case of Hupa, these concerns could be addressed using tools provided by cognitive linguistics.

In doing language revitalization, one of the main concerns is that of the goal of the project. Is it to return the language entirely to its former role as the language of daily communication within a community, or is it rather to create a place for the language within the community, transforming it in some sense into a somewhat different entity with somewhat different roles than it had before? In many cases, while the former is held up as a potential long-term goal, language planners aim for the latter. This is in part because it seems to be a more realistic goal, especially in cases where the community in question is intimately involved with another language community, needing the language of that community to survive economically (as in the case of most Native American languages), and also because of the fear that if members of a community feel that they have to aim for complete restoration, they will believe that the goal is unattainable.

In any case, people interested in reversing language shift typically accept that change is part of the process. (Note that I use Fishman's term here, "reversing language shift". Language shift is the process whereby a community moves from using its language of heritage to using another language, typically one which is dominant socially or economically or both. This process can, and in many cases does, lead to the death of the
language of heritage. I use Fishman's acronym, RLS, as well as the designation "RLSers" to refer to people involved in the process of reversing language shift.) Fishman states:

[experienced RLSers realise that all cultures are constantly changing and that their goal is merely to regulate and direct this change, so that it will not contradict or overpower the core of their cultural system, rather than legislate change out of existence. ... It is not the return of the past that RLS seeks, but the mining of the past so that the core that animated it can continue to be implemented (Fishman 1991a).

Thus, although it may seem at first glance to be backward-looking, language revitalization efforts are actually aimed at the future.

It is not the goal of language activists to see their language preserved in some way, through documentation, for example. Rather, the goal is the usage of the language of heritage. People involved in language revival realize that in order for languages to be used in a modern context, some kinds of change must necessarily take place such that the languages in question have the ability to function in the modern world. The goal is not to avoid necessary changes, but rather to make sure that they do not alter the core of what the language is. As Hinton puts it,

it is not [native language activists'] goal to see the language "preserved" in some sort of pristine state, if such can even be defined; instead, change is accepted as inevitable, and even sought in some ways for the sake of communication in new situations about new topics. As Terry Supahan (Karuk second-language speaker says about learning his language, "I'm not interested in preservation, I'm interested in communication" (Hinton 1997a).

However, most people do agree that such change can go too far, or that some kinds of change—cultural and linguistic—are inappropriate. As we will see later, cognitive linguistics can aid in creating changes that modernize a language without causing it to lose that which makes it unique.
It is also important to point out that, in the same way that language revitalization is not, typically, meant to be a return to the past, neither is it intended to be isolationist. Fishman puts it best.

Those Xmen [people belonging to culture X] who prefer to remain identified with the 'Xmen-via-Xish' ideal [in which people belonging to culture X express themselves and their culture in language X, that is, the language belonging to culture X] should also be seen as contributing to the national interest and the greater general good. Many of them, often most of them, will opt for a stable 'Xish in certain contexts plus Yish in other contexts' bilingual and bicultural solution to the problem of RLS and Xish language maintenance. As such, they will be involved in the general economy and in the general political process and will be concerned that Yish be effectively taught to their children in the (bilingual) schools that will be established by and for them. They will not be cut off, isolated or ghettoized from the general good, from general problems or from general responsibilities, but they will assiduously maintain a treasured Xish corner of their lives and will aspire to be happier, more productive and more contributory citizens as a result (Fishman 1991b).

Thus, the typical goal is to create a space for language X that will allow it to be maintained, while allowing members of culture X to participate fully in culture and language Y.

So in these terms, language revitalization can be defined as having the goal of changing the linguistic repertoire of a group of people, such that they again use their language of heritage in some part of their daily communication. This is why Fishman refers to the process as "reversing language shift", since it involves a turnaround of newer linguistic habits that include giving up the language of heritage for all of the numerous reasons that were discussed in Chapter 1. However, language revitalization efforts also leave room for a continued participation in the larger surrounding culture.
Section 2: Practical issues

 Practically speaking, how can reversing language shift be effected? Many RLS efforts focus on the schools, and their potential role in teaching the language to a new generation of speakers. Hinton points out that a number of endangered languages in the world have fought language death effectively through the schools. The Maori, Irish, Welsh, Hawaiians, Navajos, and Mohawks, among others, have been able to establish immersion preschools and elementary schools where the language of instruction is the heritage language. Through these efforts a whole generation of bilingual children whose home language was English are nevertheless growing up with a strong command of their language of heritage (Hinton 1997a).

These school programs represent a great deal of commitment on the part of the community members involved. Curricula must be created, oftentimes built from the ground up, funding found for the classes, and interest generated among community members. However, there is often a groundswell of interest within a community, once such programs have been implemented. In Hoopa, for example, a number of programs have been created which involve teaching Hupa to children, and these programs have grown in popularity over the years, now including grade school classes, high school classes, and summer immersion camps.

While these types of programs show that schools can be a positive influence on the retention of languages of heritage, there are some researchers who doubt the long-term efficacy of the schools in creating a stable bilingual situation. In a written debate included in Language and the state: Revitalization and revival in Israel and Eire, Imtiaz states that "policy makers place an enormous amount of faith on the power of school language, and I, myself, am quite skeptical about the trickle-down effect that is hoped for." (Wright 1996:41) It is true that in a number of communities, there is an attitude that the schools
were the instrument of language destruction, forcing students to learn the dominant language (in the case of Hupa, this was, of course, English), and that schools should therefore be able to restore the language to its former state (and should, in fact, be responsible for doing so). And, in many cases, such as those mentioned above, schools can be instrumental in language restoration.

In fact, schools have a number of advantages as foci for language revitalization programs. In many instances of language death, community members of parenting age do not know the language of heritage, and can therefore neither pass it on to their children as a first language, nor teach it to them as a second language. In such instances, the classroom can be the best, and only, chance for language maintenance. Also, by school age, children spend the majority of their waking hours in the school environment, which therefore can have a huge influence on them. Thus, school can provide a way of making the learning of the language of heritage prestigious, counteracting any potential for the child to reject her knowledge of her language once she reaches school. This also means that school can provide a large block of time for exposure to the language, and can teach a whole peer group of children together. Finally, schools can mobilize parents to learn the language themselves, provide curricula and instructors for doing so, and thus encourage the use of the language within families outside of the school environment.

However, there are problems with counting on the schools too much, especially if the goal is to ensure a stable bilingual situation, in which community members are comfortable with both their language of heritage, and the dominant language. Fishman points out some of the problems of relying too heavily on schools when he states:

[herit]age language learning can become a rite de passage for the young, but, . . . [the heritage languages] have to have a really safe out-of-school institutional base of their own, given that they are only rarely used at home, in the neighborhood or in church, if at all. The heritage language school may persist in teaching the language, but, barring a renewed influx of young immigrant speakers of any given heritage
language [something which cannot happen in the case of, say, Hupa], it will be little more than a relic of bygone days in societal terms because, like various other recondite subjects, it has no real functional validity outside the school that is entrusted with its instruction (Fishman 1991b).

What Fishman is pointing out here is that schools do not guarantee that students will continue to use the language in any context but that of the classroom, which can be problematic for a number of reasons, some of which will be discussed further below. One of the biggest of these problems, though, is that scholastic learning of a language does not always (and in fact often does not at all) lead to adequate intergenerational transfer of the language of heritage. In other words, students of the language do not then pass the language on to their children in the home context, creating first language speakers. Because the language has only one place—the classroom—speakers of the language do not use it at home, and therefore do not pass it on to the next generation. Researchers such as Spolsky (1996) have pointed out that language revitalization really depends on a decision of parents and caretakers to use their language of heritage with the children whom they are taking care of, and thus to pass it on to another generation. However, this decision is a difficult one, in that it involves using a language in contexts in which it has not been used in some time, and this can take a concentrated effort.

Thus, if adequate intergenerational language transfer is the end goal of language revitalization (and it seems that this is the long-term goal of many language revitalization efforts), then this must be kept in mind at all times, and programs can be evaluated in part based on their ability to encourage this process. However, one must also consider whether children will continue to use the language outside the home (or classroom). Spolsky says that "[w]hat we need to discover is how young people become convinced of this attractiveness [of the revitalized language over the mainstream language]; how this separate culture of their own evolves; and how you can sell a particular language to this culture if you want to maintain or revitalize it" (Wright 1996:41). Thus, one issue that must always
be considered in RLS efforts is how to encourage the use of the language outside of the language-learning context.

Another issue, at least in many RLS situations, is the state of the knowledge of the teachers of the language. Spolsky states,

I think one of the interesting points we might discuss is the state of language knowledge of those instrumental in language revitalization. We assume, for example, that the people who revived Hebrew knew a lot of Hebrew. Did they? We should also say something about the kind of Hebrew they knew. Similarly, in terms of Maori, we must talk about the varieties of language people used (Wright 1996).

These are very important points, especially in many of the Native American language revitalization situations, where the languages in question have not been spoken in nearly a generation, and the speakers who are involved have not used their language as a language of daily communication in many years.

Returning to the practical question of how language revitalization is done, not only must a language learning space be created, whether it is the classroom or the home, or, optimally, both working together, but a cultural space must also be created. In most cases of language revival, activists are concerned not only with maintaining the use of the language, but in maintaining the culture which that language represents. Language and culture are, in many ways, inextricably bound, and language often becomes a symbol of culture, meaning that language revitalization and culture revitalization are intimately involved with one another. Many language activists hope that one will lead to and support the other. Fishman believes:

[a] call for RLS must, therefore, also be seen and explained as a call for cultural reconstruction and for greater cultural-self-regulation. If this is not understood then RLS-efforts must, inevitably, fail, as all ethnocultural planning that lacks a central and crucial integrative component must fail. RLS is an indication of dissatisfaction
with ethnocultural (and, often, also with ethnopolitical and ethno-economic) life as it currently is, and of a resolve to undertake planned ethnocultural reconstruction (Fishman 1991a).

What he is pointing out here is that language and culture must be worked at together, if they are both to be revitalized.

Of course, this goal, too, is beset with problems, not the least of which is a potential conflict between the desire to maintain the language and culture of heritage, and the desire simultaneously to participate in the mainstream language and culture which surround a particular community. As stated above, it is not the goal of language activists to "ghettoize" their communities, but rather to create for them a space in which to practice their language and culture, without giving up their participation in the larger society in which they live.

A final difficulty to be mentioned in the context of talking about practical issues in language revival efforts is that of the existence (or, in all too many cases, the non-existence) of a close and coherent language community. Fishman points out that "[t]hose who speak still living but severely endangered languages no longer constitute speech communities. They are scattered in old age homes, in convalescent centers, in the geographically dispersed homes of kin or even of non-kin. They cannot interact with other speakers because other speakers are exceedingly few or exceedingly far between" (Fishman 1991b). This means that, even in cases where language speakers are interested in language revitalization, and dedicated to the causes of language revitalization (as so many elders in Native American communities are), there are extreme difficulties in bringing them together to speak among themselves, or to work with potential students. And these speakers may even have forgotten or lost a great deal of their linguistic ability, or at least be unable to carry on sustained speech.

Section 3: Why do language revitalization?
It is important to acknowledge a question which is often asked when the subject of language revival arises, namely, "why revitalize languages at all?" Fishman provides the most blunt answer to this question, when he states:

[the] maintenance and advancement of disadvantaged languages, these being the ultimate goals of RLS [reversing language shift], do not need to be justified any more than does the position that such languages deserve no special attention and that they should be permitted to sink into oblivion if they cannot make it on their own (Fishman 1991b).

This is a very important point to make. It is not necessary to assume that language death is the normal and correct state of affairs and that reversing the process is somehow going against the norm. It is equally possible to assume that language death is not normal, and that the practice of reversing language shift brings things back into balance. Human intent always interacts with language history. If there are positive values to language maintenance, then the "intervention" involved is not more "unnatural" than the social forces which endangered the language in the first place.

However, there are other reasons motivating language revitalization efforts. Zepeda and Hill mention a number of these reasons in their discussion of the death of Native American languages, saying:

even this vastly reduced reservoir of linguistic diversity constitutes one of the great treasures of humanity, an enormous storehouse of expressive power and profound understandings of the universe. The loss of the hundreds of languages that have already passed into history is an intellectual catastrophe in every way comparable in magnitude to the ecological catastrophe we face today as the earth's tropical forests are swept by fire. Each language still spoken is fundamental to the personal, social, and—a key term in the discourse of indigenous peoples—spiritual identity of its speakers. They know that without these languages they would be less than they
are, and they are engaged in the most urgent struggles to protect their linguistic heritage (Zepeda 1991).

In this quote, they point out a number of the issues that arise for people who are fighting to preserve their languages. One of the most important of these is the sense that a language is uniquely able to express the culture of which it is a part, and that no other language will do the job quite as well. Another point, and one which is relevant to everyone, not just to those whose languages are being lost, is the idea that linguistic diversity, in and of itself, is of value to the world, and should be preserved for its own sake, in the same way that endangered species are protected.

Given all of the practical difficulties in attempting language revival—ensuring language use at home, bringing language speakers together, concerns about "ghettoization"—why do people decide to make the attempt at all? There are a number of reasons, but the one most often cited has to do with the relationship between language and culture. There are several ways in which this relationship manifests itself. Because a language and the culture of the people who speak it have been associated over the long-term, and because they are, as Fishman puts it, "well attuned to each other", they come to stand for each other in the minds of both speakers and non-speakers. Thus, there is almost a metonymic relationship between a culture and its language. Fishman says:

the language stands for that whole culture [which speaks it]. It represents it in the minds of the speakers and the minds of outsiders. It just stands for it and sums it up for them—the whole economy, religion, health care system, philosophy, all of that together is represented by the language. And, therefore, any time when we are at odds with some other culture, we begin to say snide things about the language (Fishman 1991b).

Thus, when a language disappears, a central part of the identity of its culture also disappears.
A language which has long been associated with a particular culture is also "best able to express most easily, most exactly, most richly, with more appropriate over-tones, the concerns, artifacts, values, and interests of that culture" (Fishman 1991b). That is, the language, in its vocabulary, structure, and metaphors (for example) is better able to express the culture with which it has been associated than any other language. That is not to say that one cannot express many of those same thoughts in another language, but that they will not be expressed as easily or as gracefully or as naturally as they would in the language of that culture. This relationship between language and culture is felt very strongly by cultures in general, and by threatened cultures in particular.

The relationship between language and culture appears not only in the metonymic association between the two, and in the ability of a language to best express its culture, but also in the sociolinguistic norms which go along with a language. Hinton points out, "[t]he heritage language is not just a translation from English. Learning the language of heritage also means learning about all kinds of customs and values, and appropriate ways of behaving" (Hinton 1997a). This kind of learning can involve issues such as knowing who can be addressed by whom, how long a period of silence is required between conversational turns, different politeness norms, and so on. One researcher states: "[Lorena Zah-Bahe, Navaho] noted how children who speak Navaho act differently when their grandmother is in the house. These actions reflect Indian family values that are passed on through the family's first language" (Reyhner 1996). Thus, there is a sense in which language is a prime tool in maintaining culture, which means that language shift can involve a profound and devastating cultural shift as well. Fishman puts this best when he says, [t]he most important relationship between language and culture that gets to the heart of what is lost when you lose a language is that most of the culture is in the language and is expressed in the language. Take it away from the culture and you take away its greetings, its curses, its praises, its laws, its literature, its songs, its riddles, its proverbs, its cures, its wisdom, its prayers. The culture could not be
expressed and handed on in any other way. What would be left? When you are
talking about the language, most of what you are talking about is the culture. That
is, you are losing all those things that essentially are the way of life, the way of
thought, the way of valuing, and the human reality that you are talking about.
(Fishman 1996)
This means that losing the language which belongs to and interacts with a culture is
necessarily a devastating blow to the maintenance of the culture.

Language can also be seen to affect thought. This means that when a language is
lost, a particular way of thinking is lost, as well. Wright states:

if you come across a concept in another language, it is difficult to comprehend it at
first and ... our ways of portraying it and rendering it into the target language make
for subtle transformations of the original idea. We mediate it through our
experience. Even in related languages, an elegant line of argument that is easy in
one language can be very difficult to express as persuasively in another. So when a
language goes, the concept in its original form goes (Wright 1996).

What is expressed here is the conviction that language can shape thought to a certain
degree. This means that to lose a language is to lose potentially different ways of looking
at the world.

Aside from the connection between a language and its culture, there are other
reasons cited for working to revitalize language. One of these is the relationship between
language and the environment in which its speakers live. Any given language shows its
relationship to the surrounding environment in the ways which it has developed to speak
about that environment. Muhlhuausler points out:

[t]he examples [of richness of plant names in diverse languages] ... suggest an
important link between having a variety of linguistic resources capable of making a
large number of distinctions, and serving as a repository of natural species and
human languages. The knowledge base of any individual language ... is quite
insufficient to meet the requirements of a civilization which proclaims to be capable
of 'managing' the environment (155).

In order for humans to fully understand the world's environment, we must utilize all tools
at our disposal, and one of these tools is language. Languages which come into day-to-day
contact with a particular environment are likely to make distinctions which reflect the
distinctions which exist among the biological forms within the environment. A study of the
language can help to reveal these—perhaps much more easily and accurately than if
researchers looked at the environment alone. This concern is particularly acute in today's
climate of environmental activism, there being a great deal of attention paid to the world's
dwindling resources.

Muhlhausler also states:

diversity of languages in the view I have presented here emerges as a vast
repository of accumulated human knowledge and experience, or, to use a term
which is becoming fashionable in many branches of knowledge—a memory. By
this I mean that in a way comparable to which sea currents or layers of ice are
'memories' of short and long term climatic changes and books are memories of
literate cultures, human languages are memories of human inventiveness,
adaptation, and survival skills. How to access and read these memories remains an
awesome task, but as Whorf once remarked (1956:215) with respect to the
contribution of American Indian languages to human knowledge: "To exclude the
evidence which their languages offer as to what the human mind can do is like
expecting botanists to study nothing but food plants and hothouse roses and then
tell us what the plant world is like!" (156)

This sense that languages are important to preserve because of what they can teach us about
the environments in which they evolved is very much related to the desire to revitalize
languages so that they can teach us about other ways of thinking about the world. No one
language can express everything equally well, or can look at the world in all possible ways.
Thus, many people believe that it is important to keep languages alive and well so that their cognitive resources are available to a wider community.

In a broader sense, it can be argued that diverse languages should be valued simply because they are, well, diverse. One researcher states, "[f]or biologists and linguists working to stop extinction, diversity is a way to value the world. ... The ultimate argument for preserving them is that they make the Earth a better place to be. In the end, the case for diversity must appeal to their value" (Harmon 1995 (ms):11). This value, as we can see from the reasons for doing language revitalization stated above, is multifaceted. But it can be summed up by saying that the diversity is part of the way that the world works; diversity provides different avenues for change. Harmon puts this best when he says,

speciation and language genesis occupy similar positions of importance with respect to the creation and continuation of diversity. "Speciation is potentially a process of evolutionary rejuvenation, an escape from too rigid a system of genetic homeostasis. ... The importance of speciation is that it invites evolutionary experimentation. It creates new units of evolution, particularly those that are important for potential macroevolution. Speciation is a progressive, not a retrogressive, process" (Mays 1963:555). So language genesis is with respect to cultural diversity. Culture requires continuity if it is to have meaning, and languages are the vehicle of continuation. Languages are the building blocks of cultural diversity, arguably the fundamental "raw material" of human thought and creativity. If their numbers are reduced dramatically, then the raw material for human creative evolution is diminished, eventually making the world's cultures increasingly monolithic, with the range of cultural variety severely circumscribed (Harmon 1995 (ms)).

So language can be seen as a route for change, an avenue for understanding the world in different, and important, ways.
We have seen that there are a number of reasons why people are interested in language revitalization. These reasons vary from person to person, but there are some motivations which are common to many language activists. Michael Krauss sums up the reasons presented above very well, and I quote him at length here.

Why should we care about what is happening? Here are four reasons. First, there is the aesthetic reason. Each language has its own beauty. The world would be a less beautiful and less interesting place if we had fewer languages. In other words, does mankind live by bread alone, is not beauty essential to human existence? We sense this is so in some very deep, non-trivial way.

Second, there is the scientific reason. Theoretical linguists need to study the greatest possible variety of human languages, not just English and as a countercheck, say, Japanese. That could be called a trivial and self-serving argument of linguists, who might want to keep languages around at the public expense just so they can study them. However, language diversity also includes the knowledge of the world that is embedded in every language, which we cannot afford to lose... Languages contain traditional wisdom, for example of medicinal plants—which tree has bark that may prevent cancer, but the name of that tree is about to become extinct. Diversity also includes the fact that each language has a different way of seeing the world in its grammar. The death of any language diminishes our ability to think in different ways.

Third, there is the ethical argument. Who gets to choose which languages survive and which do not? We brutishly seem to be allowing "survival of the fittest" to prevail over human rights in this matter, even though as human beings we are also supposed to be endowed with reason and the ability to control our impulses and plan rationally for the future.

The fourth reason, most important of all, for preserving languages is that just as we are beginning to understand the world, the biosphere we live in, as a web of
life, an ecosystem, on which our physical survival depends, so should we understand that our intellectual and linguistic diversity also forms a system necessary to our survival as human beings. Our lack of concern for indigenous languages implies that we have now reached some new Babel-like pinnacle of wisdom that allows us to make this unilateral and irrevocable decision to let ninety some percent of our languages go. Have we truly reached that stage of wisdom? I do not think so. I think we had better let posterity to decide, by transmitting to future generations what has been given to us in the best shape we can (Krauss 1996).
Section 4: Examples of language revitalization

Although each of the following cases of language revival has its own particular circumstances, there are a number of issues which arise again and again, and it is in these areas that the study of cognitive linguistics will prove to be of use in language revival efforts, as we shall see in the next chapter. The examples presented here are Hebrew, Irish, Maori, Hawaiian, and the situation of the languages of Native California. They are explored in this order for a number of reasons. Hebrew is discussed first because it is often presented as the most successful of all language revival efforts, and held up as an example for other language activists to emulate. While Hebrew has, indeed, become the language of everyday communication in Israel, there are a number of reasons why it is problematic as an example for other language communities to follow. While the case of Irish is, in many ways, similar to that of Hebrew, I explore a number of reasons why the language revitalization efforts there have not been as successful as those in Israel. Maori and Hawaiian are discussed next. They are similar in that they are both languages spoken in areas in which English is dominant as both the language of the general society and government, and speakers of the language are not, as in the cases of Israel and Ireland, members of the governing group. There are also ethnic differences in the cases of Hawai'i and New Zealand, which have made it difficult for members of the ethnic minorities to enter the controlling classes. Maori is presented first, followed by Hawaiian, since the efforts of Hawaiian speakers are at least partly based on, and inspired by, those of Maori speakers. Finally, I discuss the situation in California, and point to what it can learn from these cases, and the ways in which it must forge its own path because of its differing circumstances. My presentation of each case will be very brief. Every situation has been discussed in depth in other works, and I do not wish to attempt to replicate those works here, but simply to give a sense of the work which is going on around the world, and an idea of the places where cognitive linguistics can be brought to bear as an aid.
Section 4.1: Hebrew

Hebrew is often pointed to as the prime example of language revitalization, by people who state that the language was essentially raised from the dead to become the primary language of Israel. The revival of Hebrew, was, for Hebrew language activists, not merely the revival of the Hebrew language, but of a culture and society which were associated with that language (Spolsky 1996:20-1). Although Hebrew has been categorized as having been "dead" before its revival as the language of Israel, it is important to point out that it did have a life as the language of prayer for Jews, as well as being the language of the Bible and other religious writings. There was a tradition of Jewish men learning to read Hebrew prayers, and many women could recite Hebrew prayers, even if they couldn't read them. Scholarly Jews typically discussed the Talmud in Hebrew. Hebrew also had a limited role as a kind of lingua franca among Jews whose first languages were not the same. However, it is definitely true that, in spite of this occasional role, Hebrew was very limited in a number of semantic domains, having not been used as a modern language of daily communication for generations.

Early on in the history of Israel, there were a number of languages being spoken, any of which could have been a candidate for the national language in later years. These include Yiddish, French, and German. By 1922, the time of the League of Nations Mandate for Palestine, there were between 65,000 and 85,000 Jews in the country, and at that time, Hebrew was made one of its official languages. Of course, making a language an "official language" does not ensure its use by the population. That requires a great deal of dedication. Language planners must also, in such a situation, address a number of practical issues. In the case of Hebrew these practical issues can be traced to the necessity of adding a "low" variety of the language to an already extant "high" language. As Spolsky states, "the process of revitalization was at the same time one of vernacularization"
(Spolsky 1996). In other words, Hebrew had for a long time existed as the language of the church, and of scholarship. In order for it to be used as a language of everyday communication, it had to (re)gain its everyday functions. This means that vocabulary had to be created, and ways had to be found to linguistically encode experiences that the language had not been used to talk about in generations.

Such a process is not easy, and it is one that every situation of language revitalization must face. It is also, as we shall see, one of the areas in which cognitive linguistics can be a great help. The process of modernization can be very problematic, as decisions have to be made as to how to modernize. Also, once vocabulary has been added, and ways of talking about modern phenomenon have been found, the language can have a very different "feel" from its traditional incarnation. To quote Spolsky, "Hebrew has succeeded in its goals, although the results have turned out somewhat differently from what was envisaged. Certainly there are complaints voiced by normativists that the language has changed unrecognisably." He then points out in a footnote that "[b]oth the Hebrew Language Academy and the Maori Language Commission express these concerns regularly" (Spolsky 1996:26). These concerns appear frequently in the discussion of the examples of language revitalization in this chapter.

So the question arises of how Hebrew dealt with the issue of modernization. Morgan discusses the ways in which Ben-Yehuda (the Hebrew language activist who is regarded as the father of modern Hebrew) and the Hebrew Language Council handled the introduction of new words into Hebrew. She states,

One of the most important of Ben-Yehuda's methods was his search for words in previous Hebrew writings and in related languages, and (if absolutely necessary) the creation of new words, and then his dissemination of them through his newspaper and dictionary, in order to make his "Total Hebrew" a language capable of discussing everyday affairs. ... Both Ben-Yehuda and the Language Council followed a particular order in the introduction of "new" words to Hebrew: They
searched all available Hebrew literature (preferably the most ancient: Biblical or Talmudic) for an appropriate word; they would then go to other Semitic languages (Aramaic or especially Arabic); if that failed, they would create the word by analogy to existing Hebrew words. ... Under no circumstances did they accept non-Semitic words (Morgan 1994:21-2).

This procedure raises a number of important issues in the work of language modernization. First, there is the question of where to get new words from. In the case of Hebrew, the procedure involved making sure that the words were as close to Hebrew as they could possibly be. Another issue is that of dissemination of the new words. Both of these must be dealt with in every instance of modernization, and each language situation handles them differently (although note some of the similarities that will crop up in many of these cases: a language council of some kind, a dictionary, etc). And in any given situation, there are cases where these efforts fail, and speakers make recourse to borrowings from surrounding dominant languages.

Section 4.2: Irish

The political situation in Ireland appears in many ways to resemble that of Israel. It is an independent country, with a population which identifies itself historically with a particular language. In some ways, it appears to have at least one advantage which Hebrew did not, in that, when language revitalization efforts began, there actually still existed a population of Irish speakers in Ireland. Morgan points out, "Irish has been a continuously spoken language in at least part of Ireland (albeit a steadily dwindling part) since the 6th century and before" (Morgan 1994:5). In fact, throughout the eighteenth century, Irish remained the majority language in most of Ireland. In the early part of Ireland's history, the descendants of English settlers in Ireland became monolingual Irish speakers. However, by 1800, the gentry were almost entirely anglicized, and the population in most
of eastern and central Ireland were entirely monolingual in English. Thus, language death was fairly swift, although there were (and are) still a number of isolated Irish speaking communities in existence.

But why was it that Irish, seemingly in a better starting position than Hebrew, has not fared as well as Hebrew in attempts to recreate a widespread first language community? One possible reason cited by Morgan is that, for the Irish, "[l]anguage was not an important factor or the foremost symbol; Irish legendary history and the outstanding ancient "moral qualities" of the Irish were [an important] focus" (Morgan 1994). Wright states, the Irish did not need to adopt a language that would unify a number of disparate speech communities [as Israelis did]; they possessed a vigorous and impressive Irish literary tradition expressed through the English language; they were used to accepting what Fishman has termed the state of being an 'Xman through Yish' (Fishman, 1991); the Catholic religion did not promote or require the use of the Irish language (Wright 1996).

The former of these factors also holds true in the cases of Maori, Hawaiian, and the languages of California. That is, English serves as a unifying language for members of those communities. They do not need their languages of heritage in order to communicate in the same way that Hebrew was needed for Israelis of differing language backgrounds to talk. However, the religious practices of many of those communities do need the language of heritage in order to be fully understood and participated in, and this can make a difference in language retention.

So, one reason why Irish did not see the same kind of success as Hebrew is that it was not a unifying factor for the Irish population. Another factor has to do with the relative reliance on schools. In Israel, Hebrew was taught in the schools, but it was also used as the language of home, even among people who did not speak Hebrew as a first language. The effort was, of course, tremendous, and at times almost overwhelming, but it could be argued that this use of Hebrew as a home language made a significant difference in the
success of Hebrew revival. In Ireland, however, it was thought that the schools could effect the change from English to Irish. O Laoire says,

the new State placed a special emphasis on the Irish language in its educational policies. In fact, the entire burden of the revival devolved on the schools. It was firmly believed that the language could be revived and revitalized by an effective system of teaching the language. Inherent in the policy of promoting the language in the school was an implicit understanding that as the schools were perceived as the main agents in effecting a language shift to English, the process could be reversed in favour of Irish (O Laoire 1996).

This attitude can also be found in a number of Native American communities, and is one which could be recognized as having a potentially dangerous outcome.

In fact, Irish is much more like the Native American language situation than Hebrew. Irish is in competition with English, and is therefore not a lingua franca for people who could not otherwise communicate. Also, in both cases, schools and society at large inculcated the same sense of shame in heritage language speakers. Further, in both situations, members of the heritage language speaking communities left those communities to look for opportunities elsewhere, which depletes the language speaking pool, and which, at least in the case of Irish, meant that the language was associated with poverty. Finally, both Irish and Native American language activists are aiming at bilingualism, which was not at all the aim in Israel. Of course, in both the Native American and Irish cases, bilingualism seems to be the only socioeconomically practicable goal. English seems now to be necessary in both cases for the communities' survival. In some ways, one must ask whether these factors necessarily lead to problems in the attempt to revitalize language. It is not evident that they must, but it is clear that they must be handled carefully if language revitalization is to take place in spite of them.
Section 4.3: Maori

Another example of language revitalization is that of Maori, the native language spoken in New Zealand. Like Irish, Hawaiian, and the Native American languages, and unlike Hebrew, the revitalization of Maori has involved the defense of a language which is under pressure from another language. And in all of these cases, the other language, English, belongs to a group which is politically and economically dominant. In New Zealand, like in Ireland, there was a progressive shift among the Maori speaking population from Maori to English. This shift was formalized with the passing of the 1867 Native Schools Act. This act made English the language of literacy in the schools. This meant, in effect, that Maori was virtually outlawed in schools, and that many Maori school children were punished for speaking their home language. This trend was reinforced as Maori parents, believing that a good knowledge of English was essential to their children's future, consciously chose not to use Maori as the language of the home.

The late 1970's and the 1980's saw the beginning of a movement to restore the Maori language. King states,

[a]fter a successful 1986 claim to the Waitangi Tribunal concerning the Maori language, some radio frequencies were set aside for Maori use with government funding made available for the development and delivery of iwi (tribal) stations. The first such station was set up in 1986 and by 1995 there were 22 throughout the country broadcasting in a mixture of Maori and English (King Forthcoming).

This trend was reinforced with the passage of the Maori Language Act, passed in 1987, which made Maori an official language of New Zealand, and established rules for its limited use in court. This act also served to set up the Maori Language Commission (Te Taura Whiri i Te Reo Maori), which has a number of functions, including advising on Maori language issues, issuing certificates to competent interpreters, coining new vocabulary, and promoting excellence in the language.
However, language activists realized that the Maori Language Act could not turn the tide of language loss. King points out that the "knowledge that most competent speakers were over 40 years old and that language proficiency is most easily acquired by young children, generated the idea of instituting nests where the language could be transmitted from the older generation to children and grandchildren" (King Forthcoming). These schools, called (in Maori) Kohanga Reo ("language nests"), have as their aim to provide an immersion environment, where the children involved will only hear Maori, and will therefore grow up speaking Maori. From the time that these schools began in the early 1980's, they had grown by 1996 to include 800 Kohanga Reo operating throughout New Zealand, and the number of students has risen from 50 to over 14,000 (it is interesting to note that during this time, there has not been a corresponding decrease in other early-childhood schooling options, indicating that the Kohanga Reo programs are reaching a population which was hitherto not involved in such schooling).

There are also two options for continuing education in Maori. The first of these are the Kura Kaupapa Maori (school + theme/philosophy + Maori, or Maori philosophy schools). These initially opened as private schools, but due to the high demand for their services, funding was gradually secured, and by 1995 there were 45 of these schools receiving state funding. There are also bilingual classes and units in mainstream elementary schools (by 1987, there were 38 schools with such classes; this number rose to 406 by 1995).

Of course, there are a number of difficulties to be faced in such an endeavor. First, the speakers, and therefore teachers, of Maori were often of advancing years, and therefore had limited energy for dealing with classes of young children. This is a problem which is also seen in Hawaii and California. In the case of New Zealand, younger adults, often second language speakers, have stepped in to fill the gap, and to provide support for the native language speakers in the classroom.
Another issue is, of course, whether the programs are succeeding in their goal of producing fluent Maori speakers. King says,

"It is generally agreed by most participants that Te Kohanga Reo is producing a large number of children who can speak Maori. In my experience most of the graduates from Kohanga Reo are reasonably bilingual, with proficiency depending on the length of time the child has been in the Kohanga Reo and the strength of the language environment the child is exposed to, both in the home and the Kohanga. Many Kohanga Reo have certainly succeeded in providing a language environment which enables children to become speakers of Maori. What is uncertain is the level of proficiency being attained by these children and how effective are other educational settings at expanding and enhancing that language base. The tacit aim has been to produce a new generation of native speakers of Maori, who would, in turn, pass the language on to their children. Whether that aim is being achieved, or is able to be achieved, is yet to be determined (King Forthcoming)."

This issue, in which children are exposed to a language, and gain a fairly high level of proficiency at it, but where it is difficult to tell what will happen to them as speakers once they leave the school, is a common one in language revitalization efforts. In most language revival situations, the commencement of the programs is too recent to evaluate what the long-term effect will be. In places like New Zealand and Hawaii, the first students to complete these school programs are just reaching college age, and it is therefore difficult to tell whether they will continue to use their language of heritage in their everyday lives, and whether, the long term goal, they will use the language with their children. These concerns could be seen as especially strong in the Maori case, given that both teachers and students are often very well educated in English, and that, as Spolsky observes, "most use of the Maori language is restricted to the classroom, [and even] there, pupils regularly reply in English, and teachers often use English for more complex explanations" (Spolsky 1996).
Children typically use English among themselves, and it is only with their grandparents that they are likely to use Maori generally.

Another issue which Maori, like other languages involved in revival, has had to face is that of modernization. In the case of Maori, the task is to add modern high, or formal, functions to a language whose domains had become restricted through a lack of use. Anything which is added must be standardized, that is, made to be in general usage among speakers. This is the opposite of the issue with Hebrew, where there was a high vocabulary, and an everyday vernacular had to be established, but the issue of the standardization of new additions is the same. In New Zealand, the language commission mentioned earlier has been used to promote standardization, but this issue arises in other language revival situations, such as that of Hawaiian.

Section 4.4: Hawaiian

The story of Hawaiian language loss is very much like that of Maori. It was during the first two decades of the 1900's that Hawaiian speakers began to shift towards the use of Hawaiian Creole English (commonly referred to as Pidgin). This shift came about due to English Only legislation which closed down the Hawaiian medium public schools in Hawaii. As in New Zealand, parents came increasingly to encourage their children to use English, or Pidgin, as a means of communication, since English was the language of the economically and socially more powerful group in Hawaii.

This has changed in recent years, and Hawaiian language activists began working towards the goal of creating a fluent Hawaiian speaking population again. These activists want the children who are currently learning Hawaiian to become doctors, or lawyers, or storekeepers—to keep using Hawaiian among a Hawaiian speaking population as they grow up. As in New Zealand, the programs in Hawaii began by focusing on teaching the language to young children in an immersion classroom situation. The preschools which
were created, called Punana Leo, as of 1996 served approximately 175 children in nine preschools in the state. Kamana and Wilson describe these schools as follows:

"Instruction in these full-day eleven month schools is totally through Hawaiian. Parents must 1) pay tuition (based on income), 2) provide eight hours in-kind service per month, 3) attend weekly language lessons, and 4) attend monthly governance meetings" (Kamana 1996). Notice the practice of requiring parents to attend weekly language classes. This attempts to address the problem of children not using the language outside of the schools, a problem which exists in both the Irish and Maori cases. By having parents also learn the language, it is possible for them to encourage the use of Hawaiian in the home.

These preschools gave rise to further school programs in higher grades. These immersion public schools are called Papahana Kāiapuni Hawai‘i. They serve the Punana Leo graduates, and receive financial and other support from 'Aha Punana Leo (the organization which runs the Punana Leo schools). This program grew grade by grade, following the initial class of students through the school system. There are now curricula for all of the grade levels through high school. The creation of these curricula has been in large part helped by the Hale Kuamo'o Hawaiian language center at the University of Hawai‘i. This center produces curriculum materials for the Hawaiian medium schools, including textbooks for such subjects as math and science. The University of Hawai‘i has also served to produce many of the second-language speakers who are currently the teachers of Hawaiian in the immersion schools.

In the Hawaiian programs, one of the issues which looms the largest is that of the lexicon, or vocabulary, of the language. As curricula are created for the schools, new vocabulary must be created to talk about topics which were either not addressed in traditional Hawaiian, or which were treated very differently from the ways in which they are treated by mainstream school programs (an example of this is biological taxonomy, which is divided up differently in the Hawaiian world-view from the traditional Western Linnaean taxonomy). The current solution to this problem is the Lexicon Committee,
which "gets together every month in Hilo to make up new words or accept new words sent in by teachers from all over the islands." Hinton continues by pointing out that it "is important for all of the schools to use the same new words, rather than making up their own, because the new words will be in books and curriculum materials developed centrally in Hilo and sent out to all the schools" (Hinton 1997b). Thus, this Lexicon Committee serves the important function of standardizing new additions to the Hawaiian language.

Of course, even a committee such as this cannot solve all problems easily. One such issue is that of scientific terminology, and whether the committee should borrow terms from English, merely molding them into acceptable Hawaiian phonological forms, or whether they should create new words which show the same kinds of morphological clarity that they often do in English. An example of this is the term "carbon dioxide", where the word "dioxide" comes from "di" (two) and "oxide" (oxygen), meaning that the compound involves two oxygen molecules. These kinds of issues, as to how to create new words, are difficult ones to address, and bring up questions about authenticity, as we shall see in the next chapter. At this point, the dictionary of new words, which all Hawaiian language classrooms display prominently, is bigger than the dictionary of traditional vocabulary, something which Hawaiian elders often comment on and lament.

Section 4.5: The languages of California

In the same way that Hebrew has an advantage over Irish, Maori, and Hawaiian in that it has its own country to which it belongs, all of these revitalization situations have an advantage over California, namely that of having only one language on which to concentrate. In California, there are some 50 languages still spoken by at least a few speakers. And this is the remnant of a pool of languages that originally numbered somewhere closer to 120, making California one of the most linguistically diverse regions in the world. Thus, the meager resources which exist for language revival must be spread
among a large number of communities, unlike in the cases of the languages discussed above, where resources can be focused on one language.

Another advantage that all of these languages have is the existence of relatively abundant academic resources. These languages were all studied by academics, and in most cases, not simply by academics recording them, but by second language teachers who were prepared to teach those languages at the university level to students interested in learning them. In the case of Native California languages, there are some field notes—to a greater or lesser degree depending on language—but even in cases where documentation is detailed, these notes are not aimed at teaching the languages, but rather at a theoretical understanding of the languages (see Chapter 1 for a discussion of the role of linguistics in gathering such materials). In places like Hawai'i, however, even when the use of the language was banned as the primary language of education, classes for learning Hawaiian as a second language were still available to college students.

This has an impact in another area where California is at a disadvantage, namely, in the number of speakers of each language. In the cases of Irish, Maori, and Hawaiian, even at the lowest ebb of speakers, there were still hundreds of speakers of each language left. And because of the University classes offered, there was also a population of fairly competant second language learners available from which to draw teachers. It was also the case that many of the speakers left were of relatively young ages. None of this is true in the case of California. For each of the languages still spoken, the population of native speakers is small, and dwindling rapidly. It is typical for a language to have a handful of speakers, and to have 20 or more speakers is to have a large population. It is also the case that all of these speakers are older, usually in their sixties, seventies, and eighties. This has a number of effects on potential language revitalization programs. First, it is not possible to encourage lapsed speakers to raise their children in their language, since all of the speakers are past the age of raising their own children. Second, it is difficult for most of the speakers to work in language classrooms with children. The small size of these
speaking communities also means that it is difficult to create a monolingual immersion situation—the best way of teaching a second language (and one which has worked very well in all of the four cases discussed above). This difficulty arises because of the lack of numbers, the often far-flung locations of these speakers, and because of the fact that many of them have not been able to use their languages as languages of daily communication for most of their lifetimes, meaning that there must be a great effort to begin to use them in this way again.

For all of these reasons, California language activists have had to be, and have been, creative in their efforts. One of the early language revitalization programs established in the state is the Master-Apprentice Language Learning Program. This program is funded by the Native California Network. It involves pairing a tribal elder, with fluent or near-fluent knowledge of his or her language, with an apprentice from the tribe, typically someone who has exhibited an interest in teaching the language of heritage. The goal of this program is to create a group of fluent speakers, belonging to a younger generation, who will then be able to teach the language in the classroom, and have the option to choose to raise their children speaking their language of heritage. This is done by training the master-apprentice team to create an immersion situation for themselves, so that the apprentice will be able to learn to speak the language in day-to-day situations. This has had good results in a number of cases, including two Hupa teams.

This program works well for a number of reasons. First, precisely because it does help in creating some kind of immersion situation where one did not exist before. Second, it takes traditional teaching methods into account. Leanne Hinton, one of the designers and trainers in the program, says:

The design of a good language-revitalization program must take cultural considerations into account. The fluent speakers are on the whole the least culturally assimilated, least comfortable with assuming an authoritarian, attention-drawing instructional role, a role developed for hierarchical and competitive
societies, as opposed to the egalitarian, cooperative traditions of the speakers' heritage. Traditional teaching is through shared activities, not through a teacher in a classroom. Thus the Master-Apprentice Program is a training program designed to teach a common-sense, culturally appropriate, oral approach to language teaching and language learning to teams consisting of a native speaker and an apprentice. (Hinton 1997a)

Thus, the Master-Apprentice Program addresses a number of the considerations unique to California. It enables scarce resources to be spread to a number of teams representing a number of languages (note that these teams could then choose to explain the method to other, unfunded teams, who could also use it). It also allows speakers to pass the language on to another generation who can then address concerns of taking the language to the classroom and thereby to larger groups of students.

As mentioned above, while there are still some 30-50 languages with speakers in California, there were close to 120 at the time of White contact. So language revitalizationists in the state must also address the concerns and interests of those whose languages have no speakers at all, but who are still interested in pursuing some kind of revival. One such program, mentioned elsewhere in this work, which was designed to address these concerns is the Breath of Life, Silent No More Language Restoration Workshop. This workshop has as its aim to introduce Native Californians to the immense holdings related to Native languages which exist at the University of California, Berkeley. These holdings, spread throughout the campus in various museums and libraries, have traditionally been aimed towards academics. While physical access has been there for Natives who knew about the archives and wished to look at them, the writing was often obscure, and frankly, the fact of their existence was not widely known in non-academic communities.

So the aim of the workshop is twofold: to introduce Native scholars and language activists to the archives, and to train them in the interpretation of the notes. During the
course of a week, archivists across the campus opened up their holdings to the members of the workshop, taking them on tours and introducing them to the works pertinent to each of their languages. Interspersed with these tours are lectures by members of the linguistic community on campus regarding how to read phonetic transcription, the vagaries of the note-taking techniques of various fieldworkers, how to obtain useful linguistic data from field notes, and so on. This workshop has been very successful in its goals, and participants have been able, in many cases, to cull useful information from the archives.

Section 5: Conclusion

The goal of this chapter was to present the reader with an outline of language revitalization in theory—its purposes and methods—and to give some examples of language revitalization in practice. In looking at all of this information, we have seen that there are a number of concerns which arise repeatedly: how to ensure "authenticity", how to modernize, and how to distribute language information, to name a few. In the examples of language revitalization in practice, we saw a number of solutions to these issues. The next chapter will argue that cognitive linguistics, in the form of understanding the metaphor and metonymy systems of a given language, can also prove to be a useful tool in finding solutions to these concerns.
Chapter 6: Metaphor and metonymy in language revitalization

Section 1: Introduction

The last chapter presented number of examples of language revitalization, and looked at some of the issues which arise in the attempt to do language work of that sort. In some of the cases, community language activitists have come up with a number of creative solutions to problems such as standardization of new vocabulary. There are other issues which arise in language revival situations, issues which are much deeper than simply how to disseminate information about new vocabulary. These issues, at their heart, have to do with "authenticity". The word authenticity is placed in quotes for a number of reasons. First, this word is politically charged, and hard to define. Second, I want to make it clear that I do not consider myself to be a judge of what is "authentic" in the languages with which I work. That is for community members to decide (and, of course, that too can raise issues of who in a community gets to decide what is authentic language). There are at least two places in language revitalization efforts where issues having to do with authenticity arise: in the classroom, where language teachers must consider the issue when creating a new generation of speakers, and in language modernization, in which language activists have to consider the issue in making the language useful in everyday communication again. Cognitive science can play a key role in both of these endeavors.

But what is authenticity? Concerns about authenticity can take a number of forms. The concern which is most often voiced is that of whether the language, in its revitalized form, continues to hold within it the same spirit which made it unique. Another concern has to do with how authentic speech within a classroom context is, and how to make sure that a teacher conveys "real" speech (that is, natural speech, used in a wide range of contexts and registers) within such a context. And finally, there are concerns about what the second language learning process is doing to the language. Given that second language
learners, especially adults, often change the language they are learning, or only learn it incompletely. What happens when all of the new speakers of a language are second language learners? How does this affect the language? In each of these cases, a cognitive linguistic study of a language provides a potential tool in formulating solutions to these issues.

First, let us examine the issue of defining authenticity, and who decides what version of a language is authentic and what isn't. Following Hornberger and King, the noun "authenticity" is used here, rather than the nominalized verb "authentication" (Hornberger Forthcoming). The reason for this is that the word "authentication" appears to indicate that a language needs to be made authentic in some way, whereas "authenticity" acknowledges that a version of the language is, essentially, authentic (or not). In the following quote, Hornberger and King neatly summarize some of the issues surrounding the definition of authenticity.

Examination of the dictionary definition of authenticity provides insight into the term's potency as an issue in language planning, but also as a rhetorical device. That which is authentic is "not false or copied", but rather "genuine [or] real"...

Designating a particular language variety as authentic, then, implies that it is uniquely legitimate. For language planners, this means that a certain variety should be privileged in instructional planning and policy decisions. For some language users, the claim of authenticity suggests that a particular variety of the language is not artificially constructed, but interwoven with their own traditions and unique heritage. Clearly assertions of authenticity hold important implications, and, as we shall demonstrate below, are often highly charged—both emotionally and politically. The claim of authenticity is also, however, one for which there exist no clear linguistic criteria (Hornberger Forthcoming).

In the rest of their article, Hornberger and King look at the example of language activism in Peru, and the conflict which exists there among language activists. There are three groups
involved, Peruvian linguists/bilingual education specialists, Summer Institute of Linguistics linguists, and members of the Quechua Academy. All of these people claim to have the right to judge authenticity for various reasons, and each group feels that the other's claims are spurious. This is an issue which I would like to point out, while saying, as I mentioned above, that I make no claims as a judge of authenticity in Hupa. However, once a particular variety (or varieties) of a language has been deemed authentic, cognitive linguistics can aid greatly in the study and teaching of a language. Cognitive linguistics can also aid in the creation of new, "authentic" forms, based on older patterns, enhancing the modernization process.

A major issue, once an authentic version (or versions) of a language has been decided upon, is how to transmit that language to a new batch of speakers, who should also, by the time they have learned the language, speak it authentically. Kramsch points out some of the underlying difficulties in this endeavor, when she states,

[n]ative speakers of a language speak not only with their own individual voices, but through them speak also the established knowledge of their native community and society, the stock of metaphors this community lives by, and the categories they use to represent their experience... This makes native speakers' ways of speaking predictable enough to be understood by other native speakers, but it is also what makes it so difficult for non-native speakers to communicate with native speakers, because they do not share the native-speaking community's memory and knowledge. And all the more so if they are fully socialized adults who carry with them twenty or thirty years of their own speech community's ways of talking. Even if they have mastered the forms of the new language, they might still have difficulty in meeting the social expectations of the new speech community (Kramsch 1993:43).

Here is where the study of the cognitive metaphors and metonymies within a language can be of the most use.
Section 2: Metaphor in the classroom

Broadly speaking, there are two potential foci for teaching within a second language classroom. The first can be labelled "practice", and essentially entails an aim at presenting students with as many opportunities as possible for structured use of their language skills, and for receiving comprehensible input from their teachers. This means that lessons are aimed at having the instructor speak to the students in the second language, using vocabulary and syntactic and morphological structures which are either within the students' grasp, or just outside their experience. Then students are encouraged to respond in the second language, using these forms, in order to practice them. This can be referred to as "immersion instruction".

Another focus for teaching is the explicit presentation of the rules of the second language, or giving students data from which they can deduce the rules of the second language. This means that the instructor could structure lessons around teaching a particular syntactic or morphological rule, or a particular set of vocabulary items (or often both mixed in one lesson), presenting the information to students and then having them practice the use of this new data in structured exercises. A variant of this is to present data to students in such a way as to encourage them to deduce the rules structuring the data themselves, and then to practice the use of these rules. This is often referred to as formal instruction.

There are a number of studies which suggest that mixing both immersion and formal instruction provides the best form of second language teaching, and leads to the most accurate acquisition of the second language on the part of learners. In the past, questions have been raised about the efficacy of explicit teaching of linguistic rules to students, but these newer studies have indicated that this kind of teaching can be effective, especially when combined with opportunities for language practice (Ellis 1994). There are
a number of ways in which explicit knowledge can be of use to the second language learners. Ellis points these out, saying,

'learnt knowledge' can be used to monitor and thereby improve the accuracy of communicative output ... learners who have explicit knowledge of target-language features may be more likely to notice these features in natural input. Also, the process of cognitively comparing what is present in the input with what is the current interlanguage rule is facilitated if learners have explicit knowledge. (Ellis 1994:644)

Teaching students about the underlying metaphors, metonymies, and schemata within the language which they are learning is one more way to provide explicit knowledge about the second language, and to clarify the rules that they have already learned. Thus, cognitive metaphor can be an important tool in formal language instruction. (The use of metaphor in structuring comprehensible input on the part of second language teachers can also be useful, not least in reinforcing the explanations given in more formal parts of a language course.)

Section 2.1: Pattern illumination

In teaching the forms of a language to students, there are a number of roles that the explicit teaching of cognitive metaphor can play. In many cases, cognitive metaphor can be used to show the pattern behind what might otherwise seem to be a random collection of phrases and words. By showing the broader, more general metaphorical connection between such terms, a teacher provides the kind of explicit instruction described above. An example of this can be seen using the terminology derived using the ILLNESS IS A FIGHT metaphor in Hupa.
6.1 hayditahuLwe' ['fight (definite past; reflexive)']
"illness, what afflicted him"

6.2 na'nelayh wita' haych'idun'cha' ne'en ['win (reversal of motion)
my+father illness past'] "My
father got better."

These examples (and a number of others which we will see below) are manifestations of
the following mappings:

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>enemy/combatant</td>
<td>illness</td>
</tr>
<tr>
<td>winning</td>
<td>surviving illness</td>
</tr>
<tr>
<td>losing</td>
<td>dying from illness</td>
</tr>
<tr>
<td>tying (coming to a draw)</td>
<td>living with chronic illness</td>
</tr>
</tbody>
</table>

This metaphor involves very different lexicalization patterns than the ILLNESS IS A BATTLE
metaphor in English. In Hupa, disease names are derived from this metaphor as well,
something which we do not typically see in English.

6.3 yutiya' sile' ['gnaw (definite; general subject)
it+seemed+like'] "arthritis, joint pain"

6.4 diwhoh hiwhungya' [something eat (present)'] "cancer"

6.5 xos xoLwe ['phlegm fight (indefinite)'] "he has a cold"

6.6 k'iLwe:-whiwiLwe' ['evil+spirit (lit: they fight things') fight
(definite past; progressive; first person
singular object)'] "I have a fever"
In the first two, in particular, the disease is conceptualized as an animal, either eating or gnawing at the sick person. In English, we can say "Cancer was eating away at her", but the name for cancer does not transparently derive from the metaphor, whereas "something-is eating" is the name for 'cancer' in Hupa. Thus, while the domains of the metaphor are similar in English and in Hupa, the actual conventional mappings, and the lexicalization patterns differ between the two languages.

This information could be used in the classroom to aid the learning of illness terms in a number of ways. For smaller children, physical play which enacts the battle between a body and an illness could be used to reinforce the lesson, teaching the disease names themselves, and encouraging the use of the metaphor in the discussion of "winning" over a disease, or "losing" to it. This kind of free and comfortable use of the metaphor in contexts other than the simple naming of a disease is typical of older Hupa discussions of disease, but might be harder to learn to use naturally for students. Teaching such as this aids in an immersion or practice type of lesson.

For older students, this information can be presented along with a discussion of traditional Hupa healing practices, further tying the metaphor in to the culture in which it is grounded (see also section 2.2 of this chapter). This, too, reinforces the learning and use of the metaphor, as well as providing an opportunity to teach students about their heritage, and to show them the ways in which the Hupa language and traditional culture were intimately connected.

From the perspective of formally teaching rules to students, a presentation of this metaphor and the linguistic data which derive from it can clarify for students a pattern behind what might otherwise seem to be unrelated lexical items. This means that students will more clearly understand a part of the structure of (in this case) the Hupa language, and will be able to call on that structure to aid in both understanding the language, and in production of conversation.
The explicit teaching of metaphor can also illuminate the motivation behind a particular word or phrase. In other words, the thought which motivates the use of a term may not be entirely clear to students, but if they are taught the metaphor or image-schema which underlies such a usage, the terminology will be easier to learn and more natural to use. There are several types of such explicit teaching. One is to illuminate a lexicalization pattern within a language that might otherwise be unclear to students, or difficult to remember. For example, the use of body-part names as spatial prepositions in Hupa can be shown to students as a pattern in the language, as seen in the following data.

6.7 *whi-ning*  ['my-face'] "my face"
6.8 *-dinang*  ['physical protrusion or metaphorical extendedness+face'] "facing"

6.9 *me:ne:q'*  ['its+back'] "its back/behind it"
6.10 *whi:ye:y'-xw*  ['my+breast-at'] "in front of me"
6.11 *whiye'-ding*  ['my+breast-place'] "(right) in front of me, facing me"

6.12 *whi-ne:jit*  ['my+middle'] "around my waist, my middle"
6.13 *mine:jit*  ['its+middle'] "in the middle of it, in the center"

6.14 *mixe'*  ['its+foot'] "its foot, footprint, track"
6.15 *miyeh*  ['its+foot'] "under it, at the foot of it"

In each of these cases, there is a metonymy which connects a body part with the spatial area immediately adjacent to it. Once this pattern is made clear, it is possible for students to
more easily understand and learn this prepositional set, although there may be instances of overuse of the set, which is not as complete as in other languages (notice the English has a less-developed set of this sort, including words such as "facing").

An understanding of image-schema transformations too, can clarify the polysemous usage of a lexical item. Below is a series of terms, all of which have several meanings. The meanings for each term are connected by a trajector-endpoint focus shift (Chapter 4); that is, the lexical item in question has meanings which are related both to the trajector in the relevant schema, or to the endpoint.

6.16 tsi-s-di-yan  
["grow up (definite past; metaphorical extendedness)"] "he was old"

6.17 #ni...yi-w, -yan  
"grow to maturity, grow up"

6.18 ch'ich'it  
["die (human subject)"] "he died"

6.19 #..chid  
"die"

6.20 #ti...-chid  
"get weak, exhausted"

6.21 #-ti...-L-chid  
"wear (him) out, exhaust (him)"

6.22 ..L-we, -we'  
"fight, attack (him)"

6.23 # si...-L-we, wen  
"kill (one animal or person)"

6.24 tin  
"trail, road"

6.25 tin-  
"to go away out of sight/get lost"

In each of the above pairs or triplets, an image schema of a process is divided up into essentially three parts, the beginning of the process, the process itself, and its endpoint. This can be seen most clearly in looking at the three manifestations of the verb root -chid.
The process of dying begins with wearing someone out or exhausting them, such that they become weak, leading to the final endpoint of death. Thus, each of these meanings highlights a different part of the image schema. The same is true of fighting and killing. In many cases, a fight or attack often leads to the death of either the aggressor or the victim. Thus, the focus of the term shifts from the process of the image schema (or the trajector) to the endpoint. The final example, tin, is especially interesting, since it also involves a metonymy, whereby a trail or road is seen as a salient thing to go journeying upon, and the trajector of journeying can lead to an endpoint of getting lost.

Both of the above examples are instances of what was called "cultural primaries" in Chapter 2. Both are grounded in everyday human experience: we all know that the space near a particular body part can be closely associated with that body part, and a trajector/endpoint image schema is very common, and grounded in all experiences that involve the transfer of an object or action from one entity to another. However, the Hupa culture in particular highlights those experiences and draws upon them as the grounding for extended usages of particular vocabulary.

Section 2.2: Metaphor and culture

In her discussions of teaching not only a second language, but a second culture to students, Kramsch raises the issue of the third culture which is formed in the process—the culture of the language classroom. She says, "[the] only way to start building a more complete, less partial understanding of both C1 and C2 [culture 1 and culture 2] is to develop a third perspective, that would enable learners to take both an insider's and an outsider's view on C1 and C2. It is precisely that third place that cross-cultural education should seek to establish" (Kramsch 1993:210). This is a much deeper issue when dealing with language revitalization. In such cases, the point of second language education is to create a new population to carry on the traditional language and culture. In the long run,
this new group will be the only group of speakers. Thus, it is less acceptable for them to only create this third culture. The goal must be as close an approximation as possible of the traditional culture and language.

Chapter 2 explored the ways in which cultural experiences can serve as primary grounding for metaphors. That is, either physical experiences which are considered in some way central to a culture, or cultural experiences themselves, can be central to a speaker’s experience and can therefore provide the grounding, or link between two domains, for metaphors within a linguistic system. In clarifying the role of culture as a grounding agent, part of my intent was to provide clues to places in the language and culture to look for explicit rules to present in a classroom/teaching setting. These rules, when regarded from the point of view of culture, can not only be used to clarify the structures of the language in question, but can also be used as a window into the culture itself, and can be shown explicitly to students as examples of the ways in which language and culture are linked.

Thus, metaphor provides an opportunity for the explicit transmission of culture, as well as for teaching students about the connection between culture and language. An example of this type of transmission was presented above in the discussion of the ILLNESS IS A FIGHT metaphor, when it was indicated that the linguistic data can be presented along with information about the traditional Hupa healing practices which are related to, and perhaps motivate, the vocabulary of illness. Another example of this involves the data below, which belong to an image metaphor mapping a human face onto a traditional sweathehouse.

6.26 mit-da-ning-an

['(to) its+mouth carry (perfective; definite; third person singular subject)'] "to its mouth [door of a sweathehouse] he carried"
6.27 min-ning-xun-ding ['its-face-close-place'] "by the sweathouse entrance"

6.28 mida'-nin-yay ['its+mouth-perfective-go'] "he came to the door"

6.29 minin'-xanding ['its+face-close+place'] "roof entry or smokehole of a sweathouse"

An understanding of the grounding of this metaphor relies on an understanding of the image of a sweathouse and the ways in which that image meshes with the image of a human face. The sweathouse was of central importance in traditional Hupa daily life. Thus, the sweathouse serves as a cultural experience used in grounding.

Another image metaphor of this sort is grounded in what was once (for the Hupa) the fairly basic experience of shooting an arrow from a bow:

6.30 yit-dite-tcwit ['shoot (general subject; start off from position of rest)'] "he shoots"

6.31 #...-chwid "reach, do with extended arm"

In this case, the verb root -chwid invokes an image schema which involves a trajector reaching from a person to the object which they are attempting to affect, either with their arm extended, or with a more indirect extension via the shooting of an arrow. This image schema, while originally grounded in an experience which is no longer basic to most people, is still accessible, and can be used as an introduction to a discussion of the culture which grounded it.
Section 2.3: Metaphor-mixing

Another issue which arises in the encouraging of authenticity in second language learners is that of translation from English. It is all too easy for language learners to attempt direct translations, or calques, from English to, for example, Hupa. However, such phrases as "to spend/waste time", "to win an argument" and so on, are not part of the traditional Hupa way of expressing such things, and are reflections of an Anglo-American, rather than a Hupa, worldview. In teaching students about metaphor, it is possible not only to teach them about metaphors which are part of the Hupa way of categorizing experience, but also to show them which metaphors are foreign to a traditional Hupa worldview. This is not to say that students could not then choose to utilize those metaphors in any case, but that they would do so with a knowledge of the origin of such metaphors. So examples such as TIME IS A VALUABLE RESOURCE are not found in Hupa language use (at least so far as I have been able to determine; see Appendix A on field methodology for a further discussion of the difficulties of finding "negative" evidence), and could therefore be pointed out to students as borrowing, of which they should be aware. TIME IS A VALUABLE RESOURCE is grounded in a cultural experience in which workers are paid by the hour, and in which worth is measured by the amount of work completed in a given amount of time. This metaphor is almost the only way that English, for example, has to talk about time, and can be found in such everyday phrases as, "spend time with", "borrowed time", "wasted time", and so on. There are other cultures, Hupa among them, where time is not seen as a kind of limited commodity, and it is possible that, with this comparison in mind, Hupa speakers may choose to emphasize this difference in cultural values, or to adopt the English system alongside more traditional Hupa ways of conceptualizing time.

One must also consider whether Hupa metaphors which seem foreign to second language learners' largely American English world view will be acquired by students.
Thomason and Kaufman, in discussing second language acquisition (SLA), and the effects that the process of SLA has on the second language, state that "[i]n general, because they are harder to learn, universally marked features are less likely than unmarked features to be transferred in language contact ... shifting speakers are likely to fail to acquire marked features of the TL [target language]" (Thomason and Kaufman 1988). This raises the interesting question of the issue of markedness in metaphor, and whether it is possible to discover a set of criteria for determining which metaphors are more marked. This is an issue which is addressed only briefly here, as it requires a great deal more consideration and research, and it is not central to my argument. However, my earlier discussion of the bases of metaphor, in human bodily grounding and in cultural grounding, indicates that metaphors which are grounded in human bodily experience are more unmarked, and those which are grounded in events and ideas which are specific to a particular culture or related cultures, are more marked. If this is true, then it is precisely those metaphors which help in maintaining specific unique cultural features which are less likely to be fully acquired by second language learners. In such a case, an explicit presentation of these metaphors could aid in circumventing this issue.

Lakoff and Johnson and Grady (Grady 1997; Lakoff and Johnson 1980), among others, point out that certain metaphors seem to be fairly universal, and appear in all of the languages which have so far been studied from a metaphor/cognitive linguistic perspective. These metaphors are all grounded in primaries such as those presented by Grady (1997). This is due to the fact that these primaries are grounded in basic bodily experiences which all human beings would encounter again and again from their earliest moments of consciousness. However, the kinds of grounding presented in Chapter 2 are more culture/language specific, simply by virtue of their being grounded in cultural experiences. As basic as those experiences may be to members of the culture in question, they are not universal. This means that they are more marked in some sense, and would therefore, if studies of the acquisition of marked and unmarked grammatical, phonological, and
morphological features are any guide (Thomason and Kaufman 1988), be less likely to be fully acquired. Given that second language acquisition theorists believe that an explicit teaching of the rules of a language can lead to better acquisition on the part of learners, as mentioned above, the teaching of metaphors, and of the differences between the metaphors of learners' first language and the language they are acquiring, should lead to a more accurate acquisition of even these marked metaphors.

A related issue has to do with the acquisition of metaphors which show some degree of similarity to those in the dominant language, but which have differences which represent differing cultural attitudes or experiences. In such cases, language speakers may want to make an effort to retain those distinctions, precisely because of the cultural differences which they represent. Chapter 1 made mention of the desire of speakers of Native California languages to specifically maintain a delineation between their cultures and languages and those of an invading Anglo-American culture. Retaining metaphorical differences can be a way of doing this. Linguistic differences have been shown in a number of sociolinguistic studies to be important ways in which groups of speakers differentiate between in-group members and outsiders.

These kinds of metaphor, which bear some resemblance to dominant language metaphors, but have important differences, can be seen clearly in comparing the metaphor *LIFE IS A JOURNEY* as it appears in Hupa and as it appears in English. There are a number of relevant differences, the first of which can be seen in the differing lexicalization patterns:

6.32 *sa'a na'esiya*  
['*long*+*time walk* (definite past; perfective; repetition of act)'] "he lived a long life"

6.33 *na'esiya*  
['*walk* (definite past; perfective; repetition of act)'] "he lived"
6.34 no'whohqo na'esiya ['good walk (definite past; perfective; repetition of act)'] "he lived a good life"

6.35 minejit na'esiya ['its+middle walk (definite past; perfective; repetition of act)'] "middle-aged, middle of his life"

While the above examples of the metaphor LIFE IS A JOURNEY are lexicalized differently than in the English version of the metaphor, the mappings are more or less the same:

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>moving/journeying</td>
<td>living life</td>
</tr>
<tr>
<td>road</td>
<td>life</td>
</tr>
<tr>
<td>impediments to motion</td>
<td>life difficulties</td>
</tr>
</tbody>
</table>

However, there is a distinction between the two languages. In English, one of the major mappings is the mapping of the goals of a journey onto life goals. In the Western frame for a journey, there is typically a goal or destination involved in the schema. This is not necessarily so in the Hupa conception. In fact, in all of the traditional stories involving journeying, there is no clear destination, and the hero of the story always returns to his or her starting place by the end of the journey. It is also interesting to note that in the cases where the protagonist is actually looking for something, he or she does not find that thing until returning to a starting point. Thus, not only is there a lexicalization difference evident in this metaphor when comparing English and Hupa, but a difference in the patterns of reasoning as well. Because of the similarities in so many of the mappings, it would be very easy for a learner of Hupa to assume that she could borrow from her knowledge of English and to carry that borrowing over into mappings which do not actually exist in Hupa. If this were to be considered undesirable by Hupa language planners, an explicit
teaching of these two metaphors and of the differences between the two can be of great use in avoiding such a borrowing.

Section 3: Modernization

Finally, a study of both the metaphoric and metonymic systems of a language can be of use in dealing with issues having to do with lexical borrowings and modernization. Because of the circumstances leading to situations of language death and the need for revitalization, languages such as Hupa have not been spoken as everyday languages for a number of years. This means that Hupa does not have vocabulary to refer to a number of modern phenomena. The goal of revitalization is to create a place for a language to be used by its community again, and then for the community members to use it. This means that speakers must be able to utilize the language in all situations. Given that languages such as Hupa have not been spoken for close to a generation, they did not naturally gain all of the vocabulary necessary to freely discuss many aspects of modern life, in the way that English, for example, did. This means that this vocabulary must be added. In expanding the lexicon of a language like Hupa all at once to cover many modern domains, there is a fear that speakers will resort to borrowing from English, either explicitly, by taking lexical items and fitting them to the phonological patterns of Hupa, or by using English word-formation patterns to the exclusion of more traditional Hupa ones. It is in this domain that the study of the metonymic and metaphorical patterns of a language is helpful.

Section 3.1: Metaphor and modernization

In section 2.1 of this chapter, the Hupa metaphor ILLNESS IS A FIGHT was presented. Metaphors such as this can be used in the creation of new vocabulary. If there is a new disease which is not referred to in the lexicon of traditional Hupa, it is possible to
create a name for that disease based on the pattern of older Hupa disease names. The name could refer to the area of the body in which the fight is taking place, for example. Another example of a potential use of metaphor in the creation of vocabulary can be seen in looking at a Hupa word for marriage, *nayaseL*, which literally means "walking together". A new word for divorce can be based on this old one, meaning something like "not walking together", or "moving apart", for example.

Section 3.2: Metonymy and modernization

In chapter four, the types of metonymy which exist in Hupa were explored, and those types categorized. In creating new nouns to name modern objects and processes, it is possible to use a knowledge of these categories of metonymy. This has been done by Hupa speakers in the creation of the following words:

6.36 ‘miq’it-k’iwiLiw  “butter” (on top-it is smeared)
6.37 mitah-’a:iL’e:n  “baking powder” (amongst it-someone scatters it)
6.38 miL xosah’ no:l na: ng’  “candy” (with mouth it makes it taste good)
6.39 me’ si-liq’  “pie” (into it is flopped)
6.40 ne:de’tl-neha:n  “beans” (pine nuts-it resembles)
6.41 k’iqade’-neha:n  “carrot” (a willow root-it resembles”)
6.42 te’qi:wil q’ots’  "spaghetti" (in the water it is dunked)
6.43 qi-ye:jo:-newha:n  “spaghetti” (eel strings-it resembles)
6.44 yiman’dil-mikine  “cards” (white-people their sticks)

(cf. Hinton and Ahlers 1998)

In each of these cases, one of the traditional naming patterns described in Chapter 4 is used to create a new vocabulary item to refer to an object which has been introduced relatively
recently. In many of these cases, it is only a traditional naming pattern which is used. For example, numbers 6.38-6.41 all use the associated action frame metonymy which appears so frequently in older Hupa vocabulary. This metonymy uses an action which is typically associated with the object to describe and name that object. Example 6.44 also uses this pattern. There are others, though, which not only use a traditional naming practice, but appeal to traditional objects, as well. The use of the morpheme \textit{-newha:n}, meaning "it resembles", is a traditional way of naming things. Not only do a number of the examples above use this morpheme, they also compare the newer object to a more traditional one, thus invoking not only traditional naming patterns, but traditional object frames, as well.

These examples show that a careful analysis of the typical metonymic patterns of a language provides ways to aid in the revitalization process. Following such patterns in the creation of new words, as well as following metaphorical patterns, helps in considerations of authenticity in the modernization of a language so that it can be once again used in everyday contexts. Since modernization is an important concomitant to the revitalization process, this provides for another route through which cognitive linguistics can be of assistance in language revitalization.

\textbf{Section 4: Conclusion}

The above examples show some of the ways in which a study of metaphor and metonymy can be used in the revitalization process to achieve a number of goals. First, metaphor can be used to aid students in learning a language such as Hupa more accurately. Second, teaching metaphor can also help in transmitting the culture which lies behind the language, and in teaching students about the ways in which language and culture interact. Third, comparing and contrasting the metaphors of Hupa and English can also serve as a beginning for the study of differences and similarities between the two cultures. Finally, metaphor and metonymy can prove to be of great use in providing native-system-based
templates for the less invasive modernization of languages such as Hupa, which have not been used for day-to-day communication for at least a generation, and which are therefore lacking in certain realms of vocabulary.

The process of language death, as described in Chapter 1, and the more hopeful work towards language revitalization, which we saw in Chapter 5, are both often seen as matters for applied linguistics. In presenting ways to use cognitive linguistics to aid in language revitalization endeavors, I propose that the methods of the field of cognitive linguistics be applied to that of applied linguistics. Chapter 2 presented ways in which culture could be considered a grounding force in metaphor. This chapter has come to the logical conclusion of that theoretical statement, which is to propose that this increased understanding of the complex makeup of metaphors be used practically in the process of working on language revival.
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Appendix A: Fieldwork

Section 1: Introduction

In considering the potential which the field of cognitive linguistics holds for aiding language revitalization efforts, I have had to make use of a number of tools. One of these, which I have already discussed in great detail, has been metaphor theory, in particular, the work of George Lakoff and Joe Grady (see Chapters 1 and 2). Considerations of metonymy and its processes have also proved important (see Chapter 4). Finally, linguistic analysis of Hupa data, and the mechanisms of fieldwork, have been invaluable (refer to Chapter 3). In this Appendix, I present the ways in which I have gathered and analysed the linguistic data which have been central to my thinking about metaphor theory and language revitalization, as well as some of the issues which arise when attempting to gather metaphor data via fieldwork.
Section 2: Fieldwork

Generally speaking, my data have come from two places: my own work with the Hupa consultants mentioned above, and my analysis of fieldwork done by other researchers. There have been three other fieldworkers upon whose work I have relied heavily: Pliny Earle Goddard, Woodward, and Victor Golla. The work of these researchers has spanned the twentieth century. Goddard's work was done in the late eighteenth and early nineteenth centuries, Woodward's data was collected in the 1950's, and Golla has been working with Hupa consultants from the 1960's to the present. Each of their works encompasses a different kind of text. Goddard, for the most part, collected traditional myths, tales, and formulae, while Woodward focused on stories that her consultants told about their life experiences. Golla's work has involved a mixture of these two, as well as the creation of a contemporary Hupa grammar and dictionary, both of which I have found invaluable in doing my own work.

My analysis of these texts, the methodology of which I will describe presently, has allowed me to consider issues of diachronic metaphor change within one language. In working with these collections, my methodology involved analyzing many of these texts, morpheme by morpheme, attempting to uncover polysemy patterns within the usage of a given morpheme or its derivatives. This search was, as I mentioned above, greatly facilitated by the analysis of the Hupa language already done by Victor Golla. Polysemy patterns are one of the clearest signs to look for when attempting to find metaphors, since metaphor can motivate the use of one lexical item to refer to both source and target domains, as we saw in many of the examples throughout this work (e.g. examples from the metaphor MORE IS UP, such as the sentence "Stock prices plummeted", where the word "plummeted" can be used polysemously within the domains having to do with verticality and amount). Thus, such an exegesis of textual data can uncover at least hints of what may be larger metaphorical structures.
In doing this, I encountered one of the difficulties in working to create a picture of the metaphorical system of a language through a search of textual data. That is, a textual corpus, no matter how large (and the Goddard corpus, at least, is quite sizeable), cannot by any means be guaranteed to contain all incidences of the conventional linguistic usages of any particular metaphor. In other words, there is no way to be sure which mappings of a given metaphor were in use in the contemporary language. Conversely, it is not possible to guarantee that a given linguistic expression of a metaphor is not a novel expression, although I believe that in the case of the Goddard texts this would perhaps be more rare, since he collected traditional tales, and they were likely fixed, at least to some degree, in their presentation. Thus, while texts can give a researcher some hint as to which metaphors were extant at the time of the telling, it is impossible to determine for sure what the conventional boundaries of the metaphors were. And since these texts were gathered some time ago, it is impossible to work with the tellers to attempt to find those boundaries through fieldwork. It is possible for contemporary fieldwork to add to our knowledge (although I discuss problems with such fieldwork below), and for knowledge of cross-linguistic trends in metaphor to give some hint of what the fully-fledged metaphors were likely to be. However, in spite of these difficulties, I have assumed that the hints which can be found in the texts of the types of metaphors extant in the language are accurate.

If analyzing previously gathered texts was one prong of a two-pronged attack, allowing me to gain some understanding of the state of the Hupa metaphor system at the time at which Hupa was a language of everyday communication, working with consultants and gathering metaphorical data in the field was the second. This kind of fieldwork proved difficult. There are few researchers at this time who have attempted to gather metaphor data in a language which they themselves do not speak, and I had to forge a way in creating a field methodology which was up to the task. I used several methods of elicitation. The first of these was an attempt to elicit longer, connected speech from my consultants, in the forms of stories. I hoped to analyze these texts in the same way that I had the corpus data,
finding metaphors without taking the risks involved in the direct elicitation of metaphor data. I had hoped to keep direct elicitation to a minimum, in order to limit the amount to which my own metaphor system from English affected the data. However, eliciting texts from my consultants was often very difficult, as they had not used Hupa for expressing such lengthy thoughts in a very long time, and therefore such texts did not prove to be a large source of data for me.

My second, and most fruitful, method involved spending several sessions eliciting data in what have proved cross-linguistically to be rich metaphorical target domains (also focusing on domains in which I had found metaphors in my earlier textual analyses). I would then analyze this data as I had the textual data of other researchers, morpheme by morpheme, searching for polysemous usages within the language. When I found such uses, I returned to the field, and spent time gathering data within the source domain of the metaphors which I believed that I had found. I say "believed that I had found" because I found that it was important for me to keep as open a mind as possible in stating the source and target domains, so that I would not assume a pattern which might fit in a language such as English, but would not be accurate for Hupa. In separate sessions (so as not to bias my consultants), I elicited data in the target domain of those metaphors, and then I would look to see whether I had found a more complete metaphorical pattern. Eliciting in this way provided me with most of my data. In many cases, my deep analysis of the language that I had gathered provided me with not only the metaphors which I had been looking for, but with hints as to other metaphors which I could then return to the field to research in the same way. In this way, I found not only metaphors and metonymies which I had been eliciting to find, but others which exist in the Hupa system as well.

My final elicitation method, and the method of last resort, was to present to my consultants metaphorical data found in textual analysis, and to ask what the given phrase or sentence meant, and, if a metaphorical meaning was not produced, to ask explicitly whether they understood the metaphorical sense which had been present in the earlier texts. In
some ways, this produced the most interesting data, since it gave a sense of the domains in which the modern metaphorical system of Hupa has contracted. It is in this sense that I mean the term "unacceptable" in the data presented in the Preface. In other words, my consultants, when faced with a given datum and its gloss, did not find the gloss acceptable and stated that they would not be able to produce the sentence in question (that is, they neither understood it nor would produce it at all with any meaning—in those cases where they could use the sentence to mean something else, I have said so).

I should state that in all of the above methods of elicitation and analysis, I relied heavily on the research of others, and on the information of my consultants, regarding the Hupa culture, particularly the traditional culture of the last generation of fluent speakers of Hupa. This cultural knowledge helped me in discovering metaphorical source and target domains, and in discovering areas for elicitation.

I also, in an attempt to discover places in which the metaphorical systems of English and Hupa are different (information which, as I state in Chapter 6, can prove useful in the second language classroom), spent time looking for the metaphors which appear in English, but of which I found no evidence in either textual analysis or fieldwork. Doing so raised the issue of negative evidence, an issue which was present to a certain degree in the other fieldwork which I did, but which became even more important here. In doing this kind of elicitation, there would come a time when I had exhausted all of the avenues which I (and my patient and helpful advisors) had been able to think of for elicitation. At this point, I would declare that such a metaphor does not exist in the language. This is, of course, a bold statement to make in such a case. However, I was not able to discover a more sure way of uncovering and delineating the limits of the Hupa metaphor system, and of stating the differences between that system and that of English. This was also an issue in textual analysis, but again, after analyzing a large number of stories, I assumed that if no evidence of a metaphorical domain appeared, then it did not exist in the language.
A last issue that arose while doing fieldwork was that of the influence of English on the Hupa metaphor system. It is, of course, impossible to tell to what degree there has been an influence, but one would assume, given the ways in which dominant languages affect other realms of endangered languages, that the metaphor system would be affected, too. This is one reason why I spent so much time analyzing older texts. In doing so, I hoped to gain a sense of the kinds of metaphors which were present in Hupa at a time when it had been in much less contact with English. This is an important goal in doing metaphor research with language revitalization in mind. However, there are places in this work when I have included data which may well come more from an English influence than from the traditional Hupa metaphor system. In those places, I have indicated my doubts about the data.

Of course, this research is ongoing, and I am prepared to revise my assumptions at any time that I find data which indicate that I should do so. Uncovering the metaphor system of a language is complex work, involving a sense not only of the linguistic structures of the language, but of the conceptual structures of the culture as well. Even a language such as English, which has been the focus of by far the most metaphor analysis of any of the world's languages, still presents researchers with mysteries and new discoveries. As I learn more over time about the Hupa and their language, I expect that new avenues of research will open up to me, and that I will be able to pursue them. I also plan to begin to work with related languages such as Navaho, to get a sense of the ways in which the metaphorical systems of such languages are similar and different. This, too, will add to the general theoretical sense of the operations of metaphorical systems and the cognitive systems which underlie them.
Section 3: Transcription conventions

In presenting the data throughout this work, I have used two differing transcription conventions, leaving each researcher's work in his or her own original transcription. My own fieldwork was done using the modern Hupa orthography, as delineated by Victor Golla, and as used by most of the teachers of Hupa in Hoopa Valley. Each of the fieldwork conventions is presented below.

Section 3.1: Pliny Earle Goddard

One of the two main differences in transcription conventions is the differing orthographic symbols. I present Goddard's below. The other has to do with the use of the mark "-". In Goddard's notes, this is used to indicate a syllable break. An important point to mention is that he often repeats a consonant both before and after the dash, rendering syllables as CVC. This is not the case for the other two researchers or for myself.

Goddard’s orthography is as follows (note that I present here only those symbols which are different from those used in English orthography):

L voiceless alveolar lateral fricative
n velar nasal
x voiceless velar fricative
? glottal stop (also represented as ')
tc voiceless palato-alveolar affricate
_u long u
_i long i
_o long o
û between a shcwa and a barred i (Golla's i)
Section 3.2: Woodward

Woodward did not use the dash ("-".) in her transcription. Her orthography is essentially the same as Goddard's (she makes phonetic vowel distinctions which I have regularized).

Section 3.3: Victor Golla

In his transcriptions, Golla uses the dash ("-".) to indicate a morphological break, and his literal translations, if given, also use the dash to indicate which English glosses match the Hupa morphemes. I have followed this convention as well. In a number of cases, I have cited verb stems from Golla's verb list, and have regularized these to his current transcription style (below). Also note that, in his verb theme citations, the final syllable is the verb root itself. The # marker indicates the slot into which the third person subject marker in particular, but also object markers and other inflectional markers such as those for plurality, can be inserted. If two stems are shown, the first is usually used with an imperfective aspect, and the second with a perfective aspect. All other morphemes can be considered to be necessary, but not explicitly glossable, parts of that particular verb root.

Golla's orthography, which is now used by tribal teachers, and which I have also used in my transcriptions is (note that I present here only those symbols which are different from those used in English orthography):

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>voiceless alveolar lateral fricative</td>
</tr>
<tr>
<td>'</td>
<td>glottal stop (also represented as ?)</td>
</tr>
<tr>
<td>:</td>
<td>indicates that the vowel before it is long</td>
</tr>
<tr>
<td>Symbol</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>q</td>
<td>voiceless uvular stop</td>
</tr>
<tr>
<td>x</td>
<td>voiceless velar fricative</td>
</tr>
<tr>
<td>tc</td>
<td>voiceless palato-alveolar affricate</td>
</tr>
</tbody>
</table>

I must also note that Goddard tends to represent word-final consonants as voiceless, while Golla renders the same consonants as voiced.

Section 3.4: Glosses

In the glosses throughout the texts, I included a variety of information about the Hupa form. In doing so, I made use of several symbols. The "+" symbol indicates that the words connected by the plus are all translated in Hupa by a single morpheme. The "-" symbol, when used in my glosses, corresponds to the same symbol in the original Hupa transcription, which means that, in Golla's forms, it indicates a morpheme break, while in Goddard's forms, it indicates a syllable break. Often, in glossing Goddard forms, I did not include a dash in the gloss, if it was not relevant to the breakdown of meaning. In all of the metaphor forms, I represented the morpheme which is relevant to the metaphorical meaning in bold, and also bolded the corresponding meaning in the gloss. When glossing verbs, I included in parentheses after the root meaning all of the additional information which is encoded within the complex Hupa verbal morphology. I did not include precise morpheme breaks.
Appendix B: Metaphor

Section 1: Introduction

In this Appendix, I have included all of the metaphor data which I gathered while doing fieldwork in Hoopa Valley, from the summer of 1995 to the present (January 1999). (Note that I do not include all of the data that I collected which did not prove to be metaphorical in nature.) While I referred to a great deal of this data in the body of this work, there is also quite a bit that, for reasons of clarity and space, I did not include. And, finally, there are some data of which the analysis is not final, and I have used this appendix to gather all of that together so that my readers can consider this data, simply translated and without lengthy analysis.

I have arranged these examples, for clarity's sake, by target domain (of the names which I have given them—these names can of course be challenged, which is precisely why I have placed all of my data together in one place), alphabetically. No other information has been added. Note that, in some cases, I have included examples of a particular morpheme being used in the source domain only, in order to show that the target domain use is metaphorical. Also, I should point out that I have not included all examples of a particular morpheme being used in the same metaphorical way. For example, with the morpheme kūt, discussed in depth in the body of this work, I have included here only a few of the many examples which I have seen of this morpheme being used in its extended temporal sense.

Section 2: Data

ANGER IS SHARPNESS

dime:n-na\'ay ['sharp-he carries a round object (continuative)']
"he is quarrelsome, argumentative"

*dime:n na'way* ['*sharp one person goes around (imperfective; repetition of act)*'] "he's angry"

ARGUING IS AGGRESSIVE ANIMAL BEHAVIOR

*chiLoξats'* ['*bite (human subject)*']

"they're arguing (like dogs growling and nipping)"

*di-...l-xac'* "*bite (it)*"

ARGUING IS GAMBLING

*nanelah* ['*carry+across (several things)(definite past; perfective; reversal of motion)*'] "I won the argument (game, contest)"

*xiniwiLye:win miL xowan na:ne:lai* ['*talk (progressive; transitive) with them carry+across (several things)(definite past; perfective; reversal of motion)*']

"I won (argument)", also "wrestling match", and "in gambling"

*liW, -la* "handle several objects or a rope"

*na:niliwh* ['*carry+across (several things)(momentaneous; perfective; reversal of motion)*']

"win! (a gambling game or an argument)"

AWARE IS AWAKE

*kin-n_uw-x_o-i_u-w-tcwe* ['*awake (thematic subject) make (indefinite; first person singular subject; third person singular object)*'] "I notify him"

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"be awake, aware of things"

BECOMING IS MOVING

na-nan-deL ["(two or more) move+about (perfective)"] "became"

na-nan-deL-te ["(two or more) move+about (perfective; future)"]

"were going to become"

na#-.diL, -detL' "two or more move about" (lit.)

BODY PART TERMINOLOGY

whining' ["my+face"] "my face"

-dinang "facing"

whiq'eh-dinang [='(following) after me-sloping, inclined'] "facing behind me, lined up behind me, agreeing with me"

me:ne:q' "behind it/its back"

whije:y'-xw [="my heart-at"] "in front of me"

whine:jit "around my waist, my middle"

mine:jit "in the middle of it, in the center"

n_e-djit "middle" (in "world middle he came")

mine:jixomiL [=from mine:jit-xw-miL 'the middle of it-at-from after']

"afterwards, then (after a while)"

mixe' "its foot, footprint, track"

miyeh "under it, at the foot of it"

whije'-ding [="my breast-place"] "(right) in front of me, facing me"

which'ing'ah "in front of me (as a protection)"

mitc-tciñ-a "before (the dance)" (in "before (the dance) one night will pass")
CAUSES ARE FORCES

WeWImi^ce?ding wll^cwen
[='my (woman's) daughter-made']
"my adopted daughter"
ya-na-tûk-ka-tcis-tcwen
"he made come between"
tcis-tcwin-te
[='he will make'] "he was going to cause"
e-i_uw-tcwe
"I make (a noise)"
kin-n_uw-x_o-i_uw-tcwe
[=awake-I make him'] "I notify him"
#(s-pf)-...-L-tcwe, -tcwen
"make (it), construct (it), (also..."give birth to
(him)"

CRAVING IS PHYSICAL PULLING

whitile
[='something pulls me'] "I relish it, am fond of it, like to do it"
Lo:q-xo-tile'
[=salmon-him-pulls, attracts'] "he craves salmon"
kiwiyal-xo-tile'
[=food-him-pulls'] "he craves food"
king-xo-tile'
[=sticks-him-pull'] "he's a gambler"

DESIRABLE OBJECTS ARE FOOD/DESIRE IS HUNGER

me-d_u-win-tcwen tciL-tcin-nit-t_uw
"He wanted to have intercourse with some
women."

()e#di-.tcwen (neut)
"crave, hunger for (it)(usually for food)"

EMOTIONS ARE PHYSICAL FEELINGS

me.xoniSte?We nux
[=her body-is aware, has feeling'] "she was happy"
whiniste'e'-xoniwh
[=my body-is aware, has feeling'] "I am happy"
xonesde' xoniwh
[=his body-has feeling, sensitivity'] "he is happy, excited"

FEAR IS FALLING
whije:'-tils'it  [=my mind-falls']  "I get scared, surprised, taken unawares"

xoje:'-tehLts'it  [=his mind-fell']  "he got scared"

FIGHT = KILL  (trajector-endpoint shift)

tcis-siL-we  "he killed"

#()-(w-pf)-..L-we, we?  "fight, attack (him)"  (often impersonal: "(pain, disease) attacks (him)"

#( se- (s-pf)-..L-we, -wen  "kill (one animal or person)"

GROW UP/OLD (trajector-endpoint shift)

tsis-d_i-yan  "he was old"

#ni (s-pf)-...yiw, -yan  "grow to maturity, grow up"

HEALTH IS GOODNESS/CLEANLINESS

nict-tcwin d_o-nauw-ai n_uhw_oñ hw-a-ne  [=dirty things-I do not wear-good-only']

"I do not wear dirty things—I only wear good things (for a ceremony)"  (lit.)

na-ne-i_uw-hw_oñ  "he gets well"

IDEAS ARE (MOVING) OBJECTS

hwe-de-ai ye-wiñ-ya  [=into my head-it comes']  "I thought of it"

mitis-na:xowinje:ye'  [=moving over it-his mind passed again']  "he forgot it"

HIDDEN IS UNDER

k'e:w  "under something (i.e. hidden away, in secret)"  also, "secret"
ILLNESS IS A FIGHT

*yutiya sile* [=it ate/gnawed-it seemed like] "arthrosis, joint pain"

*diwhoh hiwhungya* [=something-is eating] "cancer"

*xos xoLwe* [=phlegm-fights with him] "he has a cold"

*na'nelayh wita' haych'idun'cha' ne'en* [he won-my father-from his illness-it happened] "My father got better."

*hayditahuLwe'* [=it beat him up] "illness, what afflicted him"

*dodeh Luwonghe naya' nulai* [=nobody-won-the fight]

"He had a chronic illness."

*dohe ch'eteLite hei'q'ich'ind hainanu Lateu* [=not-strong enough-illness-he did not win-when he was supposed to]

"He died due to illness."

*k'iLwe--;whiwiLwe'* [=evil spirit-fought me, beat me up] "I have a fever."

#(w-pf)-...-L-we, -we? "fight, attack (him)" (often impers: "(pain, disease) attacks (him)"

LIFE IS A JOURNEY/LIFE IS A PLACE

*nanan-deL-te* [=when-they come-future] "when they come to be"

*nowhon ch'ininya* [=somebody-has arrived] "somebody is born"

*natestiyih* [=he left us] "he died"

*sa'a na'esiya* [=a long time-he walked] "He lived a long life."

*na'esiya* [=he walked] "he lived"

*no'whohqo na'esiya* [=good-he walked] "He lived a good life."

*minejit na'asiya* [=center-his walking] "middle-aged, middle of his life"

*haya whane na'asiya* [=that is-only-walking] "It's the end of his life."

*tin michwe'* [=road-is no good] "Life is difficult."

201
MARRIAGE IS A JOURNEY

* nayaseL  [= 'walking together']  "they're married"
* whiL-qa:l  [= 'with me-walking along']  "my in-law"

MORE IS UP/HAPPINESS IS UP

* midhulen mitso: nahdiyaw jadah jena tesiya  [= 'cow-milk-price-too much-up-going']
  "The price of milk went up."
* midhulen mitse: nahdiyaw ninj'un tesiya  [= 'cow-milk-price-low-going']
  "The price of milk went down."
* whoje'jena tesiye an'aweste'  [= 'up, higher-it went-happiness']
  "She got happier."
* hai'an'aweste' ninjen tesiya  [= 'her feelings of happiness-down-went']
  "She got sad."

RAISE = GROW = EAT  (trajector-endpoint shift)

* #.-.L-tcwen
  "grow (human, animal, or plant)"
* #()-s(pf)-.L-tcwen, -tcwen?
  "make (it), construct (it)"  (also: "make a collection, gather (e.g. fire-wood)"; "give birth")
* ()e#di-.tcwen (neut)
  "crave, hunger for (it)(usually food)"
* ne-tele-dict-tcwen
  "he grew"
* d_o-he-tele-L-tcwen
  "(food) had not grown"
* teL-tcwen
  "grew"  (in "that smoke before him grew settled")
* #()-ni (s pf)-.L-yee, -yan
  "eat (it) up, devour (it)"
* #ni (s pf)-.yiw, -yan
  "grow to maturity, grow up"
* ()-ni (s pf)-.yiw
  "raise (him, a plant)"

202
SHOOTING (image metaphor)

*yit-dic-tcwit*  
"to shoot"

#..-tcwid  
"reach, do with extended arm"

SKIN = HIDE = BARK (image metaphor)

*misits'*  
"(animal's) skin, hide"

*wandiwhsits'*  
"I'm peeling (bark, skin) off, I'm skinning it"

*whisits'*  
"my skin"

SLEEP IS AN ADVERSARY

*miL-na:whiwiLwe*  
[= 'sleep-beat me up again, fought me'] "I'm getting sleepy"

SMART IS UP

*a-kit-tis-s_e-ox*  
[= 'over things-at'] "smart"

*k'itise:-xw*  
[= '(moving) over things-at'] "smart, ambitious, capable, superior"

STORY IS A PATH

*hayah-no:nt'ik'*  
[= 'there-it stretches to'] "that's the end of it (concluding formula for a traditional story)"

#ni-n-t'ik'  
"a line stretches, is strung along somewhere" (lit.)

SWEATHOUSE IS A FACE (image metaphor)

*mit-da-niñ-an*  
"to its mouth [door of a sweathouse] he carried"

*min-niñ-xun-diñ*  
[= 'its face-close-place'] "by the sweathouse entrance"

*mida'ninyay*  
[= 'he came to its mouth'] "he came to the door (but didn't go in)(old word)"
minin'-xanding  [=‘its face-close to where it is’] "roof entry or smokehole of a sweathouse"

THINKING IS TRAVELLING (+metonymy of the mind for the person thinking)
xoi-kyůn tes-yai  [=‘his mind-went to’] "he thought of"
xoi-kyůn me-nůn-di-ya-te  [=‘his mind-go (fut.)’] "he will think of"
mitis-na:xowinje:ye’  [=‘(moving) over it-his mind passed again’] "he forgot it"

TIME IS A LANDSCAPE
mine^-zid-xo-miL  [=‘in the middle of it-at that time-after’] "after a considerable time had passed"
xaych'idilye ch'ung' yateseL  [=‘Jump Dance-towards-we're going’] "We're going towards where the dance is held", or "It's almost time for the Jump Dance."

LinoyundeteLte nohnatse  [=‘we're coming together-in front of us’] "The meeting is ahead of us."

whe:nek astele'nh LiyundeteLte  [=‘behind me-it happened-meeting’] "The meeting is behind me."

de:-q'ang-hit  [=‘here-recently-at that time’] "a short time afterwards, later on"

Special cases of TIME IS A LANDSCAPE; the use of spacial prepositions with temporal meanings:
hay na:-ya’ne’-in-diL ding  [=‘(at) the-they would return-place’] "when they returned"
de:-di ding  [=‘here-place’] "nowadays"
de:-xwi wiL-dang'  [=‘here-yesterday’] "just yesterday"
hwa-ne-na-witdaL-diñ  [=‘sun-runs along-place’] "in the evening"
xů-Le-důn-diñ  [=‘night-just past-place’] "early in the morning"
tcw_o-la-diň  [='five-place'] "five"
na-diň  [='two-place'] "twice"
kút xà-Le-dàñ  [='on-morning-place'] "in the morning"
kút tcin-niñ-yai  [='on-he arrived'] "He got there."
hai-ya-hit-djit kút kiL-dje-xai-wil-lai  [='and then-on-they started to fight']
    "and then, they commenced to fight"
do-ta'denan na'itLdau-ding  [='neg-drink drive-place] "don't drink and drive"
La'ay'xw  "immediately, at once, right then; nothing but, only"
Lah-xtx  [='once-at'] "merely, just, only, (in an) ordinary (way)"
mine:jixomiL  [='from mine:jit-xw-miL 'the middle of it-at-from, after']
    "afterwards, then (after a while)"

TIME IS A MOVING OBJECT
mijunktesya xaych'idilye  [='going toward us-Jump Dance'] "It's getting to be
time for the Jump Dance."
LinoyundeLte nohnatse  [='we're coming together-in front of us”] "The
    meeting is ahead of us."
whe:nek astele'n LiyundeteLte  [='behind-it happened-meeting'] "The meeting is
    behind us."

TO/TOWARD (trajectory-endpoint shift)
de-n Ow-kút-tciñ  [='us-over-toward'] "to/toward the sky"
kit-tûk-kutc-tciñ  [='shinny place-toward'] "to the shinny place"
hwik-kút-tciñ  [='me-on-to'] "on me"
nin-tciñ  "toward the ground"
x_on-diñ  [='fire-place'] "in the fire"
x_on-tciñ  "toward the fire"
t_o-diñ
"at the river"

t_o-tciñ
"to the river"

TRAIL = GET LOST (trajectory-endpoint shift)

tin
"trail, road"

tin-
"to go away out of sight/get lost"

TRUE = SAFE = VERY

x_otc
"safely"

x_otc ta-n_a-djit
"right-in the middle"

x_otc
"very" (in "very old")

xo'ji (xo'ch before pause)
"true, correct, well"

UNDERSTANDING IS FEELING/HEARING/TASTING

Luxun-ts'eh
"it tastes good"

-ts'eh
"feel, taste, be perceived (so)"

k'isiwhdile:-ts'eh
"I feel cold, freezing"

ch'iskis-ts'eh
[=he knocked-it was perceived'] "someone was heard
knocking (at the door)"

k'idet'seh
"understanding"

whet-seL-tseh
[='x-hot-feel'] "I'm hot"

WEAR OUT = GET WEAK = DIE (trajectory-endpoint shift)

d_o-he-tcit-tcit
"he did not die"

ch'ich'it
"he died"

#..chid
"die"
#ti (s-pf)--chid
"get weak, exhausted"

#()-ti-(s-pf)--L-chid
"wear (him) out, exhaust (him)"
Appendix C: Metonymy

Section 1: Introduction

In this final appendix, I have included all of the metonymy data that I gathered while doing fieldwork on the Hupa language to date. I have divided this data into sections by type of metonymy. Within the sections, listings are alphabetical by the first letter of the Hupa word.

Section 2: Data

CLASSICAL METONYMY

de:k'iwile                  [= 'someone who is poor, weak'] "old woman"
k'isdiya:n-chwing         [= 'old person-sort'] "widow"
ke'-ne:s                   [= 'tail-long'] "tree squirrel, grey squirrel"
ky—u-wa-na-iL-t—uw        "he who gives back (the spirit of the sick in a Brush Dance)"
Lo:q'                      "fish, salmon"
michwa:n'-taLta:n          [= 'its excrement-is very soft'] "grey fox"
michwe:xin'—q'eh-yixolwhin ['its anus-following behind-it is darkish colored']           "meadowlark"
mije'e:din                  [= prob. from mije:y'—e:din 'its mind-is lacking'] "baby, child"
misah-niLchwin             ['its mouth stinks'] "turkey vulture"
mitc-dje-xo-len            [= 'sugar pine'] "pine nuts"
mixa:ch'e'-xole:n  [= 'its roots-there are plenty'] "angelica"

tsamehstL'ohLn  "woman" (from tsang-mehstL'oLn "apron-tied on to her")
xohLiq'ay-tehsyay  [= 'whiteness goes along'] "the first light of dawn showing in the sky"

RESEMBLANCE
k'iqade'-nehwa:n  [= 'a willow root it resembles'] "carrot"
ne:de'tl-nehwa:n  [= 'like pine nuts'] "beans"
qi-ye:jo:-ne:wa:n  [= 'eel tendons looks like'] "spaghetti (cooked)"
qi-ye:jo:-newha:n  [= 'looks like eel strings'] "spaghetti"

te:-nehwa:n  [= 'water it resembles'] "black obsidian"

tse:l-nehwa:n  [= 'blood it resembles'] "red obsidian"

LOCATION FOR THE THING FOUND THERE
je:xo-ma'-ding  [= 'on the breast edge place'] "shortribs"

k'iLixan-ne:ne:q'-nint'ik'  [= 'deer behind it what stretches down'] "backstrap" (the meat located along the spine of the deer)

xoLchwit-tah-t'an'nahsmats'  [= 'in wet places around, among, redbud'] "wild ginger"

xoLtsay-taw  [= 'dry ground the one that is around, among'] "lion"

xonetehL-taw  [= 'the flats the one that is around, among'] "coyote"

ASSOCIATED ACTION FRAME METONYMY
'aih:-nahL'its  [= 'by itself it runs around'] "automobile/train"

'miq'it-k'iwiLiw  [= 'on top it is smeared'] "butter"

'a:diL-na:k'itLtal  [= 'by oneself one kicks around'] "bicycle"

a'dene  "he said it"
dahkiwe:wita:n  [=('stick-like object) that is put atop') "fishing platform"

dahya'wing'ay  [=he sits above'] "he is fishing (with a net)"

jiwolch-n'k'kilwal  [=ball-he hits it around'] "baseball"

k'itiqach  [=he tosses it along (with stick')] "stick game, shinny"

k'iwliwh  [=I watch something, keep an eye on something'] "jealous"

k'iwinya'n  [=what someone eats'] "acorn"

k'iwinya'n-ya:n  [=acorn-eater'] "person, people, Indians"

k'iwiyal  [=what one keeps eating'] "food (in general)"

k'wiLda'aLchwin  [=perhaps from k'iwilda'aL-chwing 'it carries (living things)"

kiLnesetin-te  [=I handle a living being-future'] "I will have intercourse with a woman"

kinahLda:-n  [=she reaches puberty-person'] "teenaged girl"

king-d'idiLtsay'  [=tree-it dries up'] "sapsucker"

Lo:q'-yiditile  [=fish-it relishes'] "river otter"

me' si-liq'  [=into it is flopped'] "pie"

me'dil  [=from me'-na'dil 'in it-they travel'] "canoe"

mil xosah' no:l na: ng'  [=with mouth it makes it taste good'] "candy"

mil-na:tal'  [=with it-it steps around'] "paw"

mil-xowiloy'  [=with it-he is tied up'] "belt"

minim'mil-Le:diliw  [=its face-with it-it slays'] "mountain lion, panther"

miq'it-k'iwiLiw  [=on top-it is smeared'] "butter"

misah-me:q'-silay  [=in (horse's) mouth-inside it-it (rope) lies'] "bridle"

mitah- 'a:iL'e:n  [=amongst it-someone scatters it'] "baking powder"

na:nyay  [=something that falls to the ground'] "rain, it's raining"

nandil  [=several things, particles fell to the ground'] "snow, it snowed"
<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
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<tbody>
<tr>
<td>no:na:witse</td>
<td>['what is shoved back'] &quot;door&quot;</td>
</tr>
<tr>
<td>nolah</td>
<td>['it (fish) swims to that point'] &quot;dam&quot;</td>
</tr>
<tr>
<td>q'an-ch'iwilchwil</td>
<td>['newly, recently-he is growing'] &quot;adolescent boy, male teenager&quot;</td>
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<tr>
<td>ta'na:n</td>
<td>['from ta'dina:n 'what one drinks'] &quot;water&quot;</td>
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<tr>
<td>tahdindil</td>
<td>['they come out of the water'] &quot;surf fish&quot;</td>
</tr>
<tr>
<td>te'qi:wilq'ots'</td>
<td>['in the water it is dunked'] &quot;spaghetti (uncooked)&quot;</td>
</tr>
<tr>
<td>tL'iwhxa:n</td>
<td>['probably from tLi'wh-sixa:n 'snake-that lies (caught) in a container'] &quot;eel&quot;</td>
</tr>
<tr>
<td>tsis-da-di-n</td>
<td>['sits-place'] &quot;he lived&quot; (in &quot;where he lived&quot;)</td>
</tr>
<tr>
<td>wha:k'ilkit</td>
<td>['catch something for me'] &quot;feed me&quot;</td>
</tr>
<tr>
<td>ya:dimil</td>
<td>['what is thrown up in the air'] &quot;tossel' used in stick game&quot;</td>
</tr>
<tr>
<td>yima:n-twi'winyay</td>
<td>['across-he got lost'] &quot;Indian God (preparer of the world for human beings)&quot;</td>
</tr>
<tr>
<td>yiman'dil-mikine</td>
<td>['white-people their sticks'] &quot;cards&quot;</td>
</tr>
<tr>
<td>yisxa:n</td>
<td>&quot;it has dawned, day has arrived&quot;</td>
</tr>
</tbody>
</table>