GESTURE-SPEECH BIMODALISM IN ARAPAHO GRAMMAR:

AN INTERACTIONAL APPROACH

by

RICH A. SANDOVAL

B.A., University of Colorado, 2004

M.A., University of Colorado, 2010

A thesis submitted to the

Faculty of the Graduate School of the

University of Colorado in partial fulfillment

of the requirement for the degree of

Doctor of Philosophy

Department of Linguistics

2016

The thesis entitled:

Gesture-Speech Bimodalism in Arapaho Grammar:
An Interactional Approach

written by Rich A. Sandoval
has been approved for the Department of Linguistics

_____
Andrew Cowell

_____
Barbara Fox

_____
Kira Hall

_____
Brenda Schick

_____
Charles Goodwin

Date: _____

The final copy of this thesis has been examined by the signatories, and we
find that both the content and the form meet acceptable presentation standards
of scholarly work in the above mentioned discipline.

IRB Protocol # 12-0381

Sandoval, Rich A. (Ph.D., Linguistics)

Gesture-Speech Bimodalism in Arapaho Grammar: An Interactional Approach

Thesis directed by Professor Andrew Cowell

Arapaho is an Algonquian language with few remaining speakers, but it is well represented in the literature (e.g. Salzmann 1961). The Arapaho dialect of Plains Indian Sign Language has also received a considerable amount of attention (e.g. West 1960). However, there is scant attention to an easily observable property of Arapaho: The manual gestures used by Arapaho speakers are cross-linguistically atypical. The configurations and precision of the gestures, as well as how they are integrated with speech, are much more conventional than what has been reported for other spoken languages. In this dissertation, I take a first step in describing the relationship between gesture and speech in Arapaho, and I use the term 'bimodalism' to underscore the linguistic nature of this relationship.

I also address the problem of how to approach a description of bimodalism. The classic approach to language description has framed researcher interests, methodologies, and documentational techniques in a way that does not motivate an analysis of the linguistic potential that gesture might have together with speech. I therefore use an interactional approach, which has a methodology and theoretical framework that is more sensitive to bimodalism (e.g. Fox 1987; Hanks 1990; Goodwin 1996; Enfield 2003; Blythe 2010).

I build on previous work on Arapaho grammar (notably Cowell and Moss Sr. 2008) by using the interactional approach to examine linguistic reference within Arapaho speakers' spontaneous narratives. I argue that hand pointing and spoken demonstratives are complementary resources that Arapaho storytellers use to signal discourse relevance, which involves the

relational statuses and spatial arrangements of the characters in their narratives. I show the depth

of the relationship between pointing and demonstratives in Arapaho by examining a bimodal

construction that I call the "viewpoint anchoring construction".

ACKNOWLEDGEMENTS

This dissertation is the culmination of six years of research, which would not have been in the least bit possible without the guidance, feedback, encouragement, cooperation, and commiseration of a great many people. I would first like to express my deepest gratitude to my dissertation chair and mentor, Andrew Cowell. Among other things, if it were not for the opportunities to research Arapaho that he has provided me with, there would be no dissertation. I would also like to express deep thanks to the committee members Barbara Fox and Kira Hall for the many extensive discussions I have had with them over the years, which have been central to my overall understanding of language as it relates to social interaction, the body, and communities of practice. I would also like to thank the other committee members, Brenda Schick and Charles Goodwin, for their invaluable feedback on this dissertation project.

I owe a great deal of additional gratitude to the Northern Arapaho Tribe for granting me the permission and encouragement to do this research. I especially would like to thank those speakers of Arapaho who entertained my questions about gesture, helped me with my analyses of Arapaho, and allowed me to make video recordings of them. In this regard, I owe special gratitude to Wayne C'Hair, Andrew Brown, William C'Hair, Nora Oldman, and Alonzo Moss Sr., some of whom are no longer with us. I would also like to thank Sara Wiles for providing me with not only a home base but with thoughtful comments on my research as well, during my fieldwork at the Wind River Reservation.

There are still many others who have greatly contributed to this dissertation and its development. For this, much gratitude goes to all those who I have had the pleasure of working with and learning from at the University of Colorado Boulder. I would specifically like to express my heartfelt appreciation for all the folks associated with the CLASP-lab office, who

have created an intellectual environment in which the ideas of this dissertation could sprout and flourish. With these intelligent and inspiring colleagues, I have participated in writing groups, data sessions, and lengthy discussions about a variety of topics that have greatly shaped my thinking and honed my analytical skills. A special mention goes to Nick Williams, who has spent countless hours with me discussing readings, data, conference presentations, and general ideas that have been central to my work on this dissertation. Joshua Raclaw too has been invaluable for his overall support and guidance on many aspects related to the dissertation and beyond. Irina Wagner also deserves special mention for her detailed and very helpful feedback on some of the writing and analyses that are in this dissertation. Other CLASP-lab associates who deserve my explicit gratitude include Jessica Holman, Velda Khoo, Bazil Manietta, Nina Jagtiani, Lal Zimman, Jenny Davis, Matt Ingram, Marcus Avelar, and Susanne Stadlbauer.

Outside of the CLASP lab, there are others in the Department of Linguistics who deserve my explicit gratitude. It is through the department's interdisciplinarity that I have been free to (and forced to) think about my how my work relates to and has been informed not only by work on other languages but also by cognitive science, human language technologies, and phonetics, among other areas of research. In this respect, I am extremely fortunate to have had so many meaningful exchanges of ideas with my professors, including David Rood, Laura Michaelis, Bhuvana Narasimhan, Martha Palmer, and Rebecca Scarborough. Such exchanges have also involved other graduate students in the department, including Steve Duman, Will Styler, Jack Mao, Jonnia Torres, Kevin Gould, and Timothy O'Gorman. Special mention goes to Sara Fall, my writing counselor, who is not a linguist but a lover of language just the same.

Beyond the University of Colorado, I would like to thank the Ford Foundation for its years of support in the early stages of my dissertation project. Additionally, I am grateful for

conference-attendees' feedback on my presentations, which have covered various phases of the project. The conferences include AAA 2015, ISGS 2014, BLS 2013, CLASP 2011, and SSILA 2011.

Finally, I am forever indebted to my family for supporting me and putting up with my mess as I forced my way through the grinder that is graduate school. From very early in my life, my father has encouraged me to pursue a life of the intellect, and he has been on the other end of the phone whenever I needed to talk through some aspect of my dissertation. My other parents have been tremendous too, especially in their roles as grandparents to my daughter Etta when I needed extra time for my dissertation work. As for Etta, who is only slightly older than the dissertation project, she has been the most encouraging of all, offering a big smile and a hug any time I showed frustration at my dissertation progress. It is my wife Julie, though, who deserves my full praise. She has been my partner every step of the way, celebrating with me when milestones were reached, demonstrating tolerance when I lost patience with myself. Without her, none of this could have happened. To all of my family, I thank you, and I love you.

CONTENTS

CHAPTER I

INTRODUCTION

The title of this dissertation alludes to an easily observable property of the Arapaho language as it is used for everyday social interactions: The co-speech pointing, and other types of gesture, used by Arapaho speakers are cross-culturally atypical. Simply put, the visual configurations and motions of Arapaho speakers' hand movements are much more conventional and precise than the co-speech gestures that are associated with well documented spoken languages, such as English. A central aim of this dissertation is to examine the uniqueness of Arapaho speaker's conventional gestures, especially in how such gestures are integrated with elements of speech. I use the term 'bimodalism' for the linguistic combination of these expressive modalities (cf. 'bimodal bilingualism' in Emmorey et al. 2008).

Arapaho is an Algonquian language of the Great Plains, but the uniqueness of Arapaho conventional gesture stems from an areal language historically used as a lingua franca by the Arapaho and other tribes of the Great Plains: Plains Indian Sign Language. Arapaho has few remaining speakers, but there has been considerable documentation and description of Arapaho vocal speech, especially as a vehicle for cultural traditions (for an early bibliography, see Salzmann 1961). The Arapaho dialect of Plains Indian Sign Language also received a considerable amount of attention (e.g. West 1960). However, there is scant mention in the literature of the richness demonstrated by Arapaho bimodalism.

The neglect of Arapaho bimodalism in the literature is a direct outcome of the dominant approach to language description, which formed early in the twentieth century through the Boasian school of linguistics and anthropology. I call this dominant approach 'the classic approach'. This approach has framed researcher interests, methodologies, and documentational techniques in a way that does not motivate an analysis of the linguistic potential that gesture and other visible bodily action might have together with speech. One important factor has been the lack of easily accessible video-camera technology until the last few decades. However, the neglect of bimodalism can also be understood as symptomatic of a deficiency in how language is normally perceived through the classic approach, vis-a-vis a representative language sample. In classic-approach practice, the language of conversation and of other common types of social interaction is overlooked in favor of elicited language, monologic narratives, and other uncommon productions of language. Arapaho bimodalism, however, is almost exclusive to everyday interaction. Because of the dominance of the classic approach, Arapaho researchers have tended to focus on data that does not include bimodalism or other aspects of conversational Arapaho. Thus, Arapaho bimodalism has not just been neglected because it involves gesture.

The dominant perspective of the classic approach has likely had a similar effect on the description of other languages. Farnell (1995) provides strong evidence of this in her description of Nakota speaker's combined use of conventional sign-based gestures and speech. Although focused on traditional narratives, Farnell's research suggests that linguistic bimodalism as a regular daily interactional practice of indigenous Plains communities is not limited to Arapaho speakers. Furthermore, Farnell's use of methodologies from modern-dance analysis suggests that it takes an alternative to the classic approach in order to examine bimodal language, regardless of genre. One of my central tasks for this dissertation has been to find or define an approach with a

methodology, theoretical framework, and other properties that correct for the perspective deficiency in the classic approach and are therefore sensitive to the full richness of bimodalism in everyday Arapaho language. Recently, such an approach has been emerging through multiple strands of research (e.g. Fox 1987; Hanks 1990; Goodwin 1996; Enfield 2003; Blythe 2010). With respect to language description and analysis, I call this the 'interactional approach'.

In distinction from the classic approach, the interactional approach has the following features: Language documentation is a distinct task from language description; description requires well documented interactional data, because the primary target of description is language as used in everyday social interactions; and, linguistic analysis draws heavily on the actions of speakers, provided within the data, as evidence for how they understand their own language and what they are doing with it. I demonstrate the merit of the interactional approach to description by applying it to Arapaho, the result of which is a first step at the linguistic description of bimodalism and other properties of conversational Arapaho. Additionally, by describing bimodalism as a possible feature of a language, I also broaden the typological scope of linguistics and gesture studies.

In my examination of Arapaho bimodalism, I limit the domain of analysis to linguistic reference within speakers' everyday conversational stories, which can also be described as spontaneous narratives. This limitation is for a number of reasons. First, by keeping the domain of inquiry small, I can provide better detail of the analytical methodology of the approach that I use for description. Second, traditional oral narratives are a classic data source for linguistic description, and so my use of spontaneous narratives is one way to bridge the interactional approach to language description with the classic approach. Third, linguistic reference is one of the areas in which the few researchers using an interactional approach to description have had

great success. Thus, by focusing on linguistic resources for reference, I can best engage with and build on other uses of an interactional approach. Fourth, the work to date on Arapaho has demonstrated that Arapaho has a rich tradition of narrative and a complex set of resources available to storytellers for doing reference (Cowell and Moss Sr. 2005; Cowell, Moss Sr., and C'Hair 2014). Thus, I can engage with and build on this scholarship too. Finally, through preliminary research using the interactional approach, I have found that basic resources for linguistic reference exhibit a number of unique bimodal properties. Therefore, linguistic reference is an ideal domain of description for showcasing the interactional approach.

More specifically, I focus my description on the use of demonstratives and hand pointing in spontaneous narratives. These are important linguistic resources that Arapaho storytellers use to overtly refer to the people that constitute the characters in spontaneous narratives. Demonstratives are typically used like adjectives, preceding nominal mentions in basic overt nominals. The presence or absence of a demonstrative in an overt nominal is meaningful for how a storyteller develops and organizes the characters in a spontaneous narrative. A storyteller also has to choose from a variety of demonstrative forms, which add an additional layer of meaning to character reference. Hand pointing is another linguistic resource that storytellers use to develop and organize characters. There are also different forms of hand pointing. I examine the meaningful distinctions that Arapaho storytellers make with each of these resources, including the meaningful distinctions made with basic overt nominals through various combinations of demonstratives and hand pointing.

I use the interactional approach to argue for the following general description: Pointing, demonstratives, overt nominals, and all of their inherent meaningful distinctions provide storytellers with a variety of ways to signal *discourse relevance* for their characters. The

functional domain of discourse relevance notably involves characters' discourse statuses and the combination of those statuses in a discourse relevance framework. A character's status includes how the character is ordered relative to other characters as well as how the character is positioned relative to other characters in narrative space. The validity of the interactional approach comes in the way that the approach makes such a description possible. In general, the description is effective if it guides an analysis of why speakers do what they do with pointing, demonstratives, and overt nominals in the spontaneous narratives of everyday interactions. Throughout this dissertation I define the interactional approach, provide the analytical details in support of the general description, and demonstrate effectiveness at each analytical step.

As a start to advancing these goals in Chapter 2, I do two things: I define the interactional approach to language description, and I contextualize the Arapaho language as an ideal case study for the interactional approach. The chapter grounds the interactional approach in various strands of social science research and perspectives. One important strand is work on social interaction, which has influenced the use of video-based interactional data and the use of micro-social norms for analysis (e.g. Goodwin 1996). Another important strand is preliminary work within linguistic anthropology that uses an interactional approach, which has demonstrated that demonstratives and other basic types of linguistic reference require such an approach (Enfield 2003). I then go on to discuss why the Arapaho language is apt for examination through the interactional approach. For one, there is an extensive database of video recordings of social interactions in Arapaho, which is somewhat unique for a language that is under-represented in the linguistic literature. On the other hand, Arapaho bimodalism has been historically neglected through the classic approach, and the reasons for this neglect showcase some of the ways that the interactional approach is a corrective development of the classic approach.

In Chapter 3, I provide more specific and in-depth background information on the Arapaho language. In part, the chapter situates the Arapaho language and its speakers culturally and sociohistorically. This includes a discussion of Plains Indian Sign Language. I also outline some morphosyntactic and other linguistic properties of spoken Arapaho that are needed to ground the analyses of later chapters. I focus my attention here on basic overt nominals. Additionally, I give some preliminary characteristics of conventional gestures that are used with spoken Arapaho, including pointing. These language-based discussions also serve as linguistic guides for the discussion on transcript conventions in Chapter 4.

Chapter 4 focuses on the type of data and the primary dataset that I use for the dissertation analyses. I also provide a guide for the specific transcription conventions that I use. Although my dissertation findings have benefited greatly from my fieldwork with Arapaho speakers, the primary data type for the dissertation is the spontaneous conversational narrative. My dataset, or collection, is a subset of the Arapaho Conversational Database that consists of six spontaneous conversational narratives of various genres, lengths, and speakers. I provide a comparative summary of each narrative. Finally, I provide a guide and justification of my transcription choices. The transcript excerpts are central to the analysis and evidence that I provide throughout the dissertation.

Descriptions of related phenomena should be explicit about their relationship. In Chapter 5, I support my examination of Arapaho bimodalism by introducing *discourse relevance*, which I define as the functional domain (or theme) that relates pointing, demonstratives, and overt nominals together within spontaneous narratives. These resources thus function for an Arapaho storyteller as means of signaling discourse relevance, which involves the development of characters' discourse statuses and a discourse relevance framework. Building on Cowell and

Moss Sr. (2008), I first discuss discourse relevance in relation to the concept of saliency, which the author's claim is central to much of the organization of Arapaho grammar. Next, I review the broader literature related to discourse relevance. Finally, I define some general (non-linguistic) foregrounding practices that storytellers use to reinforce signals of discourse relevance. Foregrounding practices include the relative quantity by which a speaker refers to one character with respect to another character as well as a speaker's embodied reenactment of a character. Such foregrounding practices serve as the interactional basis for the linguistic analyses of the following chapters.

The analyses start in Chapter 6 with an in-depth look at Arapaho hand pointing. There are four types of pointing used in spontaneous narratives, and they are distinguished by handshape: Forefinger points, thumb points, flat-hand points, and lexical gestures that are used for pointing. Speakers use points to refer to characters through their positions in space, their associations with other entities, and their actions. While pointing is thus an interactional practice that is used to indicate a character's high discourse status, I show that Arapaho speakers use different hand points to further distinguish a character's status. For example, a forefinger point can work to signal social asymmetry between characters, while a thumb point can work to signal social alignment between characters.

Arapaho has a large number of distinct demonstratives. In Chapter 7, however, I examine the general function of demonstratives in overt nominals. Different from demonstrative determiners as they are typified in the literature, Arapaho demonstratives are much more grammatically flexible in the formulation of nominals (cf. Mithun 1987). For example, an overt nominal may include a demonstrative for an initial reference to a character while the demonstrative would be absent from the subsequent use of the nominal for referring to the same

character. Or, this pattern could be the other way around. Although there are preliminary

indications that for traditional narratives demonstratives signal definiteness, I argue that for

spontaneous narratives demonstratives signal discourse relevance. Specifically, I show that,

similarly to the general use of pointing, speakers use demonstratives to signal a character's higher

discourse status relative to a character that is not referred to with a demonstrative.

In Chapter 8, I examine the three demonstratives that are used most commonly within

spontaneous narratives. Similar to how the different hand points function with respect to the

general use of pointing, each demonstrative specializes in further distinguishing characters'

discourse statuses in relation to one another. For example, storytellers use the demonstrative

nehe' exclusively to refer to one and only one character, signaling that character's special

relationship to the predominant narrative viewpoint. The demonstrative *hi'in*, however, is used to

signal that an individual character is a member of a previously established group (or otherwise

part of something larger), whereby the character's actions are representative of the group. Thus,

the group has a higher discourse status than the individual character.

In the final body chapter, Chapter 9, I focus on the interplay between demonstratives and

hand points as they are brought together in a bimodal construction. I show that construction is

constituted by an overt nominal in which a point is produced simultaneously with the

demonstrative instead of the nominal mention. The construction has the specific function of

establishing a narrative viewpoint anchor, which is important for the development and use of

space for a discourse relevance framework.

Throughout the following chapters I thus have a narrow analytical focus on pointing,

demonstratives, and overt nominals as used by Arapaho speakers in spontaneous narratives.

However, this narrow focus has the grand aim of showcasing the interactional approach to

language description and the even grander aim of taking the long-overdue step in describing

Arapaho bimodalism.

CHAPTER II

THE INTERACTIONAL APPROACH AND THE CASE FOR ARAPAHO

2.1 Introduction

In this chapter, I define and flesh out the concept of an interactional approach as I apply it

to the Arapaho language. As an approach to language description, it has a relationship with

language documentation and takes a position on language data as well as how to analyze that

data. In the interactional approach I use, this relationship and positioning are centered on the idea

that spontaneous social interactions amongst speakers of a language are the most common

contexts for the language's use. Good documentation of spontaneous interaction is therefore

essential data. Additionally, the linguistic analysis of this data hinges on an array of contextual

features that structure not just the language but also the social interaction surrounding its use.

Although not fully presented as such in the literature, this interactional approach to

language description has been implied by a few key pieces of research (e.g. Enfield 2003;

Wilkins 2003; Blythe 2010). The interactional approach, however, has only been applied to a

few domains of linguistic analysis, specifically reference. More generally though I find the

approach to be an emerging development or convergence of other disciplines and their

approaches to language and communication, not all of which are interactional or even focused

specifically on the description of language.

Of these approaches, the basis on which the interactional approach has developed is the

classic approach to language description, which has dominated the field of linguistics since the

time of Boas. Notably, the interactional approach maintains the classic approach's principle of descriptive relativism and the goal of achieving it. However, the interactional approach diverges with the classic approach in both the interpretation of this principle and the methodology for achieving it. This divergence stems from the influence of other disciplines, which incorporate newer technologies as well as a broader empirical foundation than the classic approach.

The Arapaho language makes an especially interesting case study through which to examine the differences in the approaches to language description and how they diverge. First of all, Arapaho is a language that is underrepresented in the literature, as is the disciplinary focus of language description. Yet, it is one of the only such languages to be documented in the way required by the interactional approach. This documentation is in the form of a large video database of spontaneous interactions amongst Arapaho speakers. The Arapaho language is thus primed for an interactional approach to describing it. Additionally, the bimodal features of the Arapaho language have been almost completely disregarded by Arapaho language researchers, whether they used the classic approach or were just influenced by it. The main reason for this situation is that Arapaho bimodalism is out of the methodological reach and ideological perspective of the classic approach. Because the interactional approach overcomes these biases, the examination of Arapaho bimodalism necessitates such an approach.

In this chapter, I unpack these issues in order to define the interactional approach, elucidate its historical foundations, differentiate it from the dominant classic approach, and underscore the appropriateness of using the interactional approach to examine the Arapaho language.

2.2 The Interactional Approach

In general, a social science approach brings together a set of theoretical assumptions, principles, and a methodology meant to guide observations and inquiries into some domain of human social nature. At a minimum, an approach to language description includes assumptions about the nature of language, principled guidelines for what constitutes appropriate linguistic data, and principled procedures for how to analyze linguistic data. What I am calling "the interactional approach" is not yet a well-established tradition within descriptive linguistics. Rather, the interactional approach is an emerging development of the well-established tradition that I call the "classic approach to language description". Thus, 'classic language description' and 'interactional language description' refer to the respective disciplines.

What the interactional approach brings to language description is a relatively recent convergence of methodological and theoretical principles about human language and sociality from various disciplines. My understanding of the interdisciplinary outreach and broad social science grounding that defines the interactional approach is in the vein of Bucholtz and Hall's (2005) use of sociocultural linguistics to identify the various research perspectives that are necessary for understanding the social basis of identity. Thus, in the following subsections, I outline the interdisciplinary positioning and foundation of the interactional approach to language description, at least as far as I understand it. Because the discipline of classic description is more relevant to the discussion of the second section, I focus this first section more so on other influential disciplines as well as the interactional approach's underlying principles, which largely diverge from those of the classic approach.

2.2.1 The Interdisciplinary Position of the Interactional Approach

I dedicate much of this chapter to detailing how the interactional approach to language description relates to the classic approach. Here I focus the discussion on how the interactional approach relates to two other important disciplines: conversation analysis and interactional linguistics. I provide a brief sketch of each discipline as well as a sketch of the interactional approach, with attention to how it relates to these other disciplines. With examples of research using an interactional approach to language description, I show that the interactional approach fills an interdisciplinary niche between the classic approach to language description and interactional linguistics.

In order to best discuss the interdisciplinary roots and influences of the interactional approach, I first need to establish a fitting terminology. I provide a survey of important terms here as a primer, leaving the nuances of definition to the discussion and examples of the rest of this chapter.

I use the term 'description' to refer to the analytical representation of a human behavior, specifically a language-based behavior. The term 'resource' refers to the semiotic material that people have available for building social action and achieving interaction. A 'linguistic resource' then refers to language-specific material available to speakers of a given language. 'Interaction' specifically refers to the spontaneous face-to-face kind, unless otherwise specified. An interaction requires the coordinated participation of two or more people, who are thus interactional 'participants'. 'Speakers' are assumed here to be participants, albeit this term puts the focus on the particular linguistic resources available or used by such participants. Additionally, reference to a "speaker" does not necessarily imply that the participant is speaking through the vocal modality, as language is possible through the visual modality as well.

The term 'practice' refers specifically to a resource that is drawn from a normative behavior within a given community. Because of this, I use 'community' or 'community of practice' as a more precise way to refer to what is often loosely described as 'culture' (see Lave and Wenger 1991). Community members recognize a practice through its 'structure' and orient to its 'function'. There are interactional and linguistic practices, among other types. A linguistic or grammatical practice might refer to something as simple as a linguistic element, such as a morpheme, including its semantic meaning, pragmatic force, or other function. A linguistic practice could also be a grammatical 'format' that speakers use in a specific discourse-sequential 'position' as a signal for initiating some social action. Linguistic practice is thus a general term for an array of norm-based resources that hinge on the grammatical structure available to the speakers of a given language. Linguistic practices can involve other semiotic structures as well as multiple modalities. Another more specific and complex type of linguistic practice is a grammatical 'construction', which is formulated with a mix of concrete and abstract grammatical elements. Unless otherwise specified, I use practice as shorthand for linguistic practice.

The idea that social practices underlay the structure and organization of face-to-face interaction emanates from conversation analysis. This discipline aims to understand the way in which humans are able to casually engage with one another to achieve a course or state of interaction. Researchers work to uncover the regular practices that constitute the interaction order; notable examination has been on the domains of turn taking, sequential organization of action, conversational repair, and person reference (Schegloff 2006; Sidnell 2010). The field then is necessarily focused on what drives the "interaction engine", or the universals of human interaction that allow even for people who do not speak the same language or share other common ground to have some semblance of communication with one another (Levinson 2006).

Interactional linguistics is also focused on the universals of human interaction, but with specific attention to the role of language as a resource through which people achieve interaction (Couper-Kuhlen and Selting 2001). Because languages differ greatly from one another, interactional linguistics explores not only how the interaction order shapes language but also how different languages add particular nuances to the interactional practices of the speakers of those languages. For example, Fox, Hayashi, and Jasperson (1996) examine English and Japanese in the universal domain of interactional repair. Their work shows that while English speakers may have less syntactic flexibility in clausal word order than Japanese speakers, this same syntactic rigidity of English allows English speakers more flexibility in recycling words in order to initiate repair than Japanese speakers. Interactional linguistics might therefore be considered to focus on the description of the language that speakers use as part of their repertoire of resources for achieving interaction.

The interactional approach to language description is also focused on examining language use in interactional contexts, but the attention is more on the community-specific particularities of a language than the language's role in mediating the particular and universal nature of social interaction. Thus, the interactional approach aims to describe how language is an interactional resource for the everyday spontaneous productions that sustain a community of practice. From this perspective, it is more interesting to examine situated interactions than interactions that are not contextualized within the situational environment, as with prototypical chit chat or most telephone conversations. Situated interactions are better examples of community-grounded cultural productions because, as Goodwin (2000) demonstrates, when an activity requires the continuous "contextual configuration" of multiple "semiotic fields", culture is necessarily highlighted (cf. Hanks 1990). Spontaneous community-grounded productions may

also involve more socially asymmetric talk in interaction (i.e. long stretches of one person speaking), such as with some spontaneous narratives, than the turn-by-turn conversations often examined by conversation analysts and interactional linguists. Such asymmetric talk might include spontaneous moments of instructing, assessing a situation, explaining, or, notably for this dissertation, telling stories, jokes, and other types of narrative. Thus, the interactional approach bridges the previously conceptualized dichotomy in language documentation, as described by Dingemanse and Floyd (2014), between classic language description, which focuses on language that is formalistic and not interactional, and interactional linguistics.

Although I will demonstrate the interactional approach, as I define it, throughout this dissertation, I highlight below some work that uses an interactional approach and has thus directly influenced my understanding of the approach. It is worth pointing out that few of these researchers give a name to their approach and, for those that do, they do not use the exact terms that I do to describe their approach. Additionally, each of their approaches is distinct in many ways from the interactional approach as I define it in this chapter. However, what unites this research is a focus on describing underrepresented languages through an analysis of spontaneous or conversational interactions that is supported by a mix of interactional, ethnographic, and linguistic methodologies.

The totality of work using an interactional approach to language description is limited, and it might be for this reason that the scope of such research is quite limited too. The limited scope of the research is more likely a factor of its emerging disciplinary development between interactional linguistics and classic descriptive linguistics. The research within this limited scope can thus be divided into the following three groups: (1) Research on language phenomena that are traditionally but insufficiently covered by the classic approach due to the high dependence of

the phenomena on interactional contexts, such as with speech-based spatial deixis; (2) Research on language phenomena that is only realized in interactional contexts and therefore has not been considered by the classic approach, such as with co-speech pointing; and (3) Research on language phenomena that overlaps the scope of both interactional linguistics research and classic descriptive linguistics research, such as with person reference. In what follows, I provide an example of research from within an exemplary domain for each of these three groups.

Deixis, and specifically demonstrative reference, is an exemplary domain of research that is insufficiently covered by the classic approach and necessitates an interactional approach (Enfield 2003). Hanks (1990), examining deixis in Yucatec Mayan, makes a similar argument, demonstrating the effectiveness of an approach that is much in line with the interactional approach. However, in a description of Lao demonstratives, Enfield (2003) is more characteristic of an interactional approach. In this work, Enfield analyzes videos of situated interactions amongst Lao speakers, such as outdoor-marketplace negotiations between a buyer and a seller. He shows the insufficiency of the classic concepts of 'proximal' and 'distal' to describe, in absolute values, spatial distances supposedly encoded by the two Lao demonstrative forms. Instead, he argues that these demonstratives are designed to reflect spatial distinctions as they are made relevant by the participants of a given interaction. Thus, the demonstratives encode interactional values that are relative to a number of contextual factors.

Co-speech pointing is an exemplary domain of research that is only realized in interactional contexts and therefore has not been considered by the classic approach. Notable here is research demonstrating that different forms of pointing can work to signal categorical distinctions that are hallmarks of classic language description. Enfield (2001) examines lip pointing in video recordings of Lao speaker interactions and demonstrates that a Lao speaker

uses a lip point instead of a hand point to signal shared knowledge (i.e. that the recipient of the point has prior knowledge of the referent). In classic terminology, the signaling of shared knowledge is described as definiteness. Wilkins (2003) uses a variety of methods for analyzing video-recorded interactions of Arrernte (central Australian) speakers and shows that they use a variety of hand points to distinguish, among other things, singular and plural reference. Additionally, Arrernte speakers use vertical arm angles to distinguish spatial distance parameters when pointing to non-visible referents, which corresponds to the three-way distinction made by Arrernte spoken demonstratives.

Person reference is an exemplary domain of research that overlaps the scope of both classic descriptive linguistics research and interactional linguistics research. Person reference is a core domain for classic linguistics because, for any given language, many of the linguistic resources available to speakers reflect the human occupation for talking about ourselves and others, specifically through pronouns and the variety of ways to formulate descriptive noun phrases. Person reference has been a domain of focus for interactional linguistics because of work by conversation analysts positing a universal system for how speakers in interaction organize the linguistic options for doing person reference. The system is based on two dueling preferences that interactional participants orient to: the preference for minimization, or a minimal form of reference, and the preference for recognition, or a form that is recognizable to the recipient of the talk (Sacks and Schegloff 1979). Brown (2007) demonstrates that for Tzeltal Mayan speakers there is an additional preference for the speaker to choose a form of reference that associates the referent to the other interactional participants. Blythe (2010) examines preferences for person reference amongst Murriny Patha (northern Australian) speakers and demonstrates that community linguistic norms, such as those involving taboo names, intervenes

with the dual preference system to create a much more complex set of preferences that is particular to these speakers.

In sum, the interactional approach to language description focuses on the community-based particular nature of language, but from an interactional perspective. As such, it builds on classic descriptive linguistics with the theoretical and methodological apparatus of conversation analysis. In the next subsection I use a set of principles in order to further define the interactional approach, continuing to relate it to these disciplines and other influential areas of research.

2.2.2 The Five Principles of the Interactional Approach

In this subsection, I provide more details of the interactional approach to language description as I understand it. The last section examined its disciplinary positioning, with a few examples of the research. Here I use a set of principles to organize a more in-depth definition of the interactional approach. Each principle relates the interactional approach to related areas of research, in order to underscore the way in which the interactional approach is emerging as an interdisciplinary research program with a unique solution to an important problem in the area of language documentation and description. The five principles are as follows:

- descriptive relativism

- sociocultural sensitivity

- enriched documentary data

- prioritizing spontaneous situated interaction

- interactional-linguistic description

I present these principles as programmatic ideals for doing research with an interactional approach to language description.

As I use "an approach to language description" in this dissertation, the concept specifically involves describing the linguistic nature of languages that are under-represented in the literature in accordance with the principle of descriptive relativism. This principle is the basis on which the interactional approach to language description is a development of the classic approach. The classic approach was developed within a theoretical framework of historical particularism, or the idea that language and other patterned behaviors of a group of people are unique accretions of their own past behaviors. The general application of this theoretical framework to the study of human behavior is a hallmark of the Boasian development of early twentieth-century Americanist anthropology (Darnell 1998). As a methodological principle of descriptive accuracy, this principle is known as descriptive relativism (cf. Spiro 1992; also "descriptive ethnology" Darnell 1998: 277; and, "methodological relativity", Levinson and Evans 2010: 2734). Descriptive relativism thus requires that any aspect or element of a language be described in terms of that language and the sociocultural life of its speakers.

One implication of the principle of descriptive relativism is that a representative sample of a language should constitute the data used to analyze patterns in the language. Despite being centered on this principle, the classic approach has somewhat standardized the use of non-representative data, which is a discussion that I take up in subsequent sections of this introduction. Thus, although the interactional approach inherits the principle of descriptive relativism from the classic approach, the interactional approach's principles regarding data requirements and analysis stem from areas of research that have put the issue of representative data at the forefront.

A principle that I call "sociocultural sensitivity" comes from research in the framework of ethnography of communication. As a linguistic anthropologist, Dell Hymes initiated this

framework more so as a reaction against trends emanating from Chomsky's mid-twentieth-century formalist push in linguistics than as a corrective to descriptive linguistics (see Hymes 1962). The ethnography of communication is based on the idea that for a community of language users, language is not homogenous or easily definable across the different cultural and social contexts in which community members communicate with one another (Saville-Troike 2003). Rather, a communicative context, especially one understood by the community as a specific type, is largely definable by specific norms of language use, which may include forms, meanings, and ideologies specific to a certain type of communicative context.

Basso (1970), for example, examines Western Apache practices to show how even silence, or the absence of language, can have meanings and uses that are guided by norms within specific communicative contexts, such as meeting someone for the first time. Additionally, by underscoring how Euro-Americans misinterpret Western Apache silence, Basso emphasizes that social contexts, such as meetings, are locally structured events. Therefore, sociocultural sensitivity is a corollary to descriptive relativism.

For the interactional approach, the principle of sociocultural sensitivity means that to ensure validity, any use of language needs to be accounted for within the sociocultural context of its production. The analysis of a social activity in which a bit of language is produced may be an important aspect of the grammatical analysis of that bit of language for accurate description. Just what constitutes a kind of activity in ethnographic terms is a task for the language researcher to uncover. To sum it up in classic linguistic terms, a language, even one with a few hundred speakers, cannot be represented as one coherent grammatical system. Given the variety of socioculturally defined contexts for any community of speakers, there are potentially many different albeit overlapping sets of grammatical practices that constitute a language.

Along similar lines, there is the principle that I call "enriched documentary data". This principle is best summed up in Himmelmann (1998), which proposes, in contradistinction with the classic approach, that language documentation is a distinct enterprise from language description. As I further elaborate in later sections of this chapter, the classic approach de-emphasizes the role of data collection by prescribing, as sufficient, a very limited type of language data that researchers should collect and use. However, as Himmelmann (1998) argues, there is no way to know exactly what the language to be described consists of without rich and socioculturally holistic documentation of it to draw from.

The collection of documentary data should thus precede the descriptive phase. Documentation includes a representative sample of language from a variety of sociocultural contexts, such as conversations, songs, prayers, jokes, and sayings. Additionally a variety of speakers and combinations of speakers should be included. Enrichment happens when speakers assist in a preliminary analysis of the language and activities, which is included in the documentation as metadata. All this ensures that much of the nuance and possibility of a language is available for a socioculturally sensitive analysis of it. Put another way, the principle of enriched documentary data is a barrier against bad samples and against aprioristic analyses of what constitutes language for a community of speakers.

Although the principle of enriched documentary stipulates the necessity of a broad language sample, this does not mean that the collection of the data or its analysis necessarily has to be unfocused. According to a principle that I call "prioritizing spontaneous situated interaction", the collection and analysis of data should have a very specific focus. This focus is on video recordings of speakers engaged with one another in spontaneous interactions that occur in community-based normal settings and involve doing correspondingly normal things.

This principle stems from conversation analysis, which has the following as one of its founding premises: Everyday instances of spontaneous and casual social interaction are the locus of human social life and language use (see Sacks, Schegloff, and Jefferson 1974). As I already discussed, research in conversation analysis has amassed a substantial amount of evidence that structures of organization for spontaneous talk-in-interaction, such as the sequential organization of action and turn taking, are at their core universal properties of human sociality (Schegloff 2006). This research thus grounds the idea that social universals are not linguistically grounded, which is an idea in accordance with a typological record of language that suggests linguistic super diversity rather than the existence of linguistic universals (Evans and Levinson 2009).

Considering both the linguistic diversity and interactional uniformity observed cross culturally, there is substantial support for the premise that spontaneous interaction is basic in the sense that it is the basic environment for the development and use of language (Levinson 2006). The field of interactional linguistics has amassed evidence that despite any particularities in the grammar of a given language, much of the grammar is shaped specifically for and by the use of language in spontaneous interaction (Couper-Kuhlen and Selting 2001; Fox 2007; Mazeland 2013). For example, Mazeland (2013) shows that Dutch speakers' have both declarative and interrogative syntax available for asking questions, which reflects epistemic distinctions that are relevant to both questioning and the relationship between questioner and responder. Additional support for the basicness of spontaneous interaction comes from evidence that the organization of spontaneous interaction is the basis for the organization of more formalized or institution-based types of interaction, such as courtroom interactions (Heritage 2008). Thus, because the language used in spontaneous interactions is more basic than other uses of language, the

language used in spontaneous interactions is more representative of a language than other uses of language.

The principle of prioritizing spontaneous situated interaction thus sets spontaneous interaction as the primary focus of data collection and the base-line data type for linguistic analysis. However, the use of the term 'situated' in the name underscores the way in which this data type should be further delimited. As much as it is shaped by and for spontaneous conversation, language is shaped by and for the embodiment and enactment of material and cultural worlds through situated interactions (Goodwin 2000). For example, Goodwin (1996) examines the how airline workers situated in an operations room draw on interactional, grammatical, material, and community-specific resources to make an event visible to the workers on various screens mutually recognizable as a perceptible problem within the professional world they presently inhabit. The emphasis on situated language use is especially important for underrepresented languages, because they are characteristically spoken by tight-knit indigenous communities whose socioculturally embedded relationships to the material world extend to very specific geographies and environments (e.g. Hanks 1990; Haviland 2003; see also Levinson 2003). Because situated language is highly visual, including the use of bodies, space, and material, data is best in a video-recorded format. In sum, the principle of prioritizing spontaneous situated interaction aims to focus attention on this basic data type: Video recordings of speakers interacting spontaneously within the socioculturally structured zones that make up their everyday lives.

The last principle covers the interactional approach's perspective on methodology for the descriptive analysis of language used in spontaneous situated interactions. I call it the principle of interactional-linguistic description. Although the principle grounds much of the analytical

methodology in conversation analysis and interactional linguistics, the overall methodology reflects a focus on language description. Because the discussion of this methodological principle is somewhat extensive, I reserve the next subsection for it.

2.2.3 Interactional-linguistic Description

Because of the different focus from conversation analysis, the interactional approach's analytical methodology is grounded in conversation analysis but adapted for descriptivist linguistics. I therefore use Sidnell (2010), an introduction to conversation analysis, as a primary basis for how I organize and label the different phases of the methodology as transcription, close observation, sample collection, and data-based evidence. The overall goal of this analytical methodology is to examine situated interactional data for language practices. This includes their structure, the categories of meaning they might encode, and the way that they engender community-particular actions, even as these actions are organized sequentially and through other more general structures of social interaction.

The first phase of analysis is transcription. However, because the researcher is working with a language that the researcher may not be fluent in or that is otherwise under-described, the pre-phase of transcription involves the development of a basic metalinguistic representation of the language. This is an enormously time-consuming task, which the classic approach is presently well suited for (Dixon 2014). As a part of the documentation process, this representation should at a minimum include a translation and orthographic transcription, while later on the representation should indicate the morphological glossing and parts of speech (cf. Himmelmann 2012). As a starting point for analytical feedback, such a representation is fine-tuned and updated as its errors are corrected with further analysis. This process thus depends heavily on native speakers as well as potential analytical parameters for language that have been

demonstrated in the literature (again, see Dixon 2014). To ease this initial process, the database should be stored digitally and organized through appropriate documentation software. In this way, the documentary database can be dynamically enriched as the analyst works with native speakers on the basic metalinguistic representation

Given an enriched documentary database, as described above, a transcript serves as an essential guide for deeper analyses of the video data. In the conversation analysis tradition, a transcript should never be considered a finished product, but it should contain enough detail of the language use, the interactional features, and other contextual features to provide a framework for fine-grained close observation (Hepburn and Bolden 2013). In dealing with an underrepresented language that the researcher, much less other observers, may not have fluency in, a transcription may be quite complex. The spoken portion may involve several lines, such as the orthographic representation, the morphological glossing, and a translation. The representation of speech might be further complicated if the transcript indicates the relative timing and position of speaker turns with any accuracy, notably through the indication of pauses and speaker overlap. Additionally, a transcript may indicate gesture, eye gaze, or other visible feature that seems relevant to the interaction.

The details that go into a transcript may vary throughout the phases of analysis. An initial set of transcripts for a broad set of data samples is more coarsely transcribed than a collection of data samples that is part of a specific analytical task. The details of a transcript may also be focused on capturing certain contextual features deemed more relevant than others, lest a transcript become too cumbersome of a guide. It is worth mentioning too that at any stage of transcription, decisions act as potential biases for further analysis. A transcriber should thus be

reflexive about the decisions that go into a transcript, including the acknowledgement of what was left out as well as a justification for what was transcribed (Bucholtz 2000).

The second phase of analysis is close observation. The idea of close observation, borrowed from the conversation analysis concept of "close looking" (quoting Harvey Sacks, Sidnell 2010:29), is that with transcripts and recordings the researcher can examine data over and over again as part of the initial process for uncovering patterns. However, for descriptive linguists working with a language and community of practice different than their own, another part of this initial process involves melding the analysis of recorded data with other ethnographic methods, as discussed at length by Moerman (1988). The patterns sought at this stage are initial indications of language-based practices, including grammatical constructions and formats, wherein linguistic structure is paired with action or meaning. The classic method of description involves analyzing a linguistic phenomenon with respect to the stream of speech or linguistic text in which it is found. However, the kind of close observation outlined here is necessary because the understanding of any bit or part of an interaction requires instead a deep examination of the rich context, communicative structure, and other features that are relevant to how the interaction is organized (cf. Goodwin 1996; 2000). This involves not just examining the data multiple times but also examining it with different analytical guidelines and perspectives.

There are a few guidelines, or ways of organizing an observation, that provide for strong returns on the initial analysis of a single data sample for its particular patterns. These guidelines are meant to highlight not just the potential patterns evoked through a guideline but also those patterns that condition or emanate from a guideline-focused pattern. From the conversation analysis tradition, Sidnell (2010:30-31) provides the following guidelines: The researcher should examine the reuse and repetition of forms and structures, track how speakers formulate a referent

throughout the sample, examine the grammatical format selected for doing an action and how it alternates within the sample, or key in on specific phenomenon within the sample. With situated data, an especially important addendum to these guidelines is for the analyst to examine how language and action are realized through a "semiotic field", such as participant framework or gesture, and made meaningful through a conjunction of fields into a "contextual configuration" (Goodwin 2000). The particular way in which semiotic fields, or signaling vehicles, come together to enable a speaker to do or mean something with language is the hallmark of multimodality. Although the researcher should work to account for patterns in a sample through the particularities of the sample, the researcher should also attend to how a more general pattern might be teased out.

As the researcher gets to know various samples of data quite well, the next step of close observation is to draw out more general patterns across data samples. Doing this, the researcher should pay attention to the two potential structural aspects of a practice, which Schegloff (1993: 121) calls "composition and position". Composition refers to the linguistic formulation of a practice, while position refers to where speakers employ the practice within a sequential organization. In this way, the researcher might notice across various samples that a particular grammatical format is selected at some position for some action, such as the use of a question format for offering help in response to a description of trouble (Sidnell 2010: 62). This type of close observation should additionally draw out an indication of other general practices, including the use and categorical meaning of linguistic constructions and elements.

It is an important part of analysis at all phases, but specifically during close observation, that hypotheses about data patterns and interpretations of data samples be tempered with feedback from native speakers. This type of ethnographic input has traditionally been eschewed

by conversation analysts because of its potential bias on what is actually observable from the data as well as the idea that part of the analyst's observational equipment is having high fluency in the observed language (cf. Mondada 2013). However, again, because descriptive linguists are often working with a language that they are not fully fluent in and a community of practice for which they lack competence, a linguist's understanding of the contextual relevancies and other properties particular to a social interaction may require quite a bit of ethnographic feedback from native speakers (Dingemanse and Floyd 2014). Feedback that provides insight on a specific linguistic phenomenon, such as the use of a deictic form, may come from native speaker ideologies brought forth through elicitation or metalinguistic commentary (Hanks 2009). As the data is further socioculturally enriched, however, the analysis of what happens within the data should be contingent on what can be accounted for within the data.

The third phase of analysis is sample collection. After much close observation, the linguist has preliminary evidence of a linguistic phenomenon, or language-based practice, through common patterning across various data samples. As a first step to fine-tuning the analysis of a practice, the linguist will collect a handful of samples within which the patterns, or a set of related patterns, seem most evident (cf. Sidnell 2010:34). These exemplary data samples should not just include clear demonstrations of what appears to be the normative behavior creating a pattern but also, if available, any demonstrations of a deviation from such norms. The linguist should then precede to thoroughly account for each instance of a practice in question with the particularities of the data sample in which the practice appears, rigorously using the methods discussed for close observation. In doing this type of analysis for each sample of a collection, the linguist can compare them and flesh out the general details of some patterned phenomenon.

The last phase of analysis is the gathering of data-based evidence. In this phase, the linguist works out and describes the general details of a linguistic practice, such as the structure and function of a construction. A generalized practice is described in a way so that its structure and function do not depend on the particularities of any single interactional context. The goal is to demonstrate that speakers recognize, orient to, and use the language practice as a resource for interactional communication.

In gathering data-based evidence, the linguist rigorously applies and consolidates the methods of close observation. There are thus three types of evidence that a linguist uses to make a strong claim about the structure and function of a practice (cf. Sidnell 2010: 62). First, the linguist should have multiple instances of the practice that clearly show its structure and function. The structure, again, involves both composition and position, while function involves action or meaning. Second, for any instance of the practice, the linguist should be able to show that the practice shapes the context in accordance to the function. By shaping the context, I mean that there is a normative accountability to other speakers for the practice. This evidence might therefore consist of one speaker employing the practice and another speaker providing a next-turn response that orients to the practice. It also might consist of a single speaker employing the practice and, through subsequent actions, orienting to the way in which the practice has effected the context. Third, the linguist should also be able to show that, for a claimed function of a practice, each instance of the practice is relevantly employed by a speaker given the context that occasioned it. Given such evidence, a practice is described for its structure and function.

In sum, as the interactional approach has emerged to fill a disciplinary gap between the classic approach and interactional linguistics, its analytical methodology reflects this interdisciplinary position. That is, the focus is on analyzing and describing community-particular

language practices that are used by speakers as resources for spontaneous interactional activities.

Additionally, despite the limited scope of existing research that uses an interactional approach

for language description, there have been strong demonstrations of the validity of the

interactional approach's data requirement and data analysis methods.

2.3 Why Arapaho Makes an Interesting Case Study

I have presented the interactional approach to language description as a development of

the classic approach, rather than as a challenge to it. While preserving the classic approach's

principle of descriptive relativism, the interactional approach adheres to the principle in a very

different way. Notably, the interactional approach's focus on interactional data and analysis takes

advantage of current technology and recent developments in our understanding of human

sociality, especially from the discipline of conversation analysis. It is thus not my goal in the

dissertation to critique the classic approach to language description, but rather it is my goal to

highlight some unique features of the Arapaho language, the analysis of which necessitates the

interactional approach. Therefore, in order to contextualize the dissertation, I find it necessary to

further illustrate some distinctions between these two approaches, especially with respect to how

the Arapaho language has been analyzed and represented through classic description in the

historical literature. In the remainder of this introduction, I further examine these issues by

outlining a few ways that make Arapaho an especially interesting case study for the interactional

approach.

2.3.1 The Arapaho Conversational Database

Descriptive relativism is a principle shared by interactional and classic approaches. A

difference is that the interactional approach puts more emphasis on issues underlying the

principle, such as appropriate representative data and the analysis of that data. A primary reason

then that Arapaho is apt for showcasing an interactional approach to language description is the existence of the Arapaho Conversational Database [ACD] (2011), a rich documentary database of Arapaho language. In this section, I give further background to the principle of descriptive relativism and how it applies to the data requirements of the interactional approach. I then discuss two ways that the ACD makes Arapaho unique. First, the ACD fits an interactional approach's rigorous requirement for data. Second, at the time of this writing, it is one of the only documentary databases of its kind for a language generally considered to be under-described and under-represented in the literature. Taken together, the ACD demonstrates a serious commitment to language documentation as well as to providing a basis for the interactional description of Arapaho language (cf. Michael 2008; Blythe 2009; Dingemanse and Floyd 2014; Gipper 2014).

The concept of descriptive relativism, a hallmark of the classic approach to language description, took its basic shape with the advent of modern anthropology. Marking a paradigm shift in the scholarship on human behavior, modern anthropology came into being in the early twentieth-century through the work of Franz Boas and his students. The movement was highly empirical, and one of its primary goals was to record and describe behaviors of populations underrepresented in the literature, especially those that were popularly understood as being vastly different than the peoples of Europe. This turn in anthropology was driven by a scientific push to develop a more rigorous and accurate approach to researching human cultural behavior than provided by the then dominate evolutionary paradigm and its racialized teleological explanations of culture (Darnell 1998). Boas and his followers demonstrated that a description of a normal behavior for some population needs to be based in how the behavior is relative to the broader sociocultural system of the population, rather than positing a racial or teleological basis. As it developed, descriptive relativism took more of an ecological perspective, wherein human

behavior is thought of in terms of the sociocultural environment to which the behavior is adapted.

Language, understood as a central aspect of human behavior, was a core focus within modern anthropology. Boas even made linguistics one of the fields in his four-field approach to the discipline. Thus language description was very important to the general goal of building a scientifically valid record of human behavior (Darnell 1998). In line with this goal, the classic approach to language description, which developed out of the modern anthropology movement, aims at a relativistic account of underrepresented languages. As a development of the classic approach, the interactional approach maintains this principle.

In order to describe a language by the principle of descriptive relativism, a researcher needs a corpus of linguistic data that is representative of the language. The interactional approach requires data that consists of ethnographically enriched language documentation centered on situated interactions. The Arapaho Conversational Database (2011) [ACD] is exemplary of such data.

In the over-thirty hours of video that constitute the ACD, Arapaho speakers interact with one another in a variety of groupings, situations, and settings primarily within the Wind River Reservation, Wyoming. Many of these interactions are casual encounters, although some are also prompted to some degree. The video recordings are organized into files and there is a wealth of metadata concerning language, the participating speakers, and other contextual matters. Each transcribed and translated video is time-aligned in ELAN documentation software, with interlinear analysis originally done in Toolbox analysis software and then imported into the ELAN database. ELAN software is developed by The Language Archive of the Max Planck Institute for Psycholinguistics, Nijmegen, The Netherlands. (For information on ELAN, go to

http://tla.mpi.nl/tools/tla-tools/elan/ also see Sloetjes and Wittenburg 2008. For information on

Toolbox analysis software got to http://www-01.sil.org/computing/toolbox/information.htm.)

The ACD thus allows for a fine-grained analysis of many aspects of Arapaho language and its

use, befitting the requirements of the interactional approach to language description.

      Additionally, the ACD makes Arapaho unique not just because of its existence, but

because it is one of the best examples of this type of language documentation. Evidence for this

fact comes from the Endangered Languages Archive [ELAR] website (www.elar-archive.org),

which is a program of SOAS University of London. ELAR hosts one of the largest accessible

collections of language-documentary data for endangered languages, with over four hundred

deposited documentation projects. In a survey of summaries of these deposits, I found that less

than twenty of them included any kind of video-based interactional data. Only about half of those

projects, including the ACD, implied a specific focus on spontaneous interaction. Thus, based on

this sample, the ACD is one of a small set of video-based language documentation projects that

is focused on the collection of interactional data for a language that is endangered or

underrepresented in the literature.

      In this subsection, I provided further background on descriptive relativism as a core

principle of the interactional approach to language description. In order to abide by the principle,

a researcher needs access to rich documentary data. The Arapaho Conversational Database is a

rare and prime example of such data. On this factor alone, Arapaho is ideal for showcasing the

interactional approach to language description.

2.3.2 The Classic Approach's Disregard of Arapaho Bimodalism

      Compared to other endangered and underrepresented languages, Arapaho has somewhat

of an extensive history in modern linguistics literature. Thus, given the dominance of the classic

approach to language description in modern linguistics, Arapaho has been subject to the classic

approach on many occasions. Nevertheless, despite the guiding principle of descriptive

relativism, Arapaho bimodalism has almost entirely been disregarded in the literature. Because

of the interactional nature of Arapaho bimodalism, I argue that the absence of Arapaho

bimodalism from this body of work is in large part due to methodological issues around data

quality in the classic approach. Additionally, because bimodalism involves the visual modality, I

argue that the absence of bimodalism from this work is also due to technological and ideological

limitations absorbed by the classic approach during its development. This situation underscores

another reason, then, that Arapaho makes an exemplary case study for the interactional approach

to language description. In this subsection, I review this situation, focusing on problems with the

classic approach that are solved by the interactional approach as I have already defined it.

There is evidence that for over a century and a half, at least, Arapaho language has

featured bimodalism. Again, Arapaho bimodal competency includes knowing a large number of

conventional gestures, many of which are related to Plains Indian Sign Language, as well as

knowing how conventional gestures are used in combination with speech. The prevalence of

bimodalism in spontaneous interactions is clear to both Arapaho speakers and non-speakers

alike. Any observational survey of ACD recordings makes it clear that although bimodalism is

not a ubiquitous property of spontaneous Arapaho use it is prevalent. In an interview, one

speaker stated it quite directly to me in this way: "Sign language, it just comes with what you're

saying." There is historical evidence too. When the language of bygone monolingual speakers is

mentioned in Arapaho oral histories, for instance, it is often characterized as fast and mixed with

a lot of hand talking. There are also brief historical accounts of bimodalism in written media. For

example, in his 1885 Plains Indian Sign Language field guide, W.P. Clark (1982: 39) discusses

the problems and confusions that Euro-Americans had in understanding Arapaho language vis-a-vis Arapaho "gesture speech". Gross (1951) even provides sociological evidence that bimodalism was more prevalent in bygone Arapaho than current Arapaho, bimodalism being one aspect of broader Arapaho language and traditional-culture loss.

Regardless of such evidence, the linguistics and anthropological literature, since the time of Boas, has had little to say about bimodalism. The work of Gross (1951), just mentioned, is a rare exception. The disregard of bimodalism is not for lack of good and deep linguistic and other scholarship on Arapaho over the last century (for an early bibliography, see Salzmann 1961). I provide here a few notable and relevant landmarks in this literature. Arapaho was one of the first languages to be given any amount of descriptive analysis by a Boasian, a student of Boas named Alfred Kroeber (e.g. Kroeber 1916). One of Kroeber's students, La Mont West, used an Arapaho speaker as his sole informant to describe the grammar of Plains Indian Sign Language, which was one of the first grammatical descriptions of a sign language (West 1960). More recent work includes a linguistic ethnography by Anderson (2001), linguistically annotated anthologies of traditional narratives (e.g. Cowell and Moss Sr. 2005; Cowell, Moss Sr., and C'Hair 2014), and an extensive descriptive grammar reference book by Cowell and Moss Sr. (2008). Within the depth and breadth of this language-based research, many unique grammatical and sociocultural properties of Arapaho have been analyzed and described. Nevertheless, the literature demonstrates a complete scholarly disinterest in the unique property of bimodalism.

This disregard of Arapaho bimodalism seemingly owes much to the use of the classic approach and its dominant disciplinary influence on other empirical language-oriented research. Evidence suggests that, despite bimodalism being so apparent in the use of the language, the analytical lens constructed by the classic approach doesn't allow researchers to see bimodalism,

or at least it doesn't motivate them to look for it (cf. Kuhn 1970). The obstacles to seeing Arapaho bimodalism through this approach are both methodological and ideological.

Methodologically, the classic approach, as it is still widely taught in linguistic departments, focuses on two standard data types, which have changed little since the time of Boas: Written notes of language produced from elicitation tasks and audio recordings of prompted traditional stories (e.g. Payne 1997). One obstacle to seeing Arapaho bimodalism is that such data is very limiting. Based on my attempts to elicit bimodalism as well as my observations of other elicitation tasks in the ACD, I find that only lexical gestures are produced through elicitation. Many Arapaho speakers can produce a relatively large vocabulary of lexical gestures on demand, but there is so much more to bimodalism. There are other types of conventional gestures, such as pointing, and there are practices of mixing gesture and speech. A thorough analysis of bimodalism requires the use of video-recording technology. The classic methodology around data collection is thus also limiting because it is traditionally grounded in the use of audio recorders for collecting data. Descriptive linguists, aside from those working on sign language, have only relatively recently begun to recognize the value in video-based data (Himmelmann 1998).

Another data-based obstacle to seeing Arapaho bimodalism through the classic approach is that these standard data types are produced almost entirely outside of a common language context, outside of the norm for how people use language. For the examination of Arapaho, especially, this is important because bimodalism is nearly exclusive to the very specific context of spontaneous interaction. In contrast, elicitation, as discussed above, captures only the small part of language that speakers can sensibly produce outside of a normal context of use. In the case of prompted stories, the issue is the same. A storyteller traditionally develops the telling of a

story with respect to an audience (Cowell 2002). The normal context for traditional stories thus does not involve having the speaker alone in front of a microphone. Evidence that this indeed is an important factor relevant to bimodalism comes from the ACD. Searching through the database, I have found that when storytellers are video recorded out of an interactional context, they do not use nearly the amount or quality of gesture that they do when telling stories to an audience or when telling stories that emerge spontaneously.

The lack of bimodalism in the standard data types could also be a matter of genre. That is, Arapaho speakers may use significantly less gesture when telling traditional stories than they do when telling spontaneous stories. Evidence for this is that many of the prompted traditional narratives in the ACD are recorded in situations where the storyteller is with other native Arapaho speakers. However, even in these cases, the quality and quantity of gesture is still much less than it is for spontaneous narratives. In sum, because of the methodological limitations and unnaturalness of the classic data types, Arapaho language scholars have not been able to carefully observe interactions, and so in this way they have been obstructed from seeing bimodalism.

The classic approach also presents ideological obstacles to seeing Arapaho bimodalism. As much as the state of technology contemporary with the development of the classic approach influenced its methodology, popular language ideologies of the time influenced the theoretical boundaries for what language researchers should observe (Kendon 2004). In the 19th century, European and American scholars widely thought of gesture as a more primitive form of communication than language, a precursor to language. During this time, accounts of Arapaho people by Euro-Americans considered the high use of co-speech gesture amongst Arapaho speakers to be an indication of Arapaho inferiority rather than complexity or uniqueness (e.g.

Lemly 1880; see also the discussion in Clark [1885] 1982: 39). This general stance toward

gesture was not wholly appropriated by early Boasian anthropologists and linguists, and there is

even some work by later Boasians on gesture (e.g. Efron 1941). Sapir, the preeminent Boasian

founder of the classic approach, however, reiterated the popular language ideology about gesture

and thereby promoted the idea that gesture was out of observational bounds for language

research. Sapir (1921) states the following in his primer to language description:

> "…the accompanying bodily movements … express something of the inner life of
>
> impulse and feeling, but as these means of expression are, at last analysis, but modified
>
> forms of the instinctive utterance that man shares with the lower animals, they cannot be
>
> considered as forming part of the essential cultural conception of language, however
>
> much they may be inseparable from its actual life." (21-22)

The disciplinary establishment of this observational boundary was likely a primary influence on

the disregard of Arapaho bimodalism early on.

It was not until Stokoe's ([1960] 2005) pioneering mid-century description of American

Sign Language that descriptive linguists began to really consider manual articulation as a

possible vehicle for language. Even then, the concurrent Chomskian influence on language

research had only reinforced and further solidified the bias against examining co-speech gesture

(Kendon 2004: 68). In sum, co-speech gesture was and continues to be just on the outer edge of a

classic approach observational boundary. Thus, for most language researchers, gesture and thus

bimodalism have not been relevant objects of inquiry.

To summarize, Arapaho was one of the first languages to be examined, albeit briefly,

through the classic approach, and the following relatively strong body of scholarship on Arapaho

language was largely in accord with the classic approach. However, because the classic approach

presents obstacles to research on bimodalism, this important feature of everyday Arapaho was disregarded from the literature. In general, the problem here with the classic approach is a methodology in which its standard data types do not ensure that all language properties are accounted for and a theoretical framework that resists the examination of gesture along with speech. This history of disregard due to problems with the classic approach that are solved by the interactional approach is then another reason why Arapaho makes a good case study for the interactional approach.

2.4 Conclusion

In this chapter, I defined the interactional approach to language description, as I understand it, and examined why the Arapaho language makes a good case study for this approach. I first defined the interactional approach by its interdisciplinary positioning, which is in a sense between the classic approach and interactional linguistics. I provided a few key examples of research that uses an interactional approach to underscore the interdisciplinary need for the interactional approach. I also described the interactional approach as a development of the classic approach that incorporates much of the theoretical and methodological foundations of conversation analysis and interactional linguistics. I highlighted this way of defining the interactional approach through the following five principles:

- descriptive relativism

- sociocultural sensitivity

- enriched documentary data

- prioritizing spontaneous situated interaction

- interactional-linguistic description

The last of these principles defines the important analytical methodology of the interactional approach, and so I described this methodology in terms of phases, including close observation and evidence gathering.

Using this definition of the interactional approach as a set up, I argued that the Arapaho language makes a strong case study for the interactional approach. First, I discussed the ACD, a video database focusing on social interactions amongst Arapaho speakers. I demonstrated that the ACD constitutes the kind of documentary data required by the interactional approach. Then I provided evidence that the ACD is in fact a unique data source for a language that is endangered and underrepresented in the literature. Because of these factors, Arapaho is one of the only languages primed for examination through the interactional approach. There is also another reason that I presented for why Arapaho makes a strong case study for the interactional approach. Arapaho bimodalism has been disregarded in the literature, despite a relatively broad body of scholarship on the language. I argued that this disregard has been a factor of some general methodological and ideological problems with the classic approach. Because the interactional approach presents a corrective to these problems, the description of Arapaho bimodalism necessitates such an approach.

CHAPTER III

ARAPAHO LANGUAGE PRELIMINARIES

3.1 Introduction

In this chapter, I provide some general background on the Arapaho language and its speakers, with special attention to the phenomena examined in the rest of the dissertation. I first discuss the Arapaho language and community in abstract terms. I focus on aspects of the language's natural history, the sociocultural traditions that have helped shape it, and the historical development of its current status as an endangered language. I next discuss spoken language grammar, including some notes about transcription. I focus on grammatical practices and properties that I build on later in the dissertation, such as the morphological and functional relationship between verbal expressions and basic overt nominals. Lastly, I discuss some general properties of Arapaho conventional gestures, focusing on lexical gestures and pointing.

3.2 Language Classification and Sociohistorical Status

In this section, I provide a basic sketch of Arapaho language genealogy and other classificatory characteristics relevant to the language and its speakers. This classification is complicated because the genealogy of Arapaho as spoken is different than that of its repertoire of conventional gestures. Further relevant characteristics of Arapaho language are rooted in Arapaho traditions, disruptions to those traditions, and resultant sociocultural shifts.

Arapaho, classified by its speech, is a member of the large Algonquian language family. Arapaho has two main dialects, Northern Arapaho and Southern Arapaho, which correspond to

the two present Arapaho tribes. Arapaho is also closely related to Gros Ventre, the two being mutually intelligible. In this dissertation, I am specifically examining Northern Arapaho.

Arapaho is also part of the Great Plains linguistic area, which is important for understanding the language's large repertoire of conventional gestures. This aspect of the language is socially and historically related to traditional life on the Great Plains in two ways. For one, Arapaho speakers historically used Plains Indian Sign Language, a pre-twentieth century lingua franca for Great Plains tribes (see Davis 2010). Many of the lexical gestures that Arapaho speakers use with speech are also signs in Plains Indian Sign Language (I provide evidence for this in subsection 3.4.1). In a very different way, other aspects of the conventional gestures used by Arapaho speakers are also related to life on the Great Plains. As with many other Plains tribes, Arapaho speakers anchor the topics of their talk within the local geography through a system of hand pointing practices. These practices reflect a broader traditional symbolism that is conceptualized largely through landscape themes (see Anderson 2001; Cowell and Moss Sr. 2003). According to Levinson (2003), such pointing practices constitute an "absolute gesture system" and are interconnected with a cultural specialization in way-finding (also "geocentric" system, Le Guen 2011). For pre-twentieth century Arapaho nomadism, geographic pointing practices would have been an important resource for maintaining knowledge of the expansive Arapaho territory.

Historically, Arapaho language can be further characterized by changes to it resulting from the shift of Arapaho speakers to reservation life in the late nineteenth century. Before the reservation period, Arapaho speakers were primarily located on the front range of Colorado. During this time, there were thousands of Arapaho people, and they all spoke Arapaho. It is not certain how many members of the Northern and Southern tribes were also able to use Plains

Indian Sign Language as a stand-alone language. However, due to the relationship between

Arapaho conventional gestures and the sign language, I find it likely that there was a strong

degree of bilingualism amongst this population. At this time, only a few members of the tribes

spoke English.

Throughout the late nineteenth century, Arapaho life changed drastically as the tribes

were relocated to their current reservations. This period marks the beginning of language loss

and related sociolinguistic shifts. The Southern Tribe was relocated to a reservation in

Oklahoma, and the Northern Tribe was relocated to the Wind River Reservation in Wyoming. In

the Southern Tribe, there are no remaining fluent speakers of Arapaho. From here on, unless

otherwise specified, I am referring to the Northern branch.

The integration of the tribe into the geopolitical system of the United States made the

English language a prominent sociolinguistic force in the Arapaho community, resulting in the

repression of Arapaho language and loss of Plains Indian Sign Language. In one way, English

was used instead of Arapaho because English was the language in which this new political

infrastructure functioned (Cowell 2002). In contrast, Arapaho is a language that had developed

along with nomadic traditions and other aspects of traditional Arapaho life, and so the language

had to change quite a bit as the Arapaho adapted to life on a reservation based on Euro-American

customs (Anderson 2009; 2011; for an example, see Cowell and Moss Sr. 2003). Additionally,

English quickly replaced Plains Indian Sign Language as a lingua franca amongst the Plains

tribes (Davis 2010). By the mid-20th century, only elder Arapaho speakers were fluent in the sign

language, and the use of related conventional gestures with speech (i.e. bimodalism) was also

observed to be in decline (Gross 1951). Because these factors about language loss in relation to

bimodalism are based on gross observations, it is not clear how the most proficient users of

bimodalism in the early reservation period compare to those of today. This does provide some

evidence, however, that Arapaho bimodalism as it is today, and as I present and describe it in this

dissertation, lacks some of the complexity that it once had.

A different factor of language loss that is commonly attested to by Arapaho speakers is

that Arapaho was overtly repressed by the United States government. Specifically, in the

beginning of the reservation period, Arapaho children were forced to go to boarding schools, far

away from their community, where they were punished for speaking Arapaho. The trauma of this

repressive language policy worked well to reinforce the progressing social dominance of English

in the Arapaho community (Greymorning 1997). Lastly, English gained prominence because the

Arapaho thought it was important to assimilate to the broader cultural practices of the United

States (Cowell 2002; Anderson 2011).

In the face of such a sociolinguistic situation, the value that the Arapaho language has for

daily practices or, more generally, for Arapaho identity has not been enough to maintain the

language's vitality. Instead of stable Arapaho-English bilingualism, English has nearly

supplanted the Arapaho language. Arapaho is now considered an endangered language, with less

than two hundred fluent speakers, all of whom are over the age of sixty. With respect to the

broader Arapaho community, this puts the percentage of proficient Arapaho speakers in the

single digits (Anderson 2009). In response, there are ongoing language-revitalization efforts,

including immersion programs for children, the creation of language-learning materials, and

language documentation projects (for further discussion and analysis, see Vagner 2014). The

development of the Arapaho Conversational Database in particular constitutes a massive effort

along these lines. As part of this broader revitalization effort, my work in this dissertation has

been motivated by the need for a more thorough descriptive record of the Arapaho language as it is used in everyday life.

3.3 Some Properties of Spoken Grammar

In this section I provide a primer on the grammar of spoken Arapaho and a few basic notes about orthography and other transcribing conventions used in this dissertation. I save a full discussion about transcription for Chapter 4, where I discuss other matters related to the data I use in more detail. Unless otherwise specified, the grammatical description in this section draws from "The Arapaho Language" [AL] by Cowell and Moss Sr. (2008), the authoritative reference grammar of the Arapaho language. This work is much more extensive than what I summarize in this section, and so it should be consulted for further explanation and description.

Additionally, readers should keep in mind that the AL authors use the classic approach in their description. In general, I consider the AL to be a descriptive baseline for my use and application of the interactional approach in this dissertation. However, while expanding on the AL, this dissertation does not necessarily depend on the AL. The difference in approach, for instance, means that where I use the ACD as data, the AL authors mostly use audio recordings of prompted traditional narratives and supporting elicitations. It also means that the analytical methodologies are different, as discussed in Chapter 2. Because of this, descriptions in the two works may diverge from one another, at least for a given linguistic phenomenon that both works cover, such as demonstratives. I will indicate the cases where this happens. However, more than just being different in approaches, the two works largely differ in what they cover. Most of the phenomena that I focus on, especially dealing with gesture and spontaneous narratives, are not in the scope of AL. However, in order to demonstrate consistency between the dissertation and the AL in this section, I apply descriptions from the AL to examples from the ACD.

3.3.1 Basics of Phonology and Morphology

Arapaho is characterized by a relatively simple inventory of phonemes but complex morphology. Arapaho phonemes include a glottal stop, indicated orthographically as a single quote, and vowel-length contrasts, indicated by singlet and doublet vowels. Another orthographic convention of note is the numeral three for labiodental fricatives (i.e. /θ/). Each of these conventions is found in the word *he'ne'nii'he3ebkoohut*, further discussed in this subsection as example (1). The phonemes not mentioned are similar to common Indo-European phonemes, and indicated as such by the orthography.

Arapaho's morphology is typologically classified as polysynthetic and agglutinating. In general, this means that words can potentially be made up of many morphemes wherein each morpheme tends to maintain morphemic integrity within the word. These properties are manifest most prominently in verbal expressions, which as singular words often constitute the entire spoken portion of utterances. Example (1) is a verbal expression and its five lines of annotation, as represented within the ACD.

    (1)   **(ACD 14g.046)**

```
he'ne'nii'he3ebkoohut
he'ne'-   nii'-                he3eb-  koohu  -t
that-     when.IMPERFECT-      there-  run    -3.S
proclitic- prefix-            prefix-  vai    -infl
It was around that time when (s)he went over to that place.
```

The word, represented orthographically as a whole, is on the top line. The second line from the top shows the morphemic parts of the word, demonstrating that each morpheme maintains morphemic integrity within the word. The third and fourth lines are the glosses and parts of speech, respectively, for the morphemes. The last line is the translation, which I have altered a bit from the ACD version for this example.

For this dissertation, I represent Arapaho speech a little differently than the ACD. I do this for the sake of transcription succinctness and readability, which will become more apparent in Chapter 4, where I provide a fuller discussion and justification for transcripts. Example (2) is a reworking of (1), based on the transcription conventions of this dissertation.

(2)   (ACD 14g.046)

he'ne'-nii'-he3eb-koohu-t
that-when-there-run-3.S
It was around that time when (s)he went over to that place.

Example (2) shows that the dissertation transcription conventions are much simpler than what is used in the ACD. For one, by comparing (2) to (1), the ACD version, one can see how the top two lines of the ACD version are combined in the dissertation conventions. This liberty is allowed because of the fact that Arapaho morphemes tend to maintain their morphemic integrity. Thus I can represent whole words with internal hyphens for morphemic boundaries.

Additionally, I don't have a separate line for parts of speech, as the ACD representation does. Rather, if any information about parts of speech seems very relevant to a context or analysis, I include it on the gloss line. There is, of course, a drawback to not having such information. For example, (1) but not (2) indicates that the verbal root *koohu* is a "vai" type root, or intransitive-with-animate-subject verb class. There are four verb classes in Arapaho, distinguished by animacy and transitivity possibilities. Each verb class has its own set of person-marking affixes as well as other grammatical properties and pragmatic implications. However, because I have not found such information to be very relevant to the analysis or understanding of the phenomena examined in the dissertation, I do not include it in the transcripts. Likewise, I simplify some of the glossing information, especially in cases where this information is obvious from the context or otherwise represented elsewhere in the transcription. For example, the gloss

"when.IMPERFECT" in (1) is simplified to "when" in (2) because "IMPERFECT" is obvious from the phrase "around that time" in the translation.

Although it is beyond the scope of this dissertation to provide a complete discussion of the morphological complexity and possibility of verbal expressions, I find it necessary to provide further comment on the grammatical particularities of Arapaho person-marking affixes. Verbal person affixes consist of a closed class of morphemes, each indexing differing persons and numbers, such as first-person singular and third-person plural, among many other distinctions. In (3), *-3i'* is the person marker in the two verbal expressions, indexing a 3ʳᵈ person plural referent, which is made explicit by the separate expression *3owo3neniteeno'* 'indians'.

(3)   (ACD 24c)

Heet-woo3ee-3i'   heetn-oo'eisee-3i'   3owo3neniteeno'.
will-be.many-3.PL   will-gather-3.PL   indians
There will be a lot of Indians who will meet there.

Example (3) additionally demonstrates that Arapaho utterances can be constituted by multiple grammatical expressions that use person affixes along with other properties to show agreement with one another and thus clausal consistency. However, as explored with example (2), a verbal expression and its person affixes can stand alone without a separate noun-type expression to specify or agree with the person affixes. Additionally, because Arapaho doesn't have a distinct set of person-pronominal forms, verbal person-marking affixes act as pronominal affixes as opposed to agreement markers.

Because verbal person affixes act as pronominal affixes, Arapaho speakers use them as the normal way to track person or other referents within a stretch of discourse. In general, after a referent has been explicitly specified, as with the use of *3owo3neniteeno'* 'indians' in (3), the speaker normally uses person affixes to index the referent in immediately subsequent utterances.

For example, (4) is spoken just moments after (3), and so the speaker uses *-ei'ee3i'* '-3PL/1PL' to index *3owo3neniteeno'* 'indians' as the agents and the speaker's group as the undergoer of the action indicated by the verbal root *noh'oub-* 'invite'.

(4)   (ACD 24c)

noh'oub-ei'ee3i'
invite-3PL/1PL
They invited us.

Because speakers use person affixes to track referents in this way, person affixes generally distinguish referents that are referred to frequently within a stretch of discourse from those that are not.

3.3.2 Morphosyntax and Discourse

In this subsection I sketch areas of Arapaho grammar that are specifically relevant to the dissertation. The main area of focus is morphosyntax as it relates to properties of discourse and the domain of person reference. In discussing these issues, I use the concept of saliency, following the AL's argument that saliency is a primary organizing parameter for Arapaho morphosyntax (see especially Cowell and Moss Sr. 2008: 10). The goal is to ground the reader in the basic grammar and use of overt nominals, which are referring expressions that are morphologically separated and otherwise distinct from verbal expressions. Overt nominals are usually constituted by noun phrases, but the use of 'nominal' is meant to focus on the phenomenon as a functional category rather than a formal one.

Arapaho grammar is particularly sensitive to the saliency of referents. 'Saliency' here refers to the higher degree of attention that one entity receives in relation to other entities and how that is reflected through language. On a semantic level, Arapaho saliency hierarchies determine how verbal classes and other grammatical properties are structurally organized. In

Arapaho, single person referents are more semantically salient than groups of people, people more than animals, animate referents more so than inanimate, and agents more than patients, among other rankings. These saliency rankings are encoded in grammatical hierarchies that are realized morphologically. For example, of the four classes of verbal expression, transitive verbal expressions in which both the subject and object are animate are the most morphologically complex, reflecting the high semantic saliency of animate referents.

More important here is pragmatic saliency, which is central to the structure and use of verbal expressions and overt nominals with respect to one another. Pragmatic saliency is not predetermined, as with the saliency hierarchies. Rather, pragmatic saliency is situationally determined by discourse factors, including the use of language. Referents with pragmatic saliency include those that are new and central to a discourse, those that are contrasted with other referents, and those that are emphasized through repeated mention.

One example of how grammar reflects pragmatic saliency is the phenomenon of nominal incorporation. In the same way that a verbal expression can carry all the propositional information of any utterance, the language allows the incorporation of some explicit nominal-type information into verbal expressions. (5a) shows a reference to 'Arapaho language' incorporated in a verbal expression and (5b) shows the same root *inono'eiti* in an overt nominal.

(5)   **(ACD 24b)**

a.   nii-beet-hinono'eiyeiti-noo
        IMPERF-want.to-speak.Arapaho-1S
        I want to speak Arapaho

b.   cesisiini neeneyei3eiho'   nuhu'   hinono'eitiit
        begin   I_am_teaching_her DEM   Arapaho.language
        I started teaching her Arapaho language.

The two examples, (5a) and (5b), are not pragmatically identical. Rather, nominal incorporation signals that the referent is not salient. Thus, the speaker gives the Arapaho language more pragmatic saliency in (5b) than in (5a). In other words, by saying (5a) the speaker is stating that she desires to learn Arapaho without drawing specific attention to the language as the object of that desire. In (5b), however, the speaker is drawing attention to the Arapaho language as an object of his teaching, emphasizing the special cultural status of master-apprentice relationships in the teaching and learning of Arapaho.

The way in which grammar reflects pragmatic saliency for person referents is somewhat unique in comparison to other referent types. Aside from person referents, most of the things and entities that speakers refer to are not salient, pragmatically or semantically. Because of this, nominal incorporation is a normal way for a speaker to be lexically explicit when referring to a non-person referent. In most cases, then, if a speaker needs or wants to signal the pragmatic saliency of such a referent, the speaker can use an overt nominal as a resource to do so. However, because person referents are highly semantically salient, nominal incorporation is not as grammatically possible for explicit person reference. Regardless of how possible it is, Arapaho speakers almost exclusively do lexically explicit person reference through overt nominals, which can involve pragmatic saliency or some other function requiring explicit reference. Person reference from within verbal expressions, then, is almost exclusively indexed non-explicitly through person-marking affixes. Thus, in order to signal a person referent's pragmatic saliency, speakers have additional grammatical resources for differentiating the possible functions of overt nominals.

There is one clear-cut way that speakers signal the pragmatic saliency of person referents through overt nominal expressions. This involves the syntactic position of the overt nominal with

respect to the verbal expression. In order for a speaker to signal pragmatic saliency, the speaker

produces the overt nominal in a pre-posed (as opposed to post-posed) position to the verbal

expression (cf. "newsworthiness", Mithun 1987b). The AL uses "focus position" for this pre-

posed nominal position. This means of signaling is available to speakers because Arapaho word

order is not syntactically constrained. That is, an overt nominal can either be pre-posed or post-

posed to a verbal expression, regardless of whether or not and how the nominal is indexed in the

verbal expression. While a pre-posed overt nominal signals pragmatic saliency, post-posed overt

nominals are much more common and reserved for other functions of lexically explicit reference.

For instance, (6) shows one overt nominal in each syntactic position.

(6)   (ACD 56c)

a.   nih-won-siiin-eit   Danny   ne'- nuhu' kokiy
       PAST-ALLAT-rob-4/3S   NAME   then- DEM   gun.NI
       Danny went to go take his gun.

b.   hiiwo'ei3   Danny   nih-cih-nonsih'ebi-t
       nevertheless   NAME   PAST-to_here-drunk-3.S
       So then Danny got drunk.

Both examples are produced by the same speaker from different parts of the same spontaneous

narrative. Example (6a) shows *Danny* post-posed to the verbal expression *nihwonsiiineit*, while

(6b) shows *Danny* pre-posed to the verbal expression *nihcihnonsih'ebit*. In, (6a), by post-posing

Danny, the speaker is doing nothing more than making the reference explicit in order to specify

who is the agent of the action. This is necessary because the speaker was not explicitly referring

to Danny prior to the utterance and there were many other people referred to within the particular

story scene that could have been the agent. The undergoer of the action, however, does not need

to be specified, because this referent has been in focus, or tracked by verbal person-marking

affixes, through to this moment. Thus, without the lexically explicit mention of Danny, the agent

of the verbal action would be ambiguous. Thus, in (6a), the speaker is doing something with the overt nominal *Danny* other than signaling pragmatic saliency. In contrast, with (6b) the speaker pre-poses *Danny*. Here the speaker has reason to signal the pragmatic saliency of *Danny*. Up till this utterance, the speaker has been focusing on one man and his drunken behavior. The others, including Danny, have just been doing their best to deal with the behavior. In (6b), however, the speaker describes a turn of events caused by the actions of Danny. Such a change, contrast, and unforeseen moment centered on a referent is a hallmark of referent pragmatic saliency.

There are other grammatical properties of overt nominals that distinguish functions similar to pragmatic saliency. I briefly describe them here, because their analyses present further complications that are the focus of later dissertation chapters. The first is that an overt nominal expression can be formulated as a bare nominal mention or the nominal mention can be preceded by a demonstrative form. In (7a), the overt nominal *hiseihiitei'yoo* 'the little girl' is a bare mention. In (7b), the overt nominal is *nehe' hiseihiitei'yoo* 'the little girl', wherein the mention is preceded by the demonstrative *nehe'*.

(7)   (ACD 28a)

a.   noh   nenee' nih-nee-neyei3ei'i-3i'   huut   hiseihiitei'yoo
        and   it   PAST-REDUP-to_school-3PL here   girl.NA
        And that...they went to school here, the little girl.

b.   ne'-ii-   -kokoh'u3ecoo-t   nehe'   hiseihiitei'yoo
        then-IMPERF-   -think-3.S   DEM   girl.NA
        Then this little girl was thinking.

The presence of a demonstrative in an overt nominal signals a type of saliency that is different than pragmatic saliency. In Chapter 7, the general function of demonstratives is explained and examined in detail.

Finally, there is one more grammatical property that underscores the complex relationship of saliency with the organization of Arapaho. This property is obviation. Obviation is a two-way 3rd person distinction. The two 3rd person statuses are called proximate and obviative, and they generally index degrees of more and less saliency, respectively. In Arapaho, obviation crosscuts the distinction between different types of expression, because it is realized through person markers as well as through demonstratives (and some nominal mentions). I reuse an earlier example, labeled here as (8), to examine the person affix *-eit* in the verbal expression, which is glossed as "-4/3S" (i.e. 4 is the agent and 3 is the undergoer).

(8)   (ACD 56c)

nih-won-siiin-eit   Danny   ne'- nuhu' kokiy
PAST-ALLAT-rob-4/3S   NAME   then- DEM   gun.NI
Danny went to go take his gun.

It is shorthand to use '3' for the proximate distinction and '4' for the obviative distinction in morphological analyses. In this case, the obviative, Danny, is the agent of the action, and the proximate is the undergoer (i.e. the person whose gun is taken away). The proximate status of the undergoer here signals that he has been the focus of the story sequence prior to this point, while Danny is less focal at the moment. Note again that the proximate referent does not need to be specified because a trail of person affixes has maintained the focus on him and his identity up to this point. As such, obviation is mostly used by storytellers, as it allows a storyteller to develop and maintain one person referent, or character, as more salient than another within some utterance or sequence. In Chapter 8, I elaborate on this idea and further describe the use of obviation in interactional language, especially with respect to demonstratives that are part of overt nominals.

Throughout much of the rest of this dissertation, I further analyze overt nominals for person reference. I examine them as interactional resources for storytellers within the environment of spontaneous stories. I also examine them for broader functional and structural possibilities than what is presented here, notably by including gesture in the analysis. As part of this expansion, in Chapter 5 I refine the concept of saliency and take a slightly different perspective on it, especially as it pertains to interactional contexts.

3.4 Some Properties of Conventional Gesture

In this subsection, I provide some background on the conventional co-speech gestures used by Arapaho speakers. As is fitting with the rest of this chapter, I limit this discussion to topics that can be substantiated through the literature. Because of this, I save a discussion of the ways in which gesture and speech are combined, including bimodalism, for later chapters. The two types of conventional co-speech gesture that I cover here are lexical gestures and basic pointing. While lexical gestures are somewhat particular to Arapaho, basic pointing constitutes a framework or set of practices that is more widespread. However, a sample of observations from the ACD demonstrates that most Arapaho speakers point frequently, and I am not suggesting that all Arapaho pointing is basic. Thus, as I demonstrate in Chapter 6 and Chapter 9, the properties that differentiate lexical gestures and basic pointing are not so clear in a finer-grained interactional analysis of some language practices that involve pointing. The phenomena that I discuss here provide background not only for the later interactional analyses of the dissertation but also for the gestural phenomena encountered in the transcripts.

3.4.1 Lexical Gestures

In this subsection, I describe some basic characteristics of Arapaho lexical gestures. In the literature, there are a few related phenomena that are important to note, which I summarize

here, based on Kendon (1992). In terms of sign language, a 'sign' is the general term for a lexical item that can be phonologically distinguished by a hand's shape, orientation, location, and movement. Facial expression and other parts of the body may be involved too, but the focus here is on manual articulation. Signs make up the vocabulary of a sign language and are grammatically organized through the visual modality. In terms of spoken language, 'gesture' is the general term for any communicative action in the visual modality that is expressed through manual articulation. A 'conventional gesture' is a gesture wherein its form or part of its form is regularly used to indicate some meaning or function. The term 'emblem' or 'quotable gesture' refers to a conventionalized gesture that is similar to a sign language sign in that it is potentially part of a vocal speaker's larger vocabulary. There are two types of emblems. The first is a 'holophrastic gesture', which expresses a whole idea or action on its own and is glossed as a sentence. These gestures are not typically expressed with speech. A beckoning forefinger is an example, which would be glossed as 'come here'. The other type of emblem is the lexical gesture. These gestures are glossed as single words or phrases and are thus only parts or elements of a whole idea or action. They are typically integrated with speech. Arapaho speakers have a substantially larger vocabulary of lexical gestures than what is reported for the speakers of other languages.

Many of the Arapaho lexical gestures are related to Plains Indian Sign Language signs. Observing videos in the ACD, I have found lexical gestures for which there are nearly equivalent signs found in Plains Indian Sign Language guides from the 1800s (e.g. Mallery [1881] 2001; Clark [1885] 1982). For example, (9) and (10) show lexical gestures from the database that are nearly identical to signs described in W.P. Clark ([1885] 1982).

(9) **(ACD 14c.007)**

'drum'

(10) **(ACD 24a.251)**

'before'

About 'drum', Clark (1982) writes, "holding left hand in its position, strike downward several times with nearly-closed right hand, back up, hand held over the imaginary drum, and imitating their way of beating it" (156-157). The gesture of (9) diverges from Clark's 'drum' description only in the palm orientation of the right hand, which is back down instead of back up. About 'before', Clark (1982) writes, "Bring the left hand, back up" … "fingers pointing to front and slightly upwards; bring right hand, back up, index finger extended, others and thumb closed few inches in front of left hand" (64-65). The gesture of (10) diverges from Clark's description of 'before' in that the speaker's left hand in the figure has only the index finger extended and pointing, instead of all fingers.

Arapaho speakers also have many lexical gestures that are localized and thus not directly related to the broader Plains Indian Sign Language lexicon. The existence for Arapaho-specific lexical gestures is an indication that not all aspects of Arapaho conventional gestures have simply been borrowed or adapted from Plains Indian Sign Language. Evidence for Arapaho innovation in lexical gestures includes the many names for local Arapaho places, dances, and other things that have both a spoken and a gestural form. For example, (11) shows a storyteller using a place name gesture.

(11)   (ACD 14g.064)

heetihcoo'oo' 'Thermopolis Hot Springs'

More specifically, (11) is the lexical gesture for 'Thermopolis Hot Springs', which is the name of a place near the Arapaho Wind River Reservation in Wyoming. The gesture uses a full hand with fingers pointed up. Starting near the torso, the speaker brings the hand up to the point seen in the photographs. Throughout her story, the speaker in (11) often uses this lexical gesture with spoken mentions of the Arapaho name of the hot springs, *heetihco'oo'*, which literally translates to 'it goes up'. Although the iconic resemblance of the gesture to a hot spring geyser is apparent, the gesture actually has a literal gloss of 'it goes up', the same as *heetihco'oo'*. This is a factor of the speaker's use of a full hand, which is the gestured form for 'go' (for further analysis of full hand use, see Chapter 6). The spoken name and the gestured name thus go together, which is

further evident by the speaker's frequent use of *ni'iitou'u* 'that's how they said it' after each spoken and gestured mention of *heetihco'oo'*.

Arapaho speakers have a large repertoire of lexical gestures. The number in use is likely in the hundreds, although I have not attempted a count (cf. West 1960). This number, of course, pales in comparison to the spoken lexicon. The result is that for those cases where there is a match between a spoken lexeme and a lexical gesture there is not always a one-to-one semantic relationship. Rather, a lexical gesture will often exhibit rampant polysemy in comparison to the spoken counterpart (for a similar phenomenon amongst Australian Aboriginal languages associated with alternate sign languages, see Wilkins 1997). For example, the previously examined lexical gesture for 'before', from example (10), is also used in the socially comparative sense, as in 'lead', as well as its complement sense, 'follow' or 'watch'. It is probably because of this factor that Arapaho speakers think of lexical gestures as appropriate pedagogical scaffolds for teaching language learners the more complex spoken vocabulary.

3.4.2 Basic Pointing

In this subsection, I provide background on the basic way that pointing is used by Arapaho speakers. I use the term 'basic' for two reasons. First, I use the term 'basic' because I provide an analysis of more complex aspects of pointing practices in other parts of the dissertation. Second, by 'basic' I mean to cover the way that Arapaho speakers use pointing and the world around them to refer to things, or by way of things, that are not always visible to a speaker and other interactional participants. These pointing practices are aspects of conventional gesture because they use recognizable manual articulation as part of how they convey meaning (Johnston 2013). However, unlike the semantic field that structures the meaning of lexical gestures, basic pointing relies on other types of semiotic structure. Here I discuss two pointing

practices, one relies on geographic structure and the other relies on structure that consists of partitioned areas of gesture space. These practices are not entirely particular to Arapaho speakers, but they are particular to some typological characteristics of Arapaho speakers.

For the purposes of this dissertation, I define pointing as any hand-directed movement that is produced as part of a referential action. The hand produces the 'point', which is directed at a 'target' that may or may not be the same as the referent. There are a few basic modes of pointing, which I summarize here following Le Guen (2011). First, there is the distinction between non-transposed and transposed pointing. In non-transposed pointing, a speaker's point is targeting something in relation to the situational time and space, which the speaker and other interactional participants are physically occupying. There are three modes of non-transposed pointing. First, a speaker's pointing target can indicate a referent directly, as when pointing to a visible person to refer to that person. Second, a speaker's pointing target can indicate a referent metonymically, as when pointing to a place to refer to a person socially associated with that place. Third, a speaker's pointing target can indicate a referent metaphorically, as when pointing to an empty area of space to refer to a person that has been arbitrarily associated with that space. Metaphorical pointing is highly elaborated in many sign languages.

In transposed pointing, a speaker's point is targeting an empty area of space, but the association between the area of space and the referent is not arbitrary. Rather, the point is targeted in relation to a time and, more importantly, a place that has been reconstructed in the gesture space throughout the narration. The speaker and other interactional participants are occupying this transposed place in imagination only, through a projected viewpoint. Typologically, language communities tend toward using either the more-common egocentric (or relative) frame of reference for transposed pointing or the less-common geocentric (or absolute)

frame of reference. Speakers of geocentric languages, such as Arapaho, tend to be more precise at targeting geographic places during non-transposed pointing. However, unlike other geocentric languages, Arapaho speakers also frequently use egocentric frames of reference in transposed pointing. I examine transposed pointing a bit further in Chapter 6.

Given that Arapaho is a geocentric language that also has a linguistic relation to a sign language, Arapaho speakers have corresponding non-transposed pointing practices. As speakers of a geocentric language, Arapaho speakers frequently and accurately target geographic areas, both near and far, through pointing. The modes of geographic pointing are both direct and metonymic. For example, image (12a) is of a speaker spontaneously producing a direct geographic point targeted at Boulder, Colorado, as part of how he refers to Boulder. Moments later, (12b) shows the speaker producing a metonymic point, also targeted at Boulder, as part of how he refers to a person.

(12)   (ACD 24b.094, 24b.097)

a.   Direct geographic point at Boulder

b.   Metonymic point at Boulder

The point in (12a) is precisely directed toward Boulder, which is additionally indexed through the speaker's gaze, and angled up to indicate distance (about 400 miles). The reference to Boulder is part of how the speaker is telling other interactional participants about the cameraperson, who is a student from CU Boulder. During the point, the speaker mentions the English version (as opposed to an Arapaho version) of the place name, Boulder, in order to specify a relevance to CU Boulder (as opposed to Boulder as an important area of the Arapaho ancestral homelands). As this particular moment illustrates, a single act of direct pointing can index multiple geographic structures.

In specifying Boulder in association with CU, the speaker made the structure semiotically available for further use. This further use is pictured in (12b), where, after a few utterances, the speaker once again targets Boulder, but this time in reference to the professor at CU who advises the cameraperson. During this point, the speaker makes no explicit verbal reference to the place or its university, as that meaning is already semiotically embedded in the point (for further analysis of this sequence, see Sandoval 2014). Thus, although both points are from the same sequence and both points are targeting Boulder, the point of (12a) is direct because it has Boulder as the referent. The point of (12b), however, is metonymic because it has a person as the referent. Overall, this example shows how Arapaho speakers use geographic pointing as a way to semiotically activate places in the local geography, as if the places were nodes in a virtual diagrammatic map (cf. Enfield 2003b).

As I related Arapaho lexical gestures to Plains Indian Sign Language in the previous subsection, Arapaho speakers also make frequent use of non-transposed metaphorical pointing (cf. "abstract pointing" McNeil, Cassell, and Levy 1993; "deixis am phantasma" Bühler [1934] 1982). Metaphorical pointing is the practice of specifying an area of gesture space to represent a

referent, and while the practice is not exclusive to sign language speakers, it is central to how

many signers track and develop the discourse-identity of referents through a sequence, among

other grammaticalized uses of space (Engberg-Pedersen 2003; Liddell 2003). An example of

how Arapaho speakers use metaphorical pointing in this way comes from a joke sequence about

a girl who translates her grandmother's Arapaho to English for a shopkeeper. Images (13a) and

(13b) show the speaker semiotically structuring his (otherwise empty) gesture space with a

grandma space and shopkeeper space, respectively.

(13)   (ACD 28a.117)

a.   Point to grandma space

b.   Point to shopkeeper space

Although the speaker's use of a thumb point in (13a) and a forefinger point in (13b) are important

for how the speaker is referring to these two characters, this handshape distinction, which I

discuss in Chapter 6, is overlaid onto the more basic practice of metaphorical pointing that I

describe here. Image (13b) shows the one and only time the speaker uses pointing to refer to the

shopkeeper space. In contrast, in separate instances throughout the joke, the speaker points four times to the grandma space. Each of these points is similar to (13a). In some respect, then, the speaker may have produced the shopkeeper space to help distinguish the grandma space.

The speaker's use of the grandma space, though, is more interesting here. With each reference to the grandma character, the speaker's point to the grandma space is the only aspect of the speaker's behavior that is consistent. In particular, the speaker's narrative footing changes three times through the references to the grandma character, and the way the speaker formulates his speech to refer to her changes with each reference as well. With respect to "footing", in the first reference the speaker is "animating" the shopkeeper, in the second and third references the speaker is narrating (i.e. not animating any of the characters), and in the fourth reference the speaker is animating the little girl (see Goffman 1981). Each of these references corresponds to a different spoken formulation of the grandma character. In the first reference the shopkeeper uses *hei'eibehe'* 'your grandmother', in the second reference the speaker-as-narrator uses *hini-i'iiwoho* 'her grandmother', in the third reference the speaker-as-narrator uses *betebi* 'old lady', and in the fourth reference the little girl uses the English term *old lady*. Given this inconsistency from one reference to the next, it is evident that the speaker is consistently pointing to the grandma space, in large part, to maintain referential coherence. This example also demonstrates, however, the way in which metaphorical pointing is used by Arapaho speakers for more complex actions, such as character development.

3.5 Conclusion

In this chapter, I provided some preparatory background on the Arapaho language. I looked at its classification as an Algonquian language, but noted how it also must be classified in relation to the Plains linguistic area, particularly in relation to Plains Indian Sign Language. I

also looked at social changes to the Arapaho community, notably the change from nomadic traditions to the reservation, and described how these changes have lead to the endangered status of Arapaho. I then looked at some grammatical properties of spoken Arapaho, in particular as a system that is morphologically and functionally organized around verbal expressions. In preparation for further examination throughout this dissertation, I specifically focused on the use of overt nominal expressions as they function in relation to the concept of pragmatic saliency. Lastly, and also with attention to preparation, I looked at the phenomenon of conventional gestures, focusing on lexical gestures and basic pointing. The properties of these two types of conventional gesture are important for the later analysis of more complex pointing practices.

CHAPTER IV

THE COLLECTION OF SPONTANEOUS NARRATIVES AND THEIR

TRANSCRIPTION

4.1. Introduction

In this chapter, I provide background on the data collection and transcription conventions that I use in this dissertation. However, my analyses and overall understanding as represented in the dissertation have benefited from data beyond the data collection, and so to start this introduction I provide some general background before discussing the more specific data collection.

In general, my data consists of the ACD as well as, and to a lesser degree, observational notes from ethnographic interviews and other fieldwork. As discussed in Chapter 2, the ACD consists of over-thirty hours of video recordings of a variety of conversational and other social interactions between Arapaho speakers, all of which is organized through ELAN software and includes linguistic annotations and translations. In my use of the ACD for the dissertation project, I have examined hundreds of instances of pointing, demonstratives, and the other phenomena relevant for the dissertation as they occur in various contexts of use.

I only thoroughly examined a fraction of the ACD, while doing a much rougher survey of the rest of the database. The reason why I focused on a subset of the ACD is because it can take hours to thoroughly analyze a few seconds of interactional data. The initial observation, of course, does not take hours. However, seconds become hours when you add together the

following factors of an analysis. The initial observation requires that I comb through a video, looking for gestures that may be interesting. Because in regular speech some gestures are produced as quickly as speech, I often had to watch a segment of a video many times before I was able to notice all of the visible actions that were relevant to the social interaction. While I made such an initial observation, I would note gestures for aspects of their form and structure that might be relevant, such as how a gesture relates to the concurrent stream of speech. I would also note how the gestures were oriented to by the speakers or how the gestures were otherwise embedded more broadly in the discourse. After I had made hundreds of such observations, patterns would start to emerge, such as which aspects of pointing handshapes might be important and how speakers might be using pointing to geographically situate the social identities of people being talked about. Turning initial patterns into hypotheses, I would then return to a subset of instances of pointing (or other phenomenon being examined) and sequentially analyze the discourse in which each instance was produced. This involved knowing what the speakers were talking about, knowing how the topic of their talk was relevant to their situation and to them as individuals, and knowing other factors of the talk, such as grammatical nuances. Depending on the situation, this can involve slowly and repeatedly watching and annotating many minutes of video leading up to the instance of whatever phenomenon is at the focus of an analysis. Through understanding how an instance of forefinger pointing, for example, is structured and specifically used by speakers to accomplish some action within a sequential discourse, I was able to fine-tune the hypothesis. I would carry out this level of deep analysis on dozens of instances of a phenomenon before I was satisfied and confident with a description of that phenomenon. After this step, I would check unanalyzed instances for accuracy. Because of the tediousness of this

type of analysis, I have pretty good knowledge of the majority of the ACD, but I am very familiar with about a tenth of it.

To be clear, however, the tediousness of this analytical task was lessened by many of the ELAN tools, which have enabled me to note structural matters with precision, such as how an instance of pointing or other phenomenon is formed and how it is sequentially positioned or timed with respect to other communicative aspects of its interactional context. Notably, I was able to easily slow down a recording to a quarter of its original speed so that the sequential relationship amongst elements of speech, gestures, interactional participants' bodies, and other potential semiotic signals could be factored into an analysis. Such slowing down is yet another way in which seconds became hours. Additionally, I was able to directly note structural and sociocultural factors for each instance of a phenomenon through labels (or codes) in ELAN, which allowed me to use computational searching strategies when I needed to return to an instance of a phenomenon or others potentially like it in later stages of the analysis. As I fine-tuned hypotheses, I would update labels. Thus, ELAN provides a database format in which I could perform a highly technical and organized overall analysis in a somewhat efficient manner, which is important given the time-cost of the analytical procedures.

My understanding of pointing and other linguistic phenomena, however, is also influenced by what I have learned more directly from Arapaho speakers during fieldwork. The fieldwork took place primarily on the Wind River Reservation in Wyoming, although I also met speakers at off-reservation sites, such as the University of Wyoming and the Denver March Powwow. This fieldwork included focused interviews with speakers as well as my participation in more casual and personal conversations on a variety of topics. Because I am not a fluent speaker of Arapaho but all Arapaho speakers are native English speakers, I used English in my

interactions with Arapaho speakers. Additionally, I video recorded many of these interactions, so that I could analyze or otherwise review the recordings. Overall, I spent just shy of a month doing this type of fieldwork, which in comparison is a very small fraction of the time that I spent with the ACD.

The most important thing that I learned from interviews and talking with Arapaho speakers is that, even in English, it is very normal for them to discuss gesture as something with much sociocultural and linguistic value. My interviews often used ACD recordings as a prompt for discussions about pointing or other phenomena. That is, I would have a speaker watch a video of other speakers in interaction, and I would try to elicit from the speaker an interpretation of what was going on, focusing on some phenomenon of interest. I also tried a more traditional style of interview, in which I asked about the use and form of specific gestures or other phenomena. For the most part, no matter how I approached this interviewing task, I would get little feedback on the phenomenon I had prepared to focus on. Notably, speakers were uninterested in talking about pointing, which was the phenomenon I was most interested in. Instead, the interviewee would re-position the social dynamic so as to underscore my actual role as a learner of the language or knowledge seeker. Then, the Arapaho speaker would provide me with information about gesture in one of a few ways. In a few cases, I was given a brief demonstration of lexical gestures (e.g. the gestures for various animals). In other cases, I was told personal stories recollecting about how much more past generations of Arapahos used to use their hands when they talk compared to current speakers. Similarly, I was also told about how the best Arapaho speakers were the ones who best knew how to use their hands to talk. In still other cases, I was told about how important gesture is for teaching the Arapaho language to children and others. From this perspective, conventional gesture is a scaffold for learning vocal speech,

because the former is much simpler and more intuitive than the latter. Thus, when used together, the gestures help learners to better absorb the language as it is spoken. From these interactions, I learned that Arapaho speakers are similar to the speakers of any language in that there are vast limitations about what they can discuss about their own language and its use, including their use of gesture and especially regarding pointing. However, I also developed a broader ethnographic base than I could gather from the ACD for the various ways in which the Arapaho community understands conventional gesture in terms of Arapaho language, culture, and history.

My ethnographic understanding of gesture and Arapaho language was further enriched by my observations of metalinguistic (including metapragmatic) phenomena in Arapaho speakers' talk. One area of metalinguistics involves vocabulary (or category terms) for language. In general, members of a community use special vocabulary to describe or report the behaviors that they categorize as language. In English the terms 'language', 'speech', and 'talk' are common labels for behavior that constitutes language, as well as verbs such as 'say', 'tell', 'speak', and 'talk' for reporting specific linguistic behavior. When I began to talk to Arapaho speakers themselves about their use of gesture, I noticed that it was quite normal for speakers to refer (in English) to their (Arapaho) co-speech gesture as a language itself if not part of the language, using similar verbs and terms for both gesture and vocal speech. For example, as I reported in section 2.3.2, Arapaho speakers sometimes use the term 'sign language' to talk about their co-speech gesture, thus categorizing it as a type of language. Similarly, another speaker used 'gesture speaking' instead of just 'gesture' in the following way: "This is important. It's part of our language. This gesture speaking." He also gave the following guideline for observing the best Arapaho language speakers, where he applies the verb 'say' to gesture use: "Watch what they say with their hands. [It] makes the language stronger."

Another type of metalinguistic observation that reinforced for me the importance of gesture for Arapaho speakers involves speakers' commentaries on their own use of language. In general, gesture does not normally invoke the type of rich metacommentary that speech does within a community unless gesture is understood and valued by members of that community as part of the language (Wilkins 2003). One environment for such metacommentary is in instances of repair wherein a speaker highlights something problematic about what was just said and then rephrases it. I observed a particularly telling example of gesture repair that underscores the degree to which Arapaho speakers orient to gesture in a similar way to speech. The repair involved an Arapaho speaker who was speaking, in English, to a small group of people at the University of Wyoming. At one moment, he pointed in the general direction of Denver while mentioning Denver (which is 150 miles away from the university). He then stopped his talk to tell everyone that he had made a mistake in the direction of his point. He quickly apologized and repaired the point, the new point being only a few degrees off from the original. To me, the difference in direction between the original point and the repaired point was negligible and not really even noticeable to my untrained eye. However, the speaker's sensitivity to the precision with which his pointing gesture matched the geographic reality is akin, for example, to the sensitivity that people have for using an appropriate word to describe something. Thus, in my observations, Arapaho speakers displayed the linguistic nature of gesture in their talk and actions, as much as they overtly talked about how important gesture is for their language.

The ethnographic grounding that Arapaho speakers provided me with in my fieldwork fueled my drive to understand the linguistic nature of Arapaho bimodalism as it is manifest in the ACD. As previously discussed, I surveyed the majority of the ACD, while only thoroughly examining a subset of it. As I worked on analyzing various factors of the subset, I began to

notice how Arapaho speakers would differently structure types of social interaction, especially narrative and non-narrative talk. In a very basic and expected way, narratives were sequentially structured by multi-unit turns around a past or irreal topic. Non-narrative conversation had more of a turn-by-turn structure and speakers were more focused on the physical or social realities of their present situation.

What I noticed to be more interesting and specific to Arapaho, however, was that spontaneous narratives were marked by higher quantity and quality of gesture-speech bimodalism than more formal (traditional) narratives or non-narrative turn-by-turn talk. The focus of my analysis in this dissertation, therefore, is on spontaneous narratives in the ACD. My primary data is a collection of six of those spontaneous narratives. In the section that follows, I discuss spontaneous narratives as a specific type of interactional language activity, I further justify my focus on this type of data, and I provide a basic description of the spontaneous narratives that make up the collection. The section that deals with transcription focuses on transcript conventions and my justification for the conventions. As the transcripts are representations of the data collection, I have crafted the transcripts so that they uniquely represent the Arapaho language with respect to the specific phenomena that I examine in this dissertation. Because I use many conventions that are not used outside of this dissertation, the section serves mostly as a general guide for understanding the transcript excerpts that I use for examples.

4.2 The Six Spontaneous Narratives

In order to examine bimodalism with the interactional approach, I use as primary data a collection of spontaneous narratives. I focus on spontaneous narratives for three primary reasons. First, the spontaneous narrative is a common type of interactional activity in the ACD. Second,

spontaneous narratives constitute a language activity or genre with a distinct set of practices. Specifically, spontaneous narratives are distinct from traditional narratives, on one hand, and conversational turn-by-turn talk (or small talk), on the other. Unlike traditional narratives, spontaneous narratives are interactionally produced. Unlike turn-by-turn talk, spontaneous narratives are sequentially structured through multi-unit turns that build on a coherent topic. Also, whereas storytellers create and work within a story world, speakers engaged in turn-by-turn talk are more typically engaged with aspects of their present situation. The two types of talk are generally not coterminous. Chapter 6 and Chapter 7 cover some of the more Arapaho-specific language practices that speakers use to distinguish these language activities. Third, spontaneous narratives are rich environments for examining bimodalism. That is, because narratives involve various types of characters, narratives are ideal environments for person reference. As discussed in subsection 3.3.2, person reference attracts the use of gesture in interaction and, more generally, an increase in grammatical complexity.

A brief note on terminology is in order here. By 'narrative' I am referring specifically to 'stories', which consist of characters and events organized sequentially with a beginning and an end. Thus, I use 'narrative' and 'story' interchangeably. Likewise, in this context, I use 'person reference' in specific regards to how speakers refer to the characters that are the agents and undergoers of action in a narrative, be they actual persons, mythological persons, groups, or otherwise. Thus, within the dissertation, I use 'person' and 'character' interchangeably. The genre of spontaneous narratives specifically includes jokes, personal stories, legends, and any other type of telling that concerns the actions of one or more characters within some sequence of events. Additionally, spontaneous stories emerge out of social interactions involving interactional participants. Thus, in this context, I use 'speaker' and 'storyteller' interchangeably,

and I use 'participating audience' or just 'audience' to refer to interactional participants who are not speaking.

As discussed in Chapter 2 and in the introduction to this chapter, the Arapaho Conversational Database (2011) [ACD] constitutes the data source analyzed in this dissertation. The ACD includes many spontaneous narratives, some of which are collaboratively constructed but many more that emerge as performances of a single speaker, which is the type that I focus on in this dissertation. The popularity of story performance amongst Arapaho speakers is in large part due to its use as a primary vehicle for circulating cultural knowledge (Cowell 2002). In (non-collaborative) spontaneous story performances, a storyteller talks while the audience provides subtle feedback, an asymmetry that is often sharp for Arapaho speakers. Despite the asymmetry, storytellers are nevertheless coordinating their talk and other behaviors with that of the audience. Even if subtly, audience members are displaying their understanding, misunderstanding, and alignment with respect to the details of a story and the perspective of its teller. The storyteller is constantly and carefully monitoring these displays and adjusting the story accordingly. Through such accountability of linguistic and other behavior, a storyteller and audience are both participants in an interaction (cf. Goodwin 1984, 1986). It is this interactional dynamic that drives storytellers to use varied linguistic resources, including gesture, as they work to motivate the participating audience to adopt a certain perspective and stance (Sandoval 2014; cf. Stivers 2008).

For the dissertation, I use six spontaneous narratives as primary data. For examples, I use spoken, gestural, and interactional details excerpted from this data collection. As discussed in the introduction, I have examined much more of the ACD than is represented by this collection, including other spontaneous narratives. However, as discussed in section 2.2.3, a sample

collection from the data consists of exemplary instances of the examined phenomena. An instance of a phenomenon is exemplary if it provides a clear demonstration of the normative behavior that gives rise to the pattern that constitutes the phenomenon. Within a collection, such instances can be thoroughly examined and compared with respect to how they are uniquely manifest within their differing contexts of use. Additionally, a broader in-depth analysis of the collection can reveal semiotic relationships amongst a variety of phenomena. I chose the six spontaneous narratives because each of them includes many exemplary instances of pointing, demonstratives, and other phenomena of interest for the dissertation. Within the six spontaneous narratives, there are about one hundred instances of pointing and as many instances of overt nominals, more than half of which include demonstratives. Each of these instances has a unique context of use.

Although there are many other spontaneous narratives within the ACD that include such exemplary instances, I also chose narratives for the collection based on how they would together represent a diverse sample of spontaneous narratives and thus provide for a more robust analysis. There are many characteristics that make the data collection a diverse sample. The situational contexts of the stories range from a few participants in a small room to five participants on a stage with a sizable audience, not all of who can participate because they are not all speakers of Arapaho. In a few cases, the cameraperson is a member of the participating audience. There are three male storytellers and two females in the data I use. Two of the shortest stories feature the same characters and are told by one male speaker. The characters in most of the stories are actual people while in at least one story the characters are stereotypic fabrications. Of the stories featuring actual people as characters, one features individuals that are physically present participants of the interaction, while another features bygone persons. The two other stories that

feature actual people as characters involve people that are living but not physically present. Of those two, one features groups of people as characters instead of individuals as characters. Regarding the storytellers' sources, there are four personal accounts, one of which is a typical account (i.e. based on experiences but not one actual experience). The two others are popular accounts, one of which is a second-hand historical account and the other a joke. The length of the stories ranges from forty seconds to seven and a half minutes. The average story is between one and two minutes.

Although the stories each have many distinct production qualities, they are all spontaneous narratives and as such involve a high use of certain features, notably conventional gestures and overt nominals. There is quite a bit of diversity in this area too, however. Two of the stories use quite a bit of geographic pointing, although only one of those features a wide variety of distinct geographic points. Half of the stories feature the storyteller direct-pointing at another participant as part of a referential action, while four of the storytellers create referential spaces through pointing. Half of the stories feature a relatively large number of lexical gestures, while the others are limited in this area. As far as the spoken elements of overt nominals, two of the stories involve mostly specific names, two involve mostly general references, and two are quite mixed between in this way. Additionally, there are differences among the stories in how many demonstratives are used and of which type. Despite this diversity, overt nominals and conventional gesture generally mark the genre of spontaneous stories, as these resources are much of what storytellers use for doing person reference and other actions that hold their stories together.

Additionally, although each story is thematically quite different in nature from one to the next, each storyteller builds on themes associated with what it means to be Arapaho, which

underscores the use of stories to circulate knowledge. That is, these storytellers are not just participants in the situational interaction, but they are also participating in the ACD documentation process. They are well aware that their audience includes not only the other interactional participants but also anyone who might watch the video recording of their interaction. Thus, the spontaneous stories are not just records of exemplary Arapaho language but they are records of personal stances and positions concerning Arapaho culture and the use and state of the language.

The following subsections each provide a brief description of one of the six spontaneous stories in the data collection. I provide a title, which I have created, a brief summary, and an ACD key for further access. Furthermore, I reference the title and ACD key when I use excerpted examples from the transcripts of these stories.

4.2.1 "Historic events at Thermopolis"

In "Historic events at Thermopolis" (ACD 14g), the storyteller is telling about Arapahos and Shoshones from the late 1800s and early 1900s. Arapahos and Shoshones share the Wind River Reservation, and the story is really a string of vignettes about historic events during this early reservation period that took place at the hot springs in Thermopolis, WY, which is near the reservation. The story more specifically focuses on their interactions with white people at Thermopolis. The story involves a mix of character types, from specific individuals to non-specific groups of people.

One focal part of the story is about a famous actress that came to the hot springs. The storyteller is a woman, and she emphasizes that she learned the story directly from her forefathers, who knew the actress. The storyteller uses metaphoric pointing and other narrative developments of the gesture space to visually represent the variety of characters and their

actions. The storyteller is accompanied by four other Arapaho speakers on a stage, in front of an audience that includes a mix of Arapahos and non-Arapahos. Although they are on stage for the purposes of talking about and performing culture for the audience, their talk is not scripted and the event is informal. This story is about one-and-a-half minutes long.

4.2.2 "Arapaho language mentor for woman in room"

In "Arapaho language mentor for woman in room" (ACD 24b), the male storyteller has been telling about the state of Arapaho language education when a woman walks in the room. He uses the occasion to transition the topic of his talk to his language-mentoring relationship with the woman. The story is a somewhat idealized account of how the relationship developed and of how the storyteller has taken on the responsibility. The storyteller uses metonymic pointing to the woman and himself to refer to their past selves. The storyteller is joined by two other fluent Arapaho speakers, and they are interacting in a school room. This story is about two-and-a-half minutes long.

4.2.3 "Trip to language conference with woman in room"

"Trip to language conference with woman in room" (ACD 24c) features the same storyteller and setting as "Arapaho language mentor for woman in room". In this story, which happens a few minutes later, the storyteller is again talking on the topic of Arapaho language and his relationship with the woman in the room. This time, he gives a rather cut-and-dry account about a native language conference that he and the woman went to in which they gave a presentation about the Arapaho language. This story is less idealized than "Arapaho language mentor for woman in room". It is about one minute long.

4.2.4 "Joke about little girl's translation of Arapaho"

In "Joke about little girl's translation of Arapaho" (ACD 28a), the storyteller and three other participants, including the cameraman, are sitting outside at a cultural event that features a traditionally made tipi. The speaker uses the tipi to historically anchor an old-time joke about a girl who is in a shop with her grandmother. In the joke, the grandmother wants canvas for a tipi and the girl has to translate this into English for the shopkeeper. These characters are developed in large part through metaphoric pointing. The punchline hinges on the girls inappropriate translation, which the storyteller delivers in English. The story is just over a minute long.

4.2.5 "The boys had trouble learning Arapaho"

In "The boys had trouble learning Arapaho" (ACD 44b), the storyteller is telling about her experiences teaching the Arapaho language to young children. In the story, she contrasts girls and boys, focusing on the boys' particular troubles learning the language. For the most part, these groups are the primary characters. She uses metaphoric pointing to underscore how she contrasts the groups. Additionally, her story is not about a specific or actual experience but is rather a created example drawn from her typical experience. She is joined by two other interactional participants, her husband and a cameraman. They are in a living room. The story is forty seconds in length.

4.2.6 "Hunting, drinking, and eating"

In "Hunting, drinking, and eating" (ACD 56c), the storyteller tells about a hunting trip, starting from when he was awaken one morning until the next morning. During that full day, the storyteller reminisces about various events, from a scouting drive to a drunken confrontation amongst one and then another of the men in the hunting party. At the end, a woman helps him clean up and prepare the animals so that he can enjoy a late meal of fresh meat. Notably absent

from the story is the actual hunting and killing of the animals. The storyteller uses a number of geographic points to develop the narrative space as well as a number of direct points within that space to refer to the characters and their various actions. The storyteller is joined by another male participant in the room of the school building. One interesting feature of the story is that the storyteller, upon later watching the video, remarked that he was trying unsuccessfully to engage the other participant to collaborate in the story (Cowell, personal communication). The story is seven-and-a-half minutes in length.

4.3 Transcription Conventions

In this section, I discuss the various transcript conventions that I use to represent the six spontaneous narratives of the data collection. I use excerpts from these transcripts as examples to illustrate the various phenomena that I analyze. Because the details of these excerpts are important, I also provide some justification for transcription decisions, especially regarding why I do not include some details. In general, my decisions are focused on making transcript excerpts readable while showing an appropriate amount of detail to highlight the phenomena of interest in this dissertation. Each subsection that follows highlights a different aspect of the transcripts. I use examples from "Historic events at Thermopolis", which I include in its entirety in the appendix.

4.3.1 Line Numbering and Speaker Identification

Each line of a transcript is numbered. However, these numbers are not always consecutive. Rather, the line numbers are taken from the identifiers that the ACD uses for each utterance. For example, excerpt (14) shows line numbers 11 and 12 from "Historic events at Thermopolis", which correspond to utterance numbers 14g.011 and 14g.012, respectively, of ACD file 14g.

(14)   **(ACD 14g)**

11   {53}   tih-'eeneinoo'ei-3i'   nuhu'   beis-iihi'   hee3eb-ne'-
              when-go_hunt-3PL   DEM   all-ADV   there-then-
              When these [men] were all out hunting...there...

12   nuhu'   Tetons way up there   3ebiis-iihi'
               DEM   Tetons   way up there   in_that-direction-ADV
               In the Tetons, way up there, up towards that way...

I number the lines in this way so that readers can easily match up the transcripts with the ACD, if

need be. I have tried as much as possible with the transcripts to maintain the integrity of the

utterances in the way that the ACD has defined them so that there is one utterance per line of

transcript. However, there are times when an ACD-defined utterance is too long to work as one

transcript line. In these cases, I have used a sub-numbering system. For example, excerpt (15)

shows three lines of the transcript that correspond to the single ACD utterance 14g.014.

(15)   **(ACD 14g)**

14.1   {53}   ['going up and down' (geyser)]
               noh   nuhu'   Thermopolis   tohuu-niinoo'ei-3i'
               and   DEM   Thermopolis   since.IMPERF-hunt-3PL
               And in Thermopolis, when they were hunting,

14.2   [continued (geyser) ..]
               he'ne'-nii'-cii3inoo'oo-t
               that-when.IMPERF-plunge_into_s.t.-3.S
               that's when [it fell in]

14.3   ****<'go in' PT: water space>
hi'in   buffalo   in that hot water
DEM   buffalo   in   that   hot   water
that buffalo fell in that hot water.

15   {34}   yeah

As shown in (15), the sub-numbering convention uses a classification system in which the first utterance partition is designated with the number '1'. One additional issue is that there are some transcript line numbers that appear to be skipped. This only happens when there is no relevant content associated with the correlating utterance identifier in the ACD.

Speaker identifiers are positioned between line numbers and the actual linguistic representation. The convention for speaker identifiers uses curly braces, such as "{53}" and "{34}" in excerpt (15). The numbers used as identifiers correspond to the anonymized numbers used for speakers in the ACD. Speaker identifiers are not indicated for each line, so that a speaker is assumed to be speaker until another speaker is indicated. This is shown in the switch from speaker 53 to speaker 34 in (15). Where actual names are used within the transcripts, I provide pseudonyms.

4.3.2 Speech

The line representing speech uses the orthography and morphological breaks, as discussed and rationalized in subsection 3.3.1. When gesture is present, the speech is represented below the representations of gesture, as indicated by the arrow in excerpt (16).

(16)   (ACD 14g)

16   {53}   [floating body in water space]
       →   noh   hiis-iihi'   honoot   tih-'iisoxuh'u-t
              and   PERF-ADV   until   when.PAST-cooked-3.S
              And it stayed [in the water] like that until it was cooked.

When gesture is not present, then speech is represented as the top line, as in excerpt (17).

(17)   (ACD 14g)

18   {33}   yehei
              gee whiz!
              Gee!

In the rare case that the only elements of speech are English-based forms, then the speech line is

the only line, as in line 21 of excerpt (18).

(18)   (ACD 14g)

20   [around narrative space]
              bis-iihi'   'oh   huutiino
              all-ADV   but   around_here
              All of them, and here [they ran into some Mormons]

21   {52}   shoshones

22   {53}   "[trace PT: through narrative space]"
              heet-bi'-cebisee-ni3   nih-'ii3-e'   nihii
              FUT-just-walk-4S   PAST-say_to_s.o.-4/3S   well...
              "He will just walk by," he said to him, uhh...

Additionally, each element or word of Arapaho speech is separated from the next by a few spaces, to ease readability. This is the case for line 20 of excerpt (18). More space is used to indicate a larger than normal time gap between spoken elements or, in rare cases, to make room for long glosses, as is the case for line 22 of excerpt (18). Additionally, spaces may be used to better display how the speech and gesture are synchronized (which is discussed further in subsection 4.3.5). A space after a morpheme-boundary hyphen indicates a morpheme that is normally suffixed to a larger expression but for one reason or another is not being produced as such. In excerpt (19), *heetn-ii-* of line 44.1 and *nii-* of line 44.2 are examples of this phenomenon.

(19)   (ACD 14g)

44.1   {53}   ['go high' ……]
                  noh   heetn-ii-   no'oteenebeihi-t
                  and   FUT-IMPERF-   thought_highly_of-3.S
                  And...he was highly thought of [by the Whites]

44.2   nii-   hinee   hi'iihi'
                  IMPERF- DEM   INSTR
                  because of doing that..

Such cases might be instances of repair or of morphemes that are produced separately for some other interactional purpose.

There are a large number of conventions for speech that I do not use but that are typically used in the transcripts of interactional linguistics and conversation analysis research. I leave out many of the details indicated by such conventions because I have not found these details to be as relevant to the phenomena of interest as the details that I have included in the transcripts. This is not to say that I have ignored such details. My decision on where to draw the line here was made

mostly in the interest of readability. Notably, while I do indicate much of the visible and audible activity from the non-storytelling interactional participants, I do not indicate precisely where overlap occurs. I also do not indicate time values, prosodic cues, or relative stress. Although the indication of such features would undoubtedly increase the analytical value of the transcripts, it would also make them much harder to follow. In general, besides the use of spacing and hyphens for morpheme boundaries, I have attempted to represent the speech as cleanly as possible so that the line of speech can serve as an organizational center for all of the other details represented in the transcript.

4.3.3 Interlinear Gloss

The line containing interlinear glosses is in smaller font and is positioned directly below the line of speech. Each gloss is left-aligned with the corresponding representation of speech. This interlinear gloss line does not include much information about parts of speech. There is some indication of adverbial elements for example. Also, "DEM" is used to indicate elements of the demonstrative class, as I specifically focus on those elements. Most of the glossing contains basic semantic information. In general, there are a few important conventions. Capital letters are used to indicate grammatical morphemes, such as "PAST", whereas lowercase letters are used for lexical information. A dot between two glosses represents that these two glosses are two aspects of meaning for one morpheme, as in "when.IMPERF" and "3.S" of excerpt (20).

(20)   (ACD 14g)


```
46.2            ~~~~~~****<PT: camp space>
                he'ne'-nii'-he3eb-koohu-t      nuhu'   nih'oo3ou'u
        →       that-when.IMPERF-there-run-3.S   DEM    white_people.NA.PL
                That's when [a white woman] went over there.
```

An underline between two words of a gloss indicates that these two words go together, such as "white_people" in excerpt (20).

4.3.4 Translation

The line for the English translation is directly beneath the interlinear gloss. I use the exact translations provided by the ACD except in cases where the transcript organization requires subtle changes. Square brackets are used as part of the ACD translation conventions to indicate information that is not explicitly stated by the speaker, but is somehow otherwise implied. For example, in excerpt (21), "[the water]" is used in the translation to indicate that water is pragmatically implied in the sequence as the rising substance that the speaker is referring to.

    (21)   (ACD 14g)

    40.1   {53}   ~~~** | ***<geo PT:Thermopolis | PT: up>
noh   nuhu'   heetihco'oo'
and   DEM   where_rises
And this place where [the water] goes up,

Additionally, I do not indicate in the speech line where a speaker animates a character through reported or enacted speech. Thus, I use quotes in the translation to indicate these situations. For example, in excerpt (22), the speaker is reporting speech instead of narrating it in saying *nooxeihi' indian camp*. I thus have indicated the translation of this reporting with quotes.

(22)   (ACD 14g)

46.1   "[PT: forward, camp space]"
nooxeihi'   indian camp   ne'-nih'iis-i3ecoo-t
maybe   indian camp   that-PAST.what-think-3.S
"Maybe it's an Indian camp," that's what [the white man] thought.

Other than such conventions, the translations, as they are formulated in the ACD, are aimed at preserving the linear flow of the Arapaho speech while at the same time representing it in vernacular English prose.

4.3.5 Gesture

The representations of gesture are positioned directly above the line of speech. There is a textual representation and directly above that a visual representation, or image. The image or series of images depicting movement are often of a different width than the corresponding textual representation. So that the correspondence is transparent, I have centered the image with respect to its corresponding textual representation. I have only included visual aspects of the form and/or movement of a gesture that seem relevant to its meaning. At times, images are more focused on gesture, while at other times images include other visual information, such as the bodies of the participants.

There are different textual conventions for different types of gesture. Most of the gestures are bracketed with square brackets. The square-bracketed area is positioned with respect to the line of speech in order to indicate how a speaker synchronizes the gesture and speech. For example, in excerpt (23), the speaker produces "['s.t. smoking' ……………]" as she says *hi'in* and stops producing the gesture just as she says *tohuu-xouu'oo-'*.

(23)   (ACD 14g)

45   ['s.t. smoking' ……………]
        kee'in hi'in toh'uni wootii   tohuu-xouu'oo-'
        y'know? DEM   since   like   since.IMPERF-smoke-0S
        You know that [place] where...., like because it smoked [it was known].

Conventional gestures are indicated with single quotation marks. Thus, "['s.t. smoking]"

indicates a lexical gesture that can be glossed as 'something smoking'. For gestures that are not

conventional or that I cannot otherwise determine to be conventional, I use a description without

single quotes. For example, in line 16 of excerpt (24) the speaker's gesture depicting a floating

buffalo body depends on the use of non-conventional imagery, such as the water space that the

speaker created in line 14.3.

(24)   (ACD 14g)

14.3   ****<'go in' PT: water space>
          hi'in   buffalo   in that hot water
          DEM   buffalo   in that hot water
          that buffalo fell in that hot water.

15   {34}   yeah

16   {53}   [floating body in water space]
          noh   hiis-iihi'   honoot   tih-'iisoxuh'u-t
          and   PERF-ADV until   when.PAST-cooked-3.S
          And it stayed [in the water] like that until it was cooked.

Other relevant visible actions, such as head nods may also be indicated in square brackets. For

gestures that I am not able to analyze in terms of a gloss or other description, I use "[gesture]".

For gestures that are produced as reenactments, similar to reported speech, I use quotation marks.

For example, in excerpt (25), the speaker not only reports the speech of the character in saying

heet-bi'-cebisee-ni3 'he will walk by', but she also visibly enacts the character by pointing as if

referring to someone's path of movement.

(25)   (ACD 14g)

22	{53}	"[trace PT: through narrative space]"
		heet-bi'-cebisee-ni3 nih-'ii3-e' nihii
		FUT-just-walk-4S PAST-say_to_s.o.-4/3S well...
		"He will just walk by," he said to him, uhh...

To indicate gestures phases that are distinct but connected together as part of a complex phrase, I

use a line or pipe separator. For example, in excerpt (26) the speaker produces two lexical

gestures, one after the other. The first gesture is 'one' and the second is a point in the form of a

'gun shot', and so I represent it as "['one' ……….. | 'gun shot' PT]".

(26)   (ACD 14g)

29.2		['one' ………..	'gun shot' PT]
		ne'-niiseihi-ni3 nih-noh'-oo3i'
		then-one-4S PAST-kill-3PL/4
		one [cow] [was taken], and they killed it.

The use of 'PT', as in the gesture annotation of excerpt (26), indicates the class of hand points. When a lexical gesture is used to point, it is indicated as in "['gun shot' PT]". Other types of points are indicated with information before and after PT. In general, the type of point is stated before PT, and the description of what is being targeted or referred to is indicated after the colon to the right of PT. For instance, a geographic point targeting Thermopolis is indicated with 'geo' as in excerpt (27).

(27)   (ACD 14g)

40.2   [geo PT: Thermopolis]
                  ni'iit-ou'u
                  call_s.t._thus-3PL
                  they call it.

Pointing handshapes are also indicated in this way. Some points are highly conventionalized in association with a certain action or function, such as 'imperative' or 'declarative' points. They are indicated as "[imperative PT]", for example. Points that I am not able to analyze simply are designated by "[PT]". The term 'space' is used to indicate an area that a speaker has metaphorically designated as the type of space described. For example, excerpt (28) shows the speaker pointing to an area of gesture space that she metaphorically targets in reference to a camp, and so I describe it as "camp space".

(28)   (ACD 14g)

46.1   "[PT: forward, camp space]"
                        nooxeihi'   indian camp   ne'-nih'iis-i3ecoo-t
                        maybe   indian   camp   that-PAST.what-think-3.S
                        "Maybe it's an Indian camp," that's what [the white man] thought.

Arapaho storytellers often refer to or within such spaces, and so this convention is central to gesture conventions.

There is one special pointing convention that I use to indicate in a very precise way how a point is synchronized with speech. In doing so, I use '~~' to indicate the preparation of the point, '***' to indicate the stroke or apex of the point, and I follow this with a description in angled brackets. For example, excerpt (29) shows that the point is synchronized with the speech so that the apex is produced just before the morpheme -*eit* and then the point and this morpheme overlap briefly.

(29)   (ACD 14g)

52.2   ~~~~~**<PT: old-men space>
                        hee'inon-eit   nehe'   hisei
                        know-4/3S   DEM   woman
                        they knew this woman.

Thus, the position of the angled bracket is not indicative of how the pointing gesture and the speech are synchronized. It is the '**' that indicates this. The precision of this convention is especially important for Chapter 9.

4.4 Conclusion

In this chapter, I provided an overview on the data collection and transcripts that are central to the dissertation. The data collection is made up of six spontaneous narratives. These narratives provide a varied sample, while at the same time being exemplary of how speakers use resources such as pointing and overt nominals. The transcripts are organized so that the line of speech is easy to follow and so that it serves as a basis for the other lines of annotated information, including glosses, translation, and gesture. Notably, I discussed my use of conventions for representing gesture, which are quite intricate and suited specifically to the phenomena of interest in this dissertation.

CHAPTER V

THE DISCOURSE RELEVANCE OF CHARACTERS IN SPONTANEOUS

NARRATIVES

5.1 Introduction

Discourse relevance is the functional domain through which I describe Arapaho

storytellers' use of pointing and demonstratives, including their bimodal properties and other

related phenomena. Through my analysis of Arapaho, I support Cowell and Moss Sr. (2008) in

their argument that saliency is an organizational parameter of Arapaho grammar. Discourse

relevance, then, is related to saliency, as I discuss in section 5.2. Similar to many related

concepts, discourse relevance can be conceived of as a qualitative descriptor pertaining to how

storytellers organize and dynamically manage their story characters so that, at least in part, a

sequential stretch of a narrative (or a whole narrative) can be said to be more about one of its

characters than another one of its characters or it can be said to be about some relational dynamic

between certain characters. However, as I adapt it to fit my observations of Arapaho language,

discourse relevance covers a broader scope of phenomena, including spatial structure, and is

more dynamic across a given sequential discourse than other related concepts allow for. More

specifically, the domain of discourse relevance, as I use it in this dissertation, includes the

'discourse statuses' of characters (and other referents) and the combination of those statuses into

a 'discourse relevance framework'. A character's discourse status is defined when a storyteller

signals some degree of importance or some quality for the character in relation to another

character. This relational quality of statuses is structured by various factors, including how a storyteller fits characters into a relevancy ordering and how a storyteller organizes characters in a narrative space. By developing character statuses, the storyteller thus develops a discourse relevance framework. Discourse relevance is also relative to the changing discourse context, including the interactional participants, and so storytellers may change aspects of a character's discourse status throughout a narrative. In this way, a discourse relevance framework is dynamic.

For Arapaho speakers, discourse relevance is central to how an Arapaho storyteller spontaneously achieves a narrative and makes it meaningful for the audience. Arapaho speakers have a number of linguistic and other conventional resources through which a storyteller can develop the discourse status of a character. These resources can be conceptualized as signals of discourse relevance, and they are the focus of my examination in the rest of the dissertation. In Chapter 6, I examine pointing handshapes and how they are used to distinguish characters' discourse statuses within narrative space. In Chapter 7 and Chapter 8, I examine demonstratives and overt nominals for how these resources are used, among other things, to order character discourse statuses. In Chapter 9, I examine a bimodal construction and how it is used to establish a visual opposition and thereby a social asymmetry in the spatial organization of characters' discourse statuses. However, my analysis of these conventional resources and of the practices for using them depends on other practices that storytellers have for developing or reinforcing characters' discourse statuses. These are practices for foregrounding characters, and as such they are can be conceived of as displays by the storyteller that correlate with signals of discourse relevance. Foregrounding practices include referring to a character with high frequency and character reenactment. As such, foregrounding practices are not particular to Arapaho language in the way that the signals of discourse relevance are. In subsection 5.3, I discuss how

foregrounding practices make up part of the interactional-analytic framework for the examination of the conventional resources. In subsection 5.3.1, I provide a discussion and examples of some of the most fundamental foregrounding practices. In doing so, I show that even though discourse relevance defines a functional domain, storytellers' practices that relate to discourse relevance are also important for how they do a variety of other things besides managing characters, such as stance taking.

5.2 Conceptual Overview

Because it deals with person reference as it relates to discourse properties, the conceptual territory of discourse relevance overlaps with that of a number of other concepts, most of which are associated with the term 'discourse salience'. I use the term 'relevance' instead of 'salience' for three reasons. First, there is some terminological confusion in the literature with 'salience' (and 'saliency'). Second, I want to distinguish the functional domain that I am examining from the closely related one that Cowell and Moss Sr. (2008) call "pragmatic saliency" (also discussed in subsection 3.3.2). Third, my use of 'discourse relevance' generally aligns with the use of the term by others, including van Dijk (1979), who focuses on various types of relevance in relation to discourse comprehension, and Shibatani (2006), who focuses on the grammatical manifestation of discourse relevance. However, my adaptation of the concept for Arapaho introduces spatial organization of characters (and other referents), as a potential factor of their discourse statuses, and a discourse relevance framework, which is the summation of how characters are ordered and otherwise relate to one another through their statuses. The way a storyteller builds and works within a discourse relevance framework is a central component of how the storyteller achieves a spontaneous narrative. In this section, I examine these factors with a focus on situating my use of discourse relevance within the literature.

When applied to reference, salience is a useful concept for a variety of phenomena, but there is a lack of consistency in the literature with how the corresponding terminology is applied. In subsection 3.3.2, I summarized the use of 'saliency' by Cowell and Moss Sr. (2008) as an indication of the high attention that one entity receives in relation to other entities and how that indication is reflected through referential language. In this way, a salient discourse referent is any referent, such as a story character, that can be said to have relative importance because it is foregrounded in the interactional focus of attention. Thus, a referent's saliency might be due to its individual and cultural qualities, its perceptual accessibility, or how it has been pragmatically developed within a discourse (Hanks 1990; Clark 1996). For example, as I further summarized Cowell and Moss Sr. (2008) in subsection 3.3.2, Arapaho grammar is sensitive to both "semantic saliency" and "pragmatic saliency". Some researchers, however, use the similar term 'pragmatic salience' as an alternate for 'discourse salience', which has much more specifically to do with how the cognitive processing of a referent is encoded in language (for examples of the alternation, see the papers in Chiarcos, Claus, and Grabski 2011; cf. 'cognitive saliency' Schmid 2007).

This concept labeled as 'discourse salience' has been given much attention in the literature, and two dimensions of discourse salience are widely recognized by researchers (e.g. Van Valin and Foley 1980; Mulkern 2007; Chiarcos 2011; Næss 2011). In the dimension most widely represented through research, discourse salience is a cognitive model for how hearers process speakers' references. A hearer is theorized to have some pre-reference cognitive status of a referent in working memory, and the hearer's processing is a matter of how this cognitive status compares to the referent status as encoded in the speaker's reference. Thus, this dimension of

discourse salience is often conceptualized as backward looking and includes phenomena such as definiteness, givenness, and anaphoric reference.

The other dimension of discourse salience is more important for my understanding of discourse relevance. This dimension is comprised of "speaker-related factors" as opposed to "hearer-related factors" according to Van Valin and Foley (1980: 338-339). The common use of 'speaker' to conceptualize this dimension reflects a speaker's ability to use referring expressions to affect a referent's salience (for the hearer) relative to the salience of other discourse referents. This happens, for example, when a speaker emphasizes one referent over another. Mulkern (2007) thus calls this dimension "imposed salience" as opposed to the hearer-based "inherent salience".

Because speaker-based salience involves how speakers use language to affect how hearers interpret the salience of referents, it is conceptually broader than, albeit in line with, the more nuanced phenomenon that Cowell and Moss Sr. (2008) call "pragmatic saliency" as well as the one that I am calling "discourse relevance". In order to underscore their differences, I review pragmatic saliency here before moving on to discourse relevance. For Cowell and Moss Sr. (2008), a referent with pragmatic saliency is one that Arapaho speakers work to draw momentary attention to through a referential action with an overt nominal mention. The authors define such referents as "new referents", "old referents being reactivated", "contrastive referents", or "emphatically highlighted (often repeated) referents" (p.403). Thus, as I discussed in subsection 3.3.2, when a speaker signals the pragmatic saliency of a referent, the speaker is working to draw emphatic attention or focus on the referent due to a thematic change or turn of events involving the referent. Because pragmatic saliency is the outcome of a moment in which such change is manifest, the signaling scope for pragmatic saliency is the utterance.

In contrast, a character or other referent's discourse relevance is the outcome of a much more intricate signaling process, and the scope of discourse relevance can extend throughout a discourse sequence. According to Shibatani (2006) in his discussion of direct/inverse grammatical systems, a referent's discourse relevance, as much as it might be reflected in grammar, is comprised of two factors. One factor is the "topicality hierarchy", which is what I have been referring to as "semantic saliency". This factor is somewhat neutralized for character reference in narratives, because nearly all characters are human 3rd persons. In Chapter 8, though, I show how the use of certain demonstrative forms in referring to characters can interrelate semantic saliency and discourse relevance. The other factor is "information value", whereby a referent that is more central to information being conveyed has higher discourse relevance than a referent that is not as central to such information. Thus, the factor of information value underscores the relevancy ordering of referents given some state of a discourse. In my use of discourse relevance, information value is a multidimensional property of discourse status, including not just the linear ordering of characters but also the grouping of characters by such relations as social alignment and social opposition (which is organized in space). Thus, characters' discourse relevance, at least for Arapaho speakers, is a matter of how they are relevant as much as how relevant they are.

Although van Dijk (1979) conceptualizes discourse relevance in terms of propositions as well as referents, he discusses some additional factors that I find fundamental for understanding discourse relevance as it pertains to Arapaho spontaneous narratives. One factor is "structural relevance", whereby there are structural choices that a speaker makes in signaling a referent's discourse relevance. When a signal is successful, it either matches or adds to the "contextual relevance", which is discourse relevance as it is actually perceived by recipients or an audience.

Thus, discourse relevance is a dynamic structuring process involving discourse statuses, and not a static representation of recipients' cognitive status. Because Arapaho storytellers have a variety of conventional resources with which to signal discourse relevance, I find that this structuring process can be quite complex. A discourse relevance framework is meant to capture that complexity, bringing together the different dimensions and modality manifestations of character's discourse statuses. As storytellers develop a discourse relevance framework, it provides some stability so that they can also subtly alter it as they work to shift focus between different characters, actions, and events throughout the progression of a spontaneous narrative (cf. "participation framework", Goodwin 1984, 2003b). As I mentioned in the introduction to this chapter, this notion of framework and other properties of Arapaho discourse relevance are more concretely elaborated on in the chapters that follow.

Although my understanding of discourse relevance owes much to the literature discussed in this section and related literature, such as the work on 'topicality' by Givon (1983), I want to reiterate that this understanding is more fundamentally a product of my analysis of Arapaho. That is, I am motivated to engage with this literature because I want to better understand and thus describe the functional domain that holds together Arapaho storytellers' uses of pointing, demonstratives, and other related phenomena. Because of this, my goal here remains descriptive, as opposed to advancing a theoretic understanding of salience, relevance, and so forth. In the next section, I ground the concept of discourse relevance more firmly in the interactional approach.

5.3 Signaling Discourse Relevance

From the perspective of interactional participants, the discourse relevance framework (as well as other things that a story is about) emerges effortlessly from the unfolding narrative as

intended by the Arapaho storyteller. It takes much effort for a storyteller, however, to signal the discourse status of a character effectively, so that the other participants understand the status. The storyteller has choices in how to signal discourse relevance. In order to manage multiple characters in terms of discourse relevance, a storyteller may have to use redundant signals of discourse relevance or may otherwise employ multiple signals over the course of a narrative with respect to the discourse status of any given character. Additionally, discourse relevance is not necessarily static. A storyteller may take time developing a character's discourse status or may subtly change the organization of discourse relevance from one part of a story to the next.

There are two types of practice for developing discourse relevance. The first type is foregrounding, or the display of discourse relevance. In using such a practice, storytellers work to put characters (or other referents) on display as having some type of relevance. That is, a foregrounding practice involves structuring the discourse in a way that accords with how people otherwise perceive what is relevant for any given context. Because of this, foregrounding displays hinge on or align with perceptual and interactional factors that are not specific to Arapaho speakers (or any community of practice). The second type of practice for developing discourse relevance involves the conventional resources used to signal discourse relevance. In using these resources, storytellers indicate some aspect of discourse relevance for a character's discourse status through a signal that has been conventionalized (or encoded) for the purpose. In what remains of this chapter, I explore the first type of practice, by providing brief discussions and examples of how Arapaho storytellers foreground characters (and other referents) and why they do so. Because many properties of human perception and social interaction are not particular to Arapaho speakers, the speakers' foregrounding displays are also not unique.

Additionally, because there is a vast literature on human perception and social interaction, I can ground an understanding of such displays outside of what Arapaho speakers do.

My reason, then, for highlighting foregrounding displays in this chapter is so that these displays can serve in the other chapters as assumed aspects of the analytical framework for my examination of the use of pointing, overt nominals, and the related bimodal properties. Because storytellers have various practices for developing discourse relevance, foregrounding displays often co-occur with uses of conventional resources for signaling discourse relevance. Therefore, I can use the former as diagnostic evidence for the latter. Establishing such a framework for analysis is an important aspect of the methodology for the interactional approach to language description (see subsection 2.2.3).

In the following subsection, I discuss some specific foregrounding displays of as produced by Arapaho storytellers. The displays are produced with respect to a mode of contextual relevance (i.e. what people actually perceive as being discourse relevant), such as a certain modality of expression or frame of reference. Through such modes, storytellers have a variety of ways to foreground characters and thus display differences between characters.

5.3.1 Displays of Discourse Relevance

Foregrounding displays are very general practices for how storytellers differentiate characters with respect to one another, and thus foregrounding practices are important resources for how storytellers develop discourse statuses. For the purposes of this dissertation, foregrounding can be conceptualized in terms of information, whereby a storyteller foregrounds a character by providing more detailed information about that character than other characters. The various modes of contextual relevance provide many opportunities for how storytellers can very subtly or completely foreground one character with respect to another. In what follows, I

discuss how differences between characters are displayed through frequency of reference in a sequence, through the formulation of mentions, through expressions of transitivity, through gesture, and through reenactment.

In the simplest way, a storyteller displays a difference between characters by referring to, or talking about, one character more than any others over the course of the story. A character that is repeatedly mentioned or otherwise referred to (e.g. through a pronoun) is displayed by the speaker as having more discourse relevance than a character that is only mentioned once or a few times. This very pragmatic means of foregrounding is useful for differentiating characters with high discourse statuses from those with lower statuses. However, frequency does not display the kind of nuances relating to discourse relevance that other displays do.

A more nuanced foregrounding display involves how storytellers formulate the explicit nominal mentions of their characters. The display of a mention also involves where in a sequence the mention is positioned as well as any other elements that are part of the formulation, which are matters that I deal with more specifically in Chapter 7. Here, I focus on the choices that a speaker has in formulating a bare mention, all else being equal. In general, Arapaho speakers have three basic type-choices in formulating a bare nominal mention that explicitly refers to a person: personal names, relational terms, and category labels. First, a speaker can refer to someone through a personal name (for a discussion on Arapaho traditions of personal names see Anderson 2001; Cowell and Moss Sr. 2004). Second, a speaker can refer to a person through that person's kin (or other) relation with an interactional participant or another referent. In Arapaho, these relations are expressed through single relational kin terms. For example, *he-i'eibehe'* '2.S-grandmother' is how one says 'your grandmother'. Third, there are category labels, such as *hisei* 'woman' and *nih'oo3oo* 'white person'. Personal names and relational kin terms are

informationally specific to some character, and thus speakers use specific nominal mentions to achieve "recognition" of a character (Sacks and Schegloff 1979). However, in many cases, mentions are formulated to do something else beyond just referring or the achievement of recognition (Stivers 2007). So, because a name is specific to a character whereas a relational term involves the referred-to character in association with someone else, names can work as stronger foregrounding displays (i.e. where either option would be recognizable by the interactional participants).

In contrast to names and relational terms, category labels are informationally general and therefore motivate an examination of the interactional context for how the categorization or use of generic information might be doing something special (Schegloff 2007). If the story is such that the characters are not real people or the characters are groups of people, category labels may be the only option for mentions (e.g. 'old man' or 'school children'). For all other cases, specific mentions, constituted by names and relational terms, are more informationally rich and therefore work more so as foregrounding displays than generic mentions, which are constituted by category labels. As with all other situations that can be described functionally in relation to discourse relevance, a storyteller may be doing a variety of actions that coincide with formulating a mention as a foregrounding display.

In excerpt (30) from "Historic events at Thermopolis", the storyteller changes how she formulates a nominal mention. She first uses the generic category *beh'eihohoh'o* 'old men' in line 48, then she use the name "Ben Fry" in line 52.1 to index a group of these bygone Arapaho men more specifically. Later, in line 53.1, she identifies the same group of men with the relational kin term *ne-besiiwoho'* 'my grandfathers'.

(30)   (ACD 14g)

48   {53}   'oh nih-bis-e'inon-eit nuhu' beh'eihohoh'o huutiino
　　　　　　but   PAST-all-know-4/3S   DEM   old_men.OBV.PL around_here
　　　　　　But the old men here all knew her.

49   {37}   huh

50   {53}   kee'in
　　　　　　you_know?
　　　　　　you know

51   {37}   [head nods]
　　　　　　mhmm

52.1   {53}   　　　　　[gesture]　　　　　　　　　　['go back' in time]
　　　　　　heenoo Ben   Fry   and   heenei'isiihi' way back
　　　　　　oblig   NAME NAME   and   and_so_forth   way back
　　　　　　You know, Ben Fry and so forth, from way back,

52.2   　　　　　~~~~~**<PT: old-men space>
　　　　　　hee'inon-eit   nehe'   hisei
　　　　　　know-4/3S   DEM   woman
　　　　　　they knew this woman.

53.1   　　　　　[PT: old-men space] [linking PTs: old-men space and speaker]
　　　　　　nenee-3i'   nih-'oon-oo3itoon-einoo
　　　　　　it_is-3PL   PAST-REDUP-tell_a_story-3S/1S
　　　　　　They are the ones who told me this story,

53.2   ~~~***<PT: old-men space>
nuhu'   ne-besiiwoho'
DEM   1S-grandfathers.NA.OBLPOSS.PL
my grandfathers.

In line 48, the formulation of *beh'eihohoh'o* 'old men' is a way for the storyteller to explicitly re-refer to the bygone Arapaho men as well as maintain the higher differential discourse status of the other character referred to in the utterance, the woman. For a few lines prior to 48, the storyteller had been recounting the legend of this woman, a famous actress who visited the Thermopolis hot springs. The storyteller's reliance on the person affix *-eit* '-4/3S' to refer to the actress shows that the actress has high discourse relevance. Given that the storyteller has not referred to bygone men for many utterances prior to this moment, she cannot rely solely on this affix for referring to the bygone men. She thus refers to them with a lexical mention. However, the formulation of a more specific mention, such as a name, could have disrupted the higher status of the actress.

Lines 49-51 of (30) might possibly show that the person next to the storyteller is a bit troubled by the vague formulation of *beh'eihohoh'o* 'old men' in line 48 (cf. Sidnell 2007). The storyteller's use of the name in line 52.1 would then be an instance of the storyteller self-repairing the generic reference, satisfying a pursuit of more recognition. It could also be that the storyteller is using *kee'in* 'you know' in line 50 to transition into a phase of the story where she uses the line 48 reference to the 'old men' as an occasion to associate herself with them and thus account for her knowledge of the story. Either way, because a specific group of men are the sole focus of attention in the new sequence starting at line 52.1, the storyteller foregrounds them

through the use of a specific name, "Ben Fry". In line 52.2, the speaker reinforces this foregrounding by referring to them solely through the person affix -*eit* '-4/3S'. Whereas, because it is not clear here what '3S' indexes without a mention (i.e. it could either index Ben Fry or the woman), the speaker uses an explicit mention to specify the woman. The use of the generic category *hisei* 'woman' for the mention, though, does not disrupt the higher local discourse status of the men. Line 52.2, then, shows the opposite relevancy ordering than line 48, which is all the more clear because each utterance uses the same verbal root and person affix (i.e. *e'inon-eit* 'know-4/3S') with different generic category mentions.

In line 53.1, translated as "They are the ones who told me this story", the storyteller makes it clearer that she is accounting for how she knows about the story and her rights to tell it (see Chapter 6 for an analysis of how these linking points function in this respect). Here, then, the storyteller projects not only her own discourse status but also that she will provide the necessary information for why it is that these men told her the story. Thus, in line 53.2 she formulates the mention of this group of bygone men as *ne-besiiwoho'* 'my grandfathers', positioning the group of men within her epistemic domain (cf. Stivers 2007). She could have provided the same information by formulating the mention in terms of being their granddaughter, but that would have maintained their discourse status instead of subtly shifting the differential in her favor, as the mention *ne-besiiwoho'* 'my grandfathers' does.

Another way to foreground characters involves expressions of transitivity. Hopper and Thompson (1980) argue that, despite the vast morphosyntactic variation in the world's languages, a universal property of language is that grammatical organization tends to reflect a continuum of semantic transitivity, from the intransitive to the highly transitive. For any given language, highly transitive events, including the involved referents and their transitive relationship, are

expressed through constructions that are more morphosyntactically complex than constructions that are used for less transitive events. Thus, highly transitive expressions are marked by the rich and detailed information that is grammatically required of such expressions. However, speakers have grammatical choices in the degree of transitivity with which they formulate a given event. Thus, if a storyteller chooses to formulate one event as highly transitive and another as less transitive, the storyteller is providing more information about the former than the latter. The storyteller is thereby foregrounding the former event with respect to the latter. In this way, storytellers are able to foreground those events that involve characters that have high discourse statuses.

Transitivity as such manifests in Arapaho grammar through four different verbal classes. Each class is morphosyntactically differentiated and scaled from one another by properties of transitivity. As predicted by Hopper and Thompson (1980), the class constituted by transitive verbs with animate agents, for highly transitive expressions, has the most complex morphology. Because grammatical transitivity is a resource for foregrounding, an Arapaho storyteller can involve a character in a highly transitive expression as a means to develop or reinforce the character's discourse status. In line 19 of excerpt (31), from "Trip to language conference with woman in room", *ne'-cowoo3itoon-oot* 'then she translated for them' is a highly transitive expression.

> **(31)   (ACD 24c)**
>
>
>
> 16   ['speaking'…………..…]
>   ne'-hee   ne'-heeneti-noo
>   then-???   then-speak-1S
>   Then, then I spoke.

17   ['speaking' ……..…] ~~~~~~~*****<'speak' PT: Deer>
      hooxohoen-iini nih-'eeneti-t hi'in nookhoosei niibei
      in_return-DETACH PAST-speak-3.S DEM NAME   NAME
      Then Running Deer took her turn to speak.

18   ['speaking' ……….……………………….]
      niito' nih- hinono'eiyeiti- hiinono'eiyeiti-t
      first PAST- speak_Arapaho- speak_Arapaho-3.S
      First she spoke Arapaho.

19   ['speak' PT: audience space ………………………..]
      ne'-cowoo3itoon-oot heeneesi-nihii-t nih'oo3oun-iihi'
      then-translate_for-3S/4 what-say-3.S   white_person-ADV
      Then she translated for them what she said into English.

20   [PT: Sage]
      koo-nee'eesoo   nookhoosei niibei
      INTERR-be _thus   NAME   NAME
      Is that how it was, Running Deer?

21   hei'towuun-i   nookhoosei niibei
      tell_s.o.-1S.IMPER NAME   NAME
      Tell me, Running Deer.

22 {23} hmm

The transitive expression in line 19 comes after a string of intransitive expressions, as the excerpt shows. In terms of reference, the storyteller and Running Deer (i.e. speaker 23, the woman in the room) are each referred to as the only individual characters of the story. However, the transitive expression of line 19 represents the only event of the story that involves one of them as an

individual and that is also expressed grammatically as a transitive. This foregrounding display of Running Deer by the storyteller is part of how he draws focus on her. He actually uses this little narrative as a preliminary for what he does next in line 21, which is to have her repeat the performance he described in the story.

Given their visual salience, gesture and other visible actions are also resources for foregrounding. Stivers (2008), for example, argues that gesture is an informationally rich resource for storytellers, on par with verbal descriptions. In this way, the author shows that gesture enables storytellers to give an audience detailed access to the storyteller's perspective in order to motivate the audience to share in the storyteller's understanding and stance. Furthermore, pointing, as a unique type of gesture, allows a speaker to visually direct as well as heighten the attention of recipients (Goodwin 2003; Enfield, Kita, De Ruiter 2007; Mondada 2007). Excerpt (31), then, also provides an example of how a storyteller can foreground characters through gesture and other visible actions. Both characters are visible, and visibly referred to, and attributed through gesture. In contrast, the other conference members (i.e. the characters who make up the audience in the story) are only visibly referred to in line 19, but even that pointing gesture is produced from the viewpoint of the woman character (and not the storyteller). The visible foregrounding of the two main characters is typical of the entire story, even where there is more verbal reference to the other conference members. By foregrounding the two characters in this way, the storyteller is reinforcing a strong differential in discourse relevance between them and everyone else in the story.

An even more prominent way to foreground a character and thus reinforce the character's discourse relevance is through reenactment. Reenactments are often highly multimodal, wherein a storyteller combines speech and bodily action to shift footing and animate

the persona, stance, and action of a character (cf. Goffman 1981; Goodwin 2007). Sidnell (2006)

uses the term 'reenactment' to examine the visible component, wherein he finds that gaze is used

as part of a practice for parsing reenactments from narrative descriptions (cf. "demonstration",

Clark and Gerrig 1990; "constructed action", Liddell 2003: 157). Reenactments through speech

are often called "reported speech" (Coulmas 1986). In order to be consistent, I use 'bodily

reenactment' and 'speech reenactment' where the distinction is necessary. However, it is not

necessarily the potential multimodality that makes reenactments such powerful displays of

discourse relevance, but rather, as Sidnell (2006) states, it is that "reenactments purport to show

not what someone witnessed (or heard about) but rather what actually happened", whether the

storyteller witnessed the event or not (p.406). In this way, a reenactment works so well to

foreground a character because the character is actually put on display.

In excerpt (32) from "Hunting, drinking, and eating", there are a variety of reenactments.

(32)   (ACD 56c)

41.1   "~~**" <'follow' PT: Robert space>
               nehe'   Danny
               DEM   NAME
               "Watch this one," Danny [said],

41.2   "[PTs: Robert space ………………..]"   [intoxicated]
               watch him watch him watch him   he's   nonsih'ebi-t
               watch him watch him watch him   he's   drunk-3.S
               "watch him, he's drunk."

42 "[holding a gun ….]" [clap]
he had that kokiy
he had that gun.NI
[Robert] had that gun.

43 "[raising and shooting a gun ……………..……]" [clap]
kookon ne'-ihcikuutii-t koo-koe'tee-'
just_any then-quickly_raise-3.S REDUP-shot-0S
Then he just raised [the gun] and started shooting.

44 ['go around and behind s.t.' ……..] [(look) 'go outward']
nuhu' pickup-huune' nih-noo'oekoohu-3i' bise'eini-3i'
DEM pick_up-at PAST-drive_around_s.t.-3PL put_head_out-3PL
The others ran around behind the pickup. They just peeked out slowly.

45.1 [thumb PT: Danny space] [clap] ~~**<PT: Robert space>
    nih-won-siiin-eit Danny ne'- nuhu' kokiy
    PAST-ALLAT-rob-4/3S NAME then- DEM gun.NI
Danny went to go take his gun.

45.2 "[taking gun]"
ceitii   nih-'ii3-eit
give_here PAST-say_to_s.o.-4/3S
"Give it here," he said to Robert.

46   "[intoxicated …]"
       "Ahh, that's mine."

For example, in line 41.1 the storyteller is reenacting the character Danny primarily through what he says, using both a lexical gesture and a spoken demonstrative. In line 41.2, the visual portion of the reenactment is more bodily, as the storyteller vigorously points as he shouts the words. In lines 42 and 43, the storyteller describes through speech what he is reenacting through multiple bodily cues, which involves Robert holding and shooting a gun. In line 44, however, the reenactment is very minimal. The storyteller is mostly describing on this line, through speech and through gesture, about the actions of the other unnamed characters. The bit of reenactment is at the end of the line, where he cocks his head forward and looks, as if peeking out, which is the action he is concurrently describing through a lexical gesture.

Although all of the characters are reenacted to some degree in excerpt (32), the storyteller does use reenactment as part of how he foregrounds the two named characters, Danny and Robert. That is, while the storyteller mostly describes (or tells) what the unnamed characters are doing, he reenacts (or shows) much of what the named characters are doing. In line 46, the discourse relevance framework is such that the storyteller shifts footing and reenacts Robert without any accompanying description.

5.4 Conclusion

In this chapter, I defined discourse relevance as a functional domain that is related to the concept of saliency. Specifically, my finding that discourse relevance is central to the analysis of Arapaho pointing, demonstratives, and related bimodal properties builds on the argument of

Cowell and Moss Sr. (2008) that saliency is an organizing parameter of Arapaho grammar. I defined discourse relevance as the discourse statuses of characters and the arrangement of those statuses in a discourse relevance framework. A discourse status includes how a character is ordered and grouped with respect to other characters. Arapaho storytellers, then, use a variety of conventional resources to signal different aspects of discourse relevance as a means to manage and organize their characters, which is a dynamic and multimodal process. There are two ways to develop discourse relevance: foregrounding displays and practices of using conventional (grammatical) resources for signaling discourse relevance. I provided many examples of foregrounding practices, including the formulation of mentions and character reenactments. Such foregrounding displays serve as important aspects of the contextual configurations that storytellers use to develop their narratives. As part of the interactional approach that I use, these displays thus serve as the contextual evidence for my analysis of the next four chapters, which concern how Arapaho pointing and demonstratives function as signals of discourse relevance. In the next chapter, I focus specifically on Arapaho pointing in spontaneous narratives.

CHAPTER VI

HAND POINTING

6.1 Introduction

In this chapter, I examine the pointing practices of Arapaho storytellers in depth. In Chapter 5, I briefly discussed how pointing is a resource for foregrounding a character and thus for developing a character's discourse status. However, storytellers can use pointing for actions that do not work to develop a discourse status. In section 6.2, I look at two pointing practices that are designed for purposes other than discourse relevance. The rest of the chapter looks at pointing practices that storytellers use for signaling discourse relevance. Notably, while a storyteller can refer to a character through pointing in order to foreground that character relative to a character that is just referred to through speech, a storyteller can refer to two characters through pointing but differentiate their discourse statuses through different pointing practices. Such discourse status differences are related to the different ways that characters can be organized in narrative space with respect to one another. In section 6.3, I thus examine how storytellers use pointing to work within different visual modes of reference, which is fundamental to how characters are spatially organized. In section 6.4, I examine how forefinger pointing is the general pointing handshape for gestural foregrounding, but I explain this with respect to how it contrasts with the less prevalent thumb point. Using visual modes of reference, I explain that thumb pointing is the normal way to refer to a co-participant during (non-narrative) turn-by-turn talk. Storytellers recreate such talk through character reenactments, which happens

within a narrative participation space. Within this space, which is one dimension of a discourse relevance framework, a thumb point signals social alignment, while a forefinger point can index some sort of social asymmetry. This space thus defines a special referential context, but an important one for understanding why forefinger pointing works the way it does as a general resource for developing discourse relevance. In section 6.4, I examine two other pointing practices that involve different handshapes than the forefinger or thumb and have a slightly different relationship with discourse relevance.

6.2 A Typology of Pointing as a Display

In section 5.3.1, I discussed how, as a type of gesture, hand points are designed to be visually salient, and this makes pointing an important resource through which a storyteller can foreground a character and thus reinforce the character's discourse relevance. Certain properties of Arapaho pointing are even conventionalized signals of discourse relevance. However, some hand points are visibly produced to display other types of referential information. A hand point with full focusing properties is designed to provide rich and primary information, drawing visual attention to a target. A hand point with a lack of focusing properties is designed to provide information that is supplementary to what is simultaneously communicated through speech. Both focusing extremes of pointing are more typically used as resources in (non-narrative) turn-by-turn talk. In order for a point to work as a display of discourse relevance, an Arapaho storyteller produces a medial point, with some focusing properties but not too many. Most hand points in Arapaho spontaneous narratives are of this medial type. The focusing properties of a point, then, correlate with the type of interactional activity that it is being used for, which further underscores how narrative and turn-by-turn talk are not coterminous activities. There are other factors too that help to distinguish a specific pointing practice from another, which I examine in more detail

in the rest of this chapter as well as chapter 9. In this section, I examine pointing types that are

differentiated by their focusing properties.

Through how a point is visibly produced, the point can have different informational

qualities and attract varying degrees of attention. Using interactional data from Lao speakers,

Enfield, Kita, De Ruiter (2007) provide the strongest evidence of this form-motivated distinction.

One type of pointing, which they call "B-points", has focusing properties and is the prominent

informational element of a referring action when there is speech involved. Focusing properties

include a speaker's use of maximal space (e.g. outstretched arm) and head-centered gaze

alignment, wherein the speaker's eye gaze is in line with the vector of the point. In general, these

properties work to focus the attention of other participants on the target of the point or the

pointing hand itself. The other type of pointing, called "S-points", lacks these focusing

properties. S-points are produced quickly, usually with just a flip of the wrist and not gaze

alignment. Because such points are demonstrably more minimal, they work secondarily to

spoken information in a referring action, and so speakers use them to provide supplementary

information in "insecure reference environments" (p.1729). Because a speaker uses a B-point to

bring an entity (both literally and metaphorically) into focus or otherwise highlight a feature of

an in-focus entity, B-points are by design more visually salient.

However, it is important to note that although Enfield, Kita, and De Ruiter (2007) suggest

that B-points and S-points are universal types, this pointing distinction represents a very

narrowly defined phenomenon. That is, among other delimitations, the authors only consider

single-handed forefinger points with horizontal vectors, and any referent targeted by a point has

to be out of the participant's immediate space. Additionally, the data was coded to only include

instances of pointing that formally fit into one of the two pointing categories, defined by the

presence or absence of focusing properties. Nevertheless, the study does provide evidence that

focusing properties are important for issues related to discourse relevance, especially considering

how B-points are designed to draw attention.

For Arapaho storytellers, it is somewhat rare for a hand point to be produced with all of

the focusing properties or a complete lack of them. The few points that seem like more canonical

B-points or S-points are used by storytellers for actions other than signaling a character's

discourse relevance. The more common points, which are used to work within discourse

relevance, fall somewhere between the spectrum defined by the two types. An example that

shows a more common point in juxtaposition with a focusing point (i.e. more like a B-point) is

excerpt (33), from "Arapaho mentoring for woman in room".

(33)   (ACD 24b)

149.2   [PT: Deer]   "~~~~~~~~~~~***" <PT: woman space>
heenei'towuun-o'   noohow-unee   hinee
tell_things-1S/3S   see-3.IMPER   DEM
I told her, "look at that [woman]."

149.3   "[PT: woman space]"
3ii'ookuu-t   hisei
stand-3.S   woman.NA
"She is standing there."

In line 149.2 of this example, the storyteller produces two points. (Note that the storyteller is

holding a piece of paper in his pointing hand and so is not producing an identifiable handshape.)

The first point, targeting Running Deer (i.e. the woman in the room), is more typical of most

points in that it is not produced with full focusing properties nor a lack of focusing properties. Specifically, the storyteller does not use a fully extended arm nor aligned gaze, but the storyteller does make his arm and hand fully visible, centered within his gesture space. This point works to maintain Running Deer's discourse status in this sequence of the narrative, which is in relation to the storyteller's role as her teacher. Within this utterance, the visible reference to Running Deer also works to situate her in gesture space with respect to the target of the storyteller's second point. The second point of line 149.2 is the focusing point of this utterance. The storyteller produces this point with a fully extended arm and aligned gaze. He produces the second point as part of a reenactment of himself using Arapaho in the real world with Running Deer, who is his language understudy. The reenacted interaction is thus a non-narrative interaction. In this reenacted event, he wants Running Deer to look at a woman in the distance so that they can practice using Arapaho to describe the woman and her actions. His use of head-centered gaze alignment and fully outstretched arm are part of how he reenacts his pedagogical style for getting Running Deer to follow along. Therefore, in using this point, the storyteller is not signaling anything about the referent's discourse relevance. Discourse relevance deals with the management and ordering of characters' discourse statuses. Rather than being a character in the narrative, this referent is something more of a discourse-ephemeral prop. The point is being used to reenact the identification of the referent as part of the reenacted non-narrative interaction.

Points that are more like S-points are also reserved for actions that are different than discourse relevance. In section 3.4.2 I discussed how the storyteller in "Joke about little girl's translation of Arapaho" uses a thumb point to a metaphoric grandma space in four different instances in large part to maintain coherent reference to the grandma character. As the storyteller shifts footing and changes how he formulates the mention of the grandma character with each

reference to her, these points are the only consistent part of how he refers to her throughout the story. Excerpt (34) shows the first two references to the grandma character. In the first reference, in line 117.1, the storyteller produces a more common point, while in the second reference, in line 120.1, his point is more like an S-point.

(34)   (ACD 28a)

117.1   {45}   "[thumb PT: grandma space]"
        koo-he-et-cee'in   he-i'eibehe'
        INTERR-2S-FUT-not_know 2S-grandmother.NA.OBLPOSS
        "Do you know what your grandmother"

117.2   toon-hii-beet-otoonoo3oo
        almost-3S.IMPERF-want-thing_bought.NI.DEPPART
        "wants to buy,"

117.3   ~~****<PT: shopkeeper space>
        hee3eihi-t   nuhu'   nih'oo3ou'u
        says-3.S   DEM   white_person(s).NA.OBV
        this white man was saying.

118   {57}   uhm

119   {45}   "[thinking]"
        ne'-ii-   -kokoh'u3ecoo-t   nehe'   hiseihiitei'yoo
        then-IMPERF-   -think-3.S   DEM   girl.NA
        Then this little girl was thinking.

120.1   ['speaking']   [thumb PT: grandma space]
nii-cowoo3itee-t   heeneis-beet-
IMPERF-translate-3.S   whatever-want_to-
She's translating what [her grandmother] wants [to buy].

120.2   [PT: at tipi model]
hini-i'iiwoho   niiinon
3S-grandma.OBLPOSS.OBV   tipi.NI
Her grandmother [wants material for] a tipi.

In line 117.1 the storyteller is reenacting the shopkeeper (i.e. the "white man"), and the point is the visible part of the storyteller's reenactment. The reenactment, and not the point, is foregrounding the character. Thus, along with its function to maintain referential coherence, the point is part of how the shopkeeper refers to the grandma in addressing the little girl. This point is formed with a fully extended thumb, and, although it is not entirely clear from the transcript, it lasts nearly a second from the moment when the storyteller first brings his hand from rest to form the point until the moment when he then brings his hand back to rest.

      In contrast, the storyteller's thumb point in line 120.1 is not produced with a fully extended thumb, but rather with a side flick of the wrist. Also, it lasts about half a second, as the storyteller brings his hand from the prior gesture to produce the point and then back to the original gesture position. Fitting with the prediction of Enfield, Kita, and De Ruiter (2007), this more minimal point is produced within an insecure reference environment and thus simply serves to maintain referential coherence, rather than also being serving as a signal of discourse relevance. There are a few pieces of evidence to support this claim. First, the reference

environment of line 120.1 and 120.2 is insecure because it is not entirely clear at this beginning point of the story who the characters are and what their relationship is to one another. The story starts off with a reenactment of the shopkeeper addressing someone. All the audience knows by line 119 is that there is a little girl and that the shopkeeper had been addressing someone with a grandma. In lines 120.1 and 120.2, the storyteller's spoken words clue the audience in that it is the little girl that the shopkeeper has been addressing. That is, in these lines the storyteller provides the relationship link between the little girl and the grandma by the reference *hini-i'iiwoho* 'her grandmother' (line 120.2) and describes that the little girl has to do translation help for her grandma regarding what she wants to buy. However, there are still other possible referential scenarios at this point, such as the possibility that there is more than one character with a grandma or the possibility that there is more than one grandchild present. Additionally, the storyteller has shifted his footing various times at this point. These factors make this somewhat of an insecure reference environment. Thus, the storyteller's minimal thumb point targeting the grandma space in line 120.1 provides the only bit of concrete coherence with the reference in line 117.1, in case the audience needs such supplementary information to resolve the reference. Another factor for why the storyteller likely produced a minimal point is that a medial point (i.e. with more focusing properties) could have been understood by the audience as a signal of the grandma's relatively high discourse relevance. Such might disrupt the storyteller's work in lines 119 through 120.2 to develop the little girl's higher discourse status.

The majority of pointing in Arapaho spontaneous narratives use some focusing properties but not so much that the points work to draw attention beyond what other gestures and visible reenactments do. This medial way of producing a point (i.e. not as a canonical S-point or B-point), then, seems to be optimal for displaying discourse relevance. However, while most of

these medial points are forefinger points, there are some discourse relevance distinctions that are signaled conventionally through handshapes. In the next section, I review the different ways that a character can be situated in narrative space in order to set up the examination of the various pointing practices involving the different handshapes.

6.3 Visual Modes of Narrative Reference

In subsection 3.4.2, I introduced pointing by discussing direct, metaphorical, and metonymic pointing as the ways in which a speaker can relate what is being targeted by a point to what is actually being referred to by the point. These are all possibilities of non-transposed pointing, which is when the target of a point is a visible entity or area of space that is part of the actual space occupied by the interactional participants. In order to visually develop their spontaneous narratives, Arapaho storytellers additionally make use of other referential devices, viewpoints, and spaces. Storytellers use these visual modes of reference to situate characters, character actions, and other character properties through pointing. Thus, visual modes of reference are central to developing a character's discourse status, and pointing handshapes are an important conventional resource that Arapaho storytellers have for working within various modes and for making mode-based distinctions. In this section, I review the various modes of reference, and outline those that are most pertinent for Arapaho spontaneous narratives, especially with regard to pointing, pointing handshapes, and discourse relevance frameworks. In the next section, I examine a pointing handshape distinction.

The most basic visual mode distinction involves the pragmatics of space. This issue has been discussed from a wide variety of linguistic and related perspectives, especially as it relates to deixis. However, my sketch here reflects the work of researchers that examine reference within interactional data (e.g. Hanks 1990; Haviland 1996; Goodwin 2000; Enfield 2003). The

first type of space is the 'gesture space'. This is the space that speakers use to articulate their gestures. Individuals can operate in their own gesture space or share a gesture space. It is also the space that storytellers visually develop through gesture. A storyteller can use an arbitrary area or division of the space to refer to characters metaphorically, where one character might be referred to by pointing to the right and another by pointing to the left, for example (see subsection 3.4.2). However, when a storyteller creates or recreates a visual scene in the gesture space, the space is called a 'narrative space'. Like a physical model of a scene, sub-spaces of a narrative space are structured so that the narrative space has visual coherence. In certain cases, metaphorical spaces are integrated with narrative spaces so that there is a trade off with respect to visual coherence. I discuss this more below. This use of 'narrative space' is somewhat misleading then, because metaphorical spaces can also be part of a narrative. Additionally, any of the other space types that I describe here can become meaningful for a narrative. Narrative spaces may also be constituted by conventionalized spatial structures, as Farnell (1995) finds for Nakota speakers' particular integration of Plains Indian Sign Language with speech. Going outward from the speaker, the second type of space is the 'participation space'. This space is managed by the bodies of interactional co-participants in order to display mutual engagement. A participation space is one aspect of a "participation framework", which also includes the participant roles that each participant is taking in the interaction (Goodwin 1984, 2003b). Typical of Arapaho interactions, Arapaho speakers create participation spaces by putting themselves in a side-by-side manner, creating a sort of arc so that they appear to be a segment of a large circle, as seen in (35a) and (35b).

(35)

a.   (ACD 28a)

b.   (ACD 56c)

Because it is the dynamic social product of participants, it is necessarily an 'interactional space'. That is, it has to be structured interactionally, whereas a gesture space can be structured by an individual. However, this terminology too is somewhat misleading because any space that is part of an ongoing interaction has in some way been shaped by the interaction, even if only articulated by one individual. A third type of space is the 'situational space'. It includes the visible boundaries and objects that physically structure the space occupied by the interactional participants. In (35a) it is an open field with a tipi model off to the right side of the storyteller, among other things. In (35b) it is a walled-in schoolroom. The fourth type of space is the 'local geographic space'. This space consists of places and other geographic features that are part of the common ground knowledge of the local community. For the Arapaho community, this space is quite vast. The majority of what constitutes a local geographic space is not visible in most situations. Aspects of the situational space and the local geographic space are not relevant to an

interaction unless participants make them relevant. Storytellers thus draw on the structures of participation, situational, and geographic spaces in developing a gesture space into a narrative space.

A primary way that storytellers draw on the variety of spatial structures and otherwise build a narrative space is through the visual mode of viewpoint (cf. Goodwin 2007). Storytellers define themselves as storytellers by developing a narrative viewpoint and motivating the other interactional participants to adopt that viewpoint. Through this mode, storytellers suspend (or create the illusion of suspending) the turn-by-turn talk and other relational activities between participants that structure the ongoing interaction. When there is no narrative viewpoint or when it is the narrative viewpoint that is suspended, the participation space (as opposed to a narrative space) is the most relevant space. In general, the participation framework itself would be most relevant. With respect to spontaneous narratives, the narrative viewpoint is suspended when the participants are engaged in turn-by-turn talk, or small talk that focuses on some aspect of interactional participation itself, as opposed to being engaged in storytelling. This is the case in lines 23 and 24 of excerpt (36), taken from "Historic events at Thermopolis".

(36)   (ACD 14g)


```
19      {53}    [thumb PT: back area of narrative space]
                hee3eb-iinoo'ei-3i'   huu3e'
                there-hunt-3PL        over_there
                They were hunting over there.
```

20   ['go back' in narrative space]
bis-iihi'   'oh   huutiino
all-ADV   but   around_here
All of them, and here [they ran into some Mormons]

21   {52}   shoshones

22   {53}   "[trace PT: through narrative space]"
heet-bi'-cebisee-ni3   nih-'ii3-e'   nihii
FUT-just-walk-4S   PAST-say_to_s.o.-4/3S   well...
"He will just walk by," he said to him, uhh...

23   {37}   [addressed gaze at 52]
ciibeh-kohtowu-nihii
PROHIB-anything-say
Don't say anything else.

24   [addressed gaze at 52]
ciibeh-kohtowu-nihii
PROHIB-anything-say
Don't say anything else.

25   {53}   [trace PT: through narrative space]
hi'in   cebisee-ni3   heih   nihii
DEM   walk-4S   ???   well...
That one walked by, uhh…

26   bexo'uuwoo-ni3i   nih-'ii3-oo3i'
            gather_wood(?)-4PL   PAST-say_to_s.o.-3PL/4
            [The Mormons] told them they were gathering wood.

27   {34}   oh yeah

28.1   {53}   [PT: in narrative space]
            noh   hee3eb-bi'-nei'oohow-oo3i'   nih'oo3ou'u
            and   there-just-look_at-3PL/4   white_person(s).NA.OBV
            And they just watched the whites [Mormons] there.

In line 21, speaker 52, who is the man two persons to the storyteller's left (and not in the camera view in the accompanying snippet), says *Shoshones* as a remark (or possible repair) in response to the storyteller's lack of explicit reference for who exactly the hunters were that she is referring to in line 19 and in prior utterances (i.e. Shoshones and Arapahos share the Wind River Reservation). As the storyteller continues with the story in line 22, speaker 37 turns her gaze away from the storyteller and toward speaker 52, saying two times to him *ciibeh-kohtowu-nihii* 'don't say anything else' (lines 23 and 24). In shifting out of the narrative viewpoint, speaker 37 is addressing speaker 52 in his role as a participant, regarding specifically one instance of how he attempted to co-participate in the storytelling (in line 21). Although this narrative is the spontaneous product of this particular social interaction, the Arapaho speakers have been gathered in front of an audience (who is behind the camera view). Thus, it is likely that in managing speaker 52's actions, speaker 37 is trying to make the storytelling seem a bit less spontaneous.

Through the course of the rest of the interaction in excerpt (36), the storyteller is developing a narrative viewpoint. As the talk of speaker 37 demonstrates, a narrative viewpoint

depends on the integrity of the participation, and so in order to accomplish a spontaneous narrative a storyteller must work to distinguish and develop a narrative viewpoint. Notably, a storyteller does this by projecting the viewpoint away from the here and now of the participation. There are two types of narrative viewpoint that are important for understanding the projecting actions of storytellers: the 'diegetic viewpoint' and the 'mimetic viewpoint'. The diegetic viewpoint is taken when the storyteller is describing or articulating the details of a narrative's events. The diegetic viewpoint is thus that of an observer who is projected into the different time and place of a narrative event. In such cases, pointing is often used to refer to characters within a gesturally developed narrative space. In (36), the storyteller develops such a narrative viewpoint by visually situating the narrative space within a real hunting ground and then reporting on the various actions of some bygone Indians and a group of Mormons. To begin this process, in line 19, the storyteller sociohistorically and geographically situates the ground of the narrative space by pointing to a hunting ground that is near Thermopolis. The diegetic viewpoint that the narrative space engenders is thereby projected to the real hunting ground. In line 20, the storyteller then shows that as the Indians are moving around within that space, they run into some Mormons. Later, in lines 22 and 25, the storyteller further develops the viewpoint by positioning her own body as a prop in the narrative space. Specifically, she takes the perspective of the Indians, as they are watching the Mormons walk by. In this development of the diegetic viewpoint, the storyteller provides the audience with information on where the two groups are with respect to one another in the narrative space. The storyteller also articulates the path of the Mormons as they move through the space that she has visually structured over the course of prior utterances.

When a storyteller reenacts a character, the storyteller is adopting a mimetic viewpoint. As an aspect of the narrative viewpoint, the rest of the interactional participants have access to the mimetic viewpoint in the same way that they have access to the diegetic viewpoint. The mimetic viewpoint, however, is projected into the narrative event not as an observer, but as a social agent who acts in response to (and within the confines of) the spatial and social structures developed through the narrative. From a mimetic viewpoint, a storyteller's points and other actions are understood to be those of the reenacted character. Such actions are thus interpreted within a set of pragmatic constraints that are distinct from those by which actions are interpreted from a diegetic viewpoint. The shift between the two types of viewpoint provides the audience with rich information. This is what the storyteller does in line 22 of excerpt (36), as she reenacts the speech and the gesture of one Indian talking to another. In this utterance and that of line 25, the storyteller's pointing, which traces a path across the narrative space, shows the audience that the diegetic viewpoint and the mimetic viewpoint of the Indian are conflated. That is, whether observing the narrative events or taking part in them, as a character, the audience can infer that the storyteller indexes the Indian perspective in this particular narrative space. In reenacting a character that is interacting with others, a storyteller also develops the characters' participation space and overall discourse relevance framework for the narrative. This is not always a straightforward process, as shown by the storyteller in "Joke about little girl's translation of Arapaho". Much of the joke is structured through a mimetic viewpoint, wherein he shifts between reenacting the shopkeeper and the little girl. The predominant viewpoint is anchored by the little girl, though, as the storyteller only produces pointing references to the two other characters, as shown in the snippets of example (37).

(37) **(ACD 28a)**

a.   Point to grandma space

b.   Point to shopkeeper space

The reenactment of the little girl is predominant because of her role as the mediator or enabler of the interaction between the shopkeeper and the girl's grandma. That is, her role is distinguished by matters of language, because the grandma only speaks Arapaho, the shopkeeper only speaks English, but the little girl is bilingual. The grandma and the shopkeeper are therefore not able to interact well with one another. Thus, as the little girl takes the role of translator, the joke hinges on how such complexities are engendered by the mimetic viewpoint.

In subsection 3.4.2, I also discussed the snippets in (37) to show how the storyteller has used metaphorical pointing to develop the grandma space and the shopkeeper space within the gesture space. One feature of these spaces, then, is that the storyteller uses the same grandma space from both the diegetic and mimetic viewpoints. This is only potentially problematic with respect to the mimetic viewpoint and the coherence of the narrative space. The potential problem here arises because he targets the same grandma space whether he is reenacting the little girl

referring to the grandma or the shopkeeper referring to the grandma. If he were to preserve the relationship of the characters in their (narrative) participation space, he would refer to the grandma at his left instead of his right when reenacting the shopkeeper. Thus, this development of gesture space into a narrative space is atypical, because it does not strictly preserve spatial relationships. In general, when developing a viewpoint, a storyteller uses spaces metaphorically in this way, instead of maintaining the integrity of the characters' participation space as the reenactments shift from one character to another. Thus, narrative participation spaces are of a special kind. In developing them, a storyteller integrates the diegetic and mimetic viewpoints so that the illusion of a (character) participation space is created by its metaphorical mapping onto narrative space. Additionally, narrative participation spaces are part of the discourse relevance framework for Arapaho spontaneous narratives, and there is a conventionalization of spatial positions, which I examine further in Chapter 9. Thus, storytellers do not always strictly orient to the distinction between a mimetic viewpoint and a diegetic viewpoint in order to accomplish the nuanced actions involved in character reference.

Le Guen (2011) describes projection as a matter of the "transposed" referential condition. The transposed condition is used by storytellers who are narrating the details of a distant (usually, not-visible) or imaginary scene. For the transposed condition, a storyteller can use either an egocentric (i.e. relative) or a geocentric (i.e. absolute) frame of reference. In the egocentric frame, the figure-ground spatial relationships are re-created from the speaker's point of view. In the geocentric frame, the figure-ground spatial relationships are based on immutable geographic properties (e.g. cardinal direction, landmarks) and thus preserve actual directions and other orientational features of the involved referents. Communities of practice tend to use one frame of reference at the exclusion of the other, whereby the egocentric is typologically much

more prevalent. Although the Arapaho language and its speakers are in many ways characteristically geocentric as I discussed in subsection 3.4.2, Arapaho storytellers use both frames quite frequently in transposed reference.

However, I do not distinguish between the two conditions in this dissertation. First, it takes a different type of analysis and methodology from the one that I use to really discern whether a speaker is using one frame of reference or the other (see Levinson 2003; Haviland 2005; Le Guen 2011). Second, for those cases in the data where I can be absolutely sure about which frame of reference is being used, I have not found that storytellers make use of the distinction with respect to the discourse relevance of characters. Third, storytellers' use of viewpoint seems to mix metaphorical pointing (i.e. the non-transposed condition) with projection (i.e. the transposed condition), and so it seems that Arapaho speakers do not adhere strictly to the frame of reference typology articulated by Le Guen (2011). Thus, when I need to discuss a storyteller's use of the transposed referential condition, I use the term 'projection' and do so without distinguishing a frame of reference.

In the sections that follow, I examine the pointing handshapes that Arapaho storytellers use. Although the forefinger handshape is the most prevalent type of pointing in spontaneous narratives, its general use as the pointing handshape for displaying discourse relevance must be understood with respect to other pointing handshapes, especially thumb pointing. Specifically, storytellers use forefinger and thumb pointing handshapes to make referential distinctions involving viewpoint. The pointing practices that use these handshapes are part of the way in which storytellers conventionally distinguish discourse statuses.

6.4 Forefinger Pointing and Thumb Pointing

This section examines forefinger pointing and thumb pointing by contrasting how Arapaho storytellers use them with respect to one another (much of this section is adapted from Sandoval 2013). I look at these ways of pointing together, not just because they use distinct handshapes, but also because they are the pointing handshapes that storytellers use for referring to individual characters. In many languages, it is apparent that the difference between these two pointing handshapes is a pragmatic matter of anatomy, the thumb used for back and side pointing, the forefinger used for forward pointing. However, in the ACD, there are instances of both forward thumb pointing as well as behind-the-back forefinger pointing (cf. Wilkins 2003). This contrasting distribution of forefinger and thumb handshapes underscores my finding that these pointing handshapes are used by storytellers as elements of different practices. Specifically, I describe how the two handshapes are conventionalized to signal differences in the discourse statuses of characters. While thumb pointing works to socially align a character with other characters in a narrative participation space, forefinger pointing can indicate a social asymmetry within such a space. However, thumb pointing is only used when a storyteller adopts a mimetic viewpoint. Thus, in light of this, in this section I provide further foundation for the forefinger as the general pointing handshape that storytellers use in developing a discourse relevance framework.

6.4.1 Pointing Handshapes Used with Other Spoken Languages

Although limited in breadth, the descriptive record of pointing shows that speakers from a diverse set of languages have a repertoire of pointing handshapes, and many of these handshapes are in regular use to distinguish functions related to discourse relevance. Kendon and Versante (2003), for example, found that for Italian speakers a formal contrast between palm-

down and palm-vertical in forefinger points signals a contrast in discourse-topical "object individuation" and discourse-relevant object identification, respectively. This contrast is similar to the distinction between pragmatic saliency and discourse relevance made in section 5.2. Wilkins (2003) found that for the Arrernte (central Australian) a formal contrast between forefinger and open hand points signals a contrast between references to individuals and regions, respectively. This is essentially a foreground/background distinction, because individuals are foregrounded against regions. The distinction is also similar to the common nominative/locative distinction made by spoken demonstratives (Dixon 2003). And, Orie (2009) found that for high arm-extended forefinger points in Yoruba, a contrast between a single held point and a double (repeated) point signals the distinction between a far-away referent being either visible or invisible, respectively. This distinction is also made by spoken demonstratives for some languages, and it deals with whether the referent is foregrounded against the immediate scenery (visible) or whether the referent is foregrounded against the broader local geography (invisible). For each of these studies, the use of form-function pairings of pointing handshapes underscores that pointing can be conventionalized in relation to discourse relevance. Although these languages may be exceptional for having such developed pointing resources, the research also serve as evidence that complex pointing can develop as part of any type of language.

6.4.2 Forefinger and Thumb Pointing for Place and Object Reference

In order to understand the conventionally distinct uses of the two handshapes for character reference, I start by showing how the two handshape forms partially motivate their functional distinction in targeting non-person referents (cf. Kendon and Versante 2003). Specifically, the forefinger is a more directionally precise pointing handshape than the thumb, and so the forefinger is used to target well defined referents whereas the thumb is used to target

vaguely defined areas. Forefinger points have the forefinger extended and the rest of the fingers at least partially closed, as in snippet (38) from "Joke about little girl's translation of Arapaho".

(38) (ACD 28a)

The line made from the base of the forefinger to the tip of the forefinger determines the directional aim of a forefinger point. Forefinger points thus maximize visual precision in this way. With a thumb point, the thumb is protruding relative to the other fingers, which are at least slightly closed, as in the third snippet to the right in (38).

(38) (ACD 28a)

Different from forefinger pointing, however, the thumb is not the usual source of directionality in a thumb point. In a thumb point, directionality is more often a matter of palm rotation or arm movement. An example of hand movement is displayed by the snippet progression of (38), where the storyteller's right hand rotates on the wrist to the right toward the target direction. The rotational direction of the storyteller's right hand is different from the direction of the thumb in

the third snippet (i.e. when the direction is measured in the same way as it is measured for the forefinger, a line going from the base of the thumb to its tip). The protruding thumb thus defines the handshape but not necessarily directionality. This difference in articulation between the two types of pointing is not much of a surprise given that thumbs are generally not as straight as forefingers.

These formal qualities that distinguish the two pointing types are iconic of the informational qualities of these points (cf. Enfield, Kita, and De Ruiter 2007). In the domain of non-person reference, storytellers generally use forefinger pointing to individuate places and objects that are well defined from the perspective of the storyteller and the other interactional participants. In the visual range, things that can be foregrounded and focused on as well-defined entities are referred to with a forefinger point. This includes a wide range of things. At close range it can include objects such as cups and cars, while at a more distant range it could also include a building. It would not include a building that someone was sitting next to, as such a building can not be focused on as a well-defined entity from that person's perspective. In excerpt (39), the storyteller is using a forefinger to target an actual tipi model that is set up in the field in front of him (but out of camera view).

(39)   (ACD 28a)

120.2   [PT: at tipi model]
          hini-i'iiwoho   niiinon
          3S-grandma.OBLPOSS.OBV   tipi.NI
          Her grandmother [wants material for] a tipi.

Geographic places that are out of the visual range are also treated with a forefinger point, if they can be conceived of as singularities from the perspective of participants. For example, a reservation town that is twenty miles away would be identified by pointing with a forefinger to the town's most central area. In excerpt (40), from "Trip to language conference with woman in room", the storyteller is using a forefinger to point to the city of Denver, which is almost four hundred miles away.

(40)   (ACD 24c)

11.1	{5}	[geo PT: Denver ……………………………….…]
		huu3e' nih-won-ne'- woni-ini noh'oub-eihi-ni'
		over_there PAST-ALLAT-then- ALLAT-DETACH invite-PASS-1PL
		Over there, we were invited to come

11.2		[contiued PT ………..]
		huu3e' niineniiniicie
		over_there Denver (tallow river)
		there to Denver.

Denver is one of many places, or locational nodes, that are part of the community's shared topography, and the storyteller is foregrounding it against this social geography. The forefinger is thus used to individuate non-person referents, whether within view or within the broader geographic landscape that is common to the interactional co-participants. With a forefinger point, then, an Arapaho storyteller does not discriminate whether the targeted referent is visible or not, only whether or not the entity can be visually foregrounded with respect to a background (e.g. a field, local geography). Thus, because forefinger pointing is more precise, this precision iconically motivates its use to foreground referents that can be perceived (or construed) as well defined and bounded from the interactional participants' perspective.

In non-person reference, speakers most often use thumb points to refer to regions or areas that cannot be well defined from the perspective of the interactional participants. A region can be conceptualized as a division of land or space that is part of the broader land or space that the interactional participants occupy. As such, I have observed Arapaho speakers use thumb points to refer to the Shoshone side of the reservation, reservation towns, and local hunting areas. Thus, a storyteller can use a thumb point to situate a geographic place or area as local or nearby to narrative events. That is, as the spontaneous narratives are situated on the reservation, a thumb point can indicate that a place or area is a socially important region with respect to reservation life. Although there are many instances of this use of thumb pointing in the ACD, there are only two such instances in the spontaneous narratives of my data collection. In excerpt (41), from "Joke about little girl's translation of Arapaho", the storyteller uses a thumb point to refer to the nearby St. Stephens Indian Mission compound, where children went to school in the early reservation period.

(41)   (ACD 28a)

115   [thumb PT: at school ………………………….]
noh   nenee'   nih-nee-neyei3ei'i-3i'   huut   hiseihiitei'yoo
and   it   PAST-REDUP-to_school-3PL here   girl.NA
And that...they went to school here, the little girl.

The storyteller uses this thumb point to introduce the little girl character into the joke as not only an Arapaho girl, but one who went to the Mission school. The thumb point thus works to situate the fictional joke in a real time and place that is sociohistorically connected to the current situational time and place. In a similar way, storytellers also use thumb points to situate narrative

spaces with real and sociohistorically connected background settings within which referents and their actions are foregrounded. For example, in "Historic events at Thermopolis", shown in excerpt (42), the storyteller uses a thumb point to target a hunting ground (near Thermopolis) in order to situate a narrative space (see section 6.3).

(42)   (ACD 14g)

19	[thumb PT: back area of narrative space]
	hee3eb-iinoo'ei-3i' huu3e'
	there-hunt-3PL over_there
	They were hunting over there.

While the storyteller uses a forefinger point to refer to the geographic location of Thermopolis itself elsewhere in her narrative sequence, the storyteller's use of a thumb point in (42) works to refer to the hunting ground as a regional patch of land that was part of reservation life for the bygone Indians of the story. The narrative space that the storyteller subsequently develops is built on this region. In sum, because thumb pointing is less precise than forefinger pointing, its low precision iconically motivates its use to refer to a region or other area that is close (or conceived of as close) in proximity from the perspective of interactional participants.

6.4.3 Forefinger and Thumb Pointing for Person Reference

In the domain of person reference, the low precision of thumb pointing and the high precision of forefinger pointing seem to motivate uses similar to non-person reference. For person reference, speakers normally use a thumb point in turn-by-turn talk to refer to an interactional co-participant, defined with respect to a participation space and, more generally, participation framework (i.e. as opposed to referring to a person from a narrative viewpoint).

That is, when a speaker is visually referring to a person as an interactional participant and as a third person (i.e. not addressing that person directly), the speaker uses a thumb point. In comparison to thumb pointing for non-person reference, this is similar because interactional co-participants are physically close to one another. Additionally, interactional co-participants are engaged with one another in a process of (metaphorical) social closeness, because participation in the sequential and physical organization of interaction involves a great deal of shared understanding. Thus, at a moment when participants are engaged with one another in (non-narrative) turn-by-turn talk, a speaker normally uses a forefinger point to refer to a visibly present person who is outside of the relevant participation space or, more generally, not part of the relevant participation framework (from the speaker's perspective).

Excerpt (43), which is a sequence of turn-by-turn talk that takes place before "Historic events at Thermopolis", provides an example of how a speaker's use of these pointing handshapes is sensitive to shifting participation frameworks.

(43)   (ACD 14a)


```
1    {37}                          [PT: woman with hat]
          he3eb-ei'towuun-inee   ne'-  nehe'  heet-cesisi-too-t
          there-tell.s.o.-3.IMPER  then-  this   FUT-begin-do-3.S
          Tell them that this one will start

2    {34}  yeah

3    {37}  uhm
```

4   {34}   koo-ne-nei'towuun-oo?
               INTERR-1S-tell_s.o.-3.S
               Do I tell her?

5   {37}   [thumb PT: woman with hat]
               hiiko   neh'eeno   heet-ne'-cesisi-too-t
               no   this   FUT-then-begin-do-3.S
               No, her, she's the one who will start

6   {34}   okay

In the excerpt, speaker 37 (i.e. the woman without a hat) is attempting to manage her husband (i.e. speaker 34, the man with the baseball cap who is not fully in the camera view) and his role in this Arapaho cultural event. In line 1, they turn inward toward one another as she speaks into his ear. She instructs him to tell the audience that the woman in the hat (who is sitting on the other side of her) will speak first. As part of this utterance, she points at the woman in the hat. Here, the participation space that they coordinate with their bodies, including the mouth-to-ear speech-directed arrangement, excludes the woman in the hat (and anyone else). Because the woman in the hat is thus not part of the speaker's relevant participation framework, her point at the woman in the hat uses a forefinger handshape.

A moment later, in line 4, speaker 34 (i.e. the man in the baseball cap, not in the camera view) asks a question that demonstrates that he did not understand his wife's instruction from line 1. During line 4, as the image shows, the wife disengages from the exclusive interaction with her husband by facing her body outward to coordinate with the others in the more inclusive side-by-side arrangement. Signaling this change of participation space, the wife briefly makes eye contact with the woman in the hat. In line 5, the wife responds to (or repairs) his

misunderstanding, and restates her initial instruction to her husband. This time, however, the woman in the hat and the wife are part of the same participation framework. The image of line 5 shows that the wife maintains the integrity of the inclusive participation space even as she turns her head to address her husband (as opposed to turning her whole body). Thus, the wife uses a thumb point to refer to the woman in the hat.

Because of this special use of the thumb point for person reference in turn-by-turn talk, a storyteller uses a forefinger point to refer to characters in all situations, with one important exception. A storyteller uses a thumb point as a normal way to index characters that are socially aligned with one another in the narrative participation space. Such characters are referred to with a thumb point, while other characters are referred to with a forefinger point. Therefore, a thumb point becomes a crucial resource with which a storyteller develops a narrative participation space as part of a discourse relevance framework. A thumb point, then, is a conventional way to signal the discourse status of the character referred to with the point, because the relation of that character to other characters is one of alignment. In line 45.1 of excerpt (44), from "Hunting, drinking, and eating", the storyteller uses a thumb point to refer to a character.

(44)   (ACD 56c)

41.1   "~~**" <'follow' PT: Robert space>
                 nehe'   Danny
                 DEM   NAME
              "Watch this one," Danny [said],

41.2   "[PTs: Robert space ……………….]"   [intoxicated]
watch him watch him watch him   he's   nonsih'ebi-t
watch   him   watch   him   watch him   he's   drunk-3.S
"watch him, he's drunk."

42   "[holding a gun ….]" [clap]
he had that   kokiy
he had   that   gun.NI
[Robert] had that gun.

43   "[raising and shooting a gun ……………..……]"   [clap]
kookon   ne'-ihcikuutii-t   koo-koe'tee-'
just_any   then-quickly_raise-3.S REDUP-shot-0S
Then he just raised [the gun] and started shooting.

44   ['go around and behind s.t.' ……..]   [(look) 'go outward']
nuhu'   pickup-huune' nih-noo'oekoohu-3i'   bise'eini-3i'
DEM   pick_up-at   PAST-drive_around_s.t.-3PL put_head_out-3PL
The others ran around behind the pickup. They just peeked out slowly.

45.1   [thumb PT: Danny space] [clap]   ~~**<PT: Robert space>
nih-won-siiin-eit   Danny   ne'-   nuhu' kokiy
PAST-ALLAT-rob-4/3S   NAME   then-   DEM gun.NI
Danny went to go take his gun.

45.2   "[taking gun]"
ceitii   nih-'ii3-eit
give_here   PAST-say_to_s.o.-4/3S
"Give it here," he said to Robert.

46   "[intoxicated …]"
"Ahh, that's mine."

As I discussed in subsection 5.3.1 with this same example, the storyteller's reenactments in (44) display the high discourse statuses of two characters, Danny and Robert. The excerpt, though, involves Robert's drunken behavior and thus inability to act (and interact) appropriately, and so there is a difference in the characters' discourse statuses. Because it is a personal account, the storyteller too is present as a character, even if his discourse status is subordinated to that of other characters. The predominant narrative viewpoint is thus partially anchored by the storyteller's own character as well as other aspects of the narrative participation framework. On the storyteller's side of the narrative space are the storyteller and Danny, while Robert alone defines the other side. In the excerpt, the storyteller uses the two pointing handshapes in order to highlight the different ways that the characters are situated with respect to the narrative participation space. In line 41.2, the storyteller reenacts Danny as Danny refers to Robert. Robert is drunk with a gun, and Danny is warning everyone else. Danny's use of a forefinger here to refer to Robert signals that Robert is out of alignment with the others. Because Robert cannot participate as a normal person, his actions are not treated as part of a successful inter-action. The forefinger point thereby indexes the social asymmetry of the narrative event. In line 45.1, the

narrative participation space is still intact, and the storyteller reports on Danny's actions. In doing so, he uses a thumb point to refer to Danny. This act reinforces the aforementioned social asymmetry, because through the thumb point the storyteller refers to Danny as a normal (or aligning) co-participant, which is in contrast to the status of Robert. Although the two characters are foregrounded through reenactment, the storyteller signals a difference in their discourse statuses through the use of the pointing handshapes. While Danny is defined by his alignment with the other characters, Robert is defined by his opposition to it. The storyteller in "Joke about little girl's translation of Arapaho" also involves complexity in the narrative's participation framework (see section 6.3), and he uses the two handshapes to set up a similar asymmetry between the grandma (thumb point) and the shopkeeper (forefinger point).

Outside of the special case in which a storyteller is referring to characters within a narrative participation space, storytellers use forefinger pointing as the general gestural resource for developing the discourse statuses of characters. This general use is likely motivated by the high precision of forefinger pointing, which individuates a target so well. Such individuation works to display the character's discourse relevance. Up until this point in the dissertation, I have discussed many ways that storytellers achieve reference through pointing, and most of these practices specifically involve forefinger pointing. When a storyteller points to a visibly present person in order to metonymically refer to (i.e. project) a past version of that person as a character in the story, the storyteller uses forefinger pointing. In this case, it does not matter whether the person is co-participant or not. The forefinger point indexes a narrative viewpoint. Storytellers also typically use forefinger pointing to target metaphorically created character spaces, when these spaces are not part of a narrative participation space. Another use that underscores the preciseness of the forefinger is the tracing point. This practice is used to trace an exact path and

trajectory. A storyteller can thus use a forefinger point to foreground a character's movement

through narrative space, a degree of information that increases a character's discourse relevance.

One forefinger pointing practice that underscores the general use of forefinger pointing

for developing a character's discourse status is what I call 'linking'. Formally, linking is when a

storyteller points to one referent and then another referent, sometimes repeatedly, as part of the

same gesture stroke. The second referent is the one being linked to. In Sandoval (2014), I

examine the practice of linking a place to a person as a way to semiotically structure an

"associative placement", whereby a speaker links the social meaning of a geographic place with

a person in order to establish a specific community-based identity for that person. For

storytellers, this type of identity work is central to fine-tuning a character's discourse status.

Because linking involves multiple characters and a trajectory, instances of linking bring together

many other forefinger pointing practices. Excerpt (45), from "Historic events at Thermopolis", is

an example of linking that also involves metaphorical pointing and metonymic pointing.

(45)   (ACD 14g)

52.1	{53}	[gesture]		['go back' (in time)]
		heenoo	Ben Fry	and heenei'isiihi' way back
		oblig	Name Name	and and_so_forth way back

You know, Ben Fry and so forth, from way back,

52.2		~~~~~**<PT: old-men space>
		hee'inon-eit nehe' hisei
		know-4/3S DEM woman

they knew this woman.

53.1   [PT: old-men space] [linking PTs: old-men space and speaker]
nenee-3i'   nih-'oon-oo3itoon-einoo
it_is-3PL   PAST-REDUP-tell_a_story-3S/1S
They are the ones who told me this story,

53.2   ~~~***<PT: old-men space>
nuhu' ne-besiiwoho'
DEM 1S-grandfathers.NA.OBLPOSS.PL
my grandfathers.

In (45), the storyteller is working to establish how she knows the story she has just told, a legend of a famous actress that visited Thermopolis. I examined this issue of epistemic rights in this instance of the story in subsection 5.3.1, showing how the storyteller uses different formulations for explicitly mentioning the old men in order to transition from the story to how she gained knowledge of the story. For example, in line 52.1 she uses the name *Ben Fry* to index the old Arapaho men as a specific group of men, while in line 53.2 she identifies them as *ne-besiiwoho'* 'my grandfathers'. The storyteller's use of linking, however, is just as important for how she claims her rights to the story. In line, 52.2 she uses a forefinger point to establish a metaphorical space to represent Ben Fry and the other old men. In line 53.1, she again uses the same metaphorical point, but this time she produces it with an overt nominal, formed with the pronominalized verb form *nenee-3i'* 'they'. This overt nominal is pre-posed to the verb *nih-'oon-oo3itoon-einoo* in the utterance, which signals the pragmatic saliency (see subsection 3.3.2) of the old men as a means of shifting focus (and ordering of discourse relevance) to them and away from the actress. During the verb, she links the old men to herself, whereby she is metonymically

referring to a younger version of herself. The link is formed through repeated movements of the wrist, wherein the storyteller's forefinger pointing from the old-men space to herself occurs multiple times. Through the transfer of knowledge indicated by the trajectory of the linking point, she represents herself as an inextricable part of who they are. Thus, it is not just that she just happened to be told something from these old men, but it is that she was given this knowledge from these men because she has a strong community-relevant association with them. In line 53.2, she specifies the association as a kin relationship, again pointing to the old-men space.

In this section I distinguished forefinger and thumb pointing handshapes formally and functionally, building up to a description of the special case in which storytellers use thumb pointing to refer to characters that are within a narrative participation space, or, more generally, part of the narrative's relevant participation framework. In light of this special context for single-finger pointing, I described forefinger pointing as the general gestural resource through which storytellers develop the discourse statuses of characters. I used an example of linking to highlight how this general use comes into play in a specific practice of forefinger pointing. In the next section, I briefly describe a few other practices that use pointing but are also distinct from general forefinger pointing.

6.5 Other Pointing Handshapes and Practices

As forefinger pointing is the general resource for developing the discourse status of a character through gesture, all other pointing handshapes or forms need to be analyzed for what they do differently. In this section, I briefly examine two other pointing practices that involve different handshapes than general forefinger pointing: directed lexicals and full-hand movement.

There are other pointing practices too, such as the use of full-hand points for person reference. However, such practices are rare, and so I am not fully confident in my understanding of them.

A directed lexical is a gesture in which a storyteller points with a lexical gesture (cf. "directed sign" Liddell 2003). Sometimes the lexical gesture itself involves a pointing action. This is the case with the lexical gesture 'follow', which the storyteller in "Hunting, drinking, and eating" uses as part of his reenactment of the character Danny telling everyone to watch out for Robert, shown in as examined in (46).

(46)   (ACD 56c)

41.1   "~~**" <'follow' PT: Robert space>
                    nehe'   Danny
                    DEM   NAME
              "Watch this one," Danny [said],

This directed lexical involves both hands with forefinger handshapes, one after the other. The target of the forefingers is the object of what is to be followed or watched. Thus, this lexical gesture is by its nature a directed lexical. In other directed lexicals, the lexical gesture itself does not need to be directional, but the handshape of the point is the handshape of the lexical gesture. Such directed lexicals are used to add the meaning conveyed through the lexical gesture to the referent. This is an especially useful resource for storytellers when the lexical meaning is part of how or why a character has discourse relevance. For example, in (47), from "Trip to language conference with woman in room", the storyteller uses the lexical gesture for 'speak' to refer to Running Deer.

(47)   (ACD 24c)

16   ['speaking'…………..…]
            ne'-hee   ne'-heeneti-noo
            then-???   then-speak-1S
            Then, then I spoke.

17   ['speaking' ……….]   ~~~~~~~*****<'speak' PT: Deer>
            hooxohoen-iini   nih-'eeneti-t   hi'in   nookhoosei   niibei
            in_return-DETACH PAST-speak-3.S DEM   NAME   NAME
            Then Running Deer took her turn to speak.

This story is focused on not just the Arapaho language but Running Deer's use and demonstration of the Arapaho language. Thus, the storyteller highlights this theme by using the 'speak' directed lexical to point at Running Deer in line 17. The storyteller in "The boys had trouble learning Arapaho" makes even more use of this type of directed lexical, as seen in excerpt (48).

(48)   (ACD 44b)

80.2   [repeated gesture…….]   ['group' PT: children space]
            nii-ni'-eeneti-3i'   tei'yoonoh'o'   'oh
            IMPERF-good-speak-3PL children.NA.PL   but
            the children speak well. But

81.1   [continued 'group' ……………. ………………………]
            beebeet   nii-   niitiini   niit-ini-hii   cenih-'ini
            just   IMPERF- ???   where-DETACH-well to_here-DETACH
            where, where uhh, as it developed,

81.2   ~~********~~~~~******<'group' PTs: girl space and boy space>

nuhu'   hiseihih'o' noh honoh'oho' noh
DEM   girls.DIM.PL and   boys.PL   and
these girls and these boys, and

82.1   ['group' action PT: girl space ...……………………….]

nuhu'   hiseihih'o' nii-hee-   nihii cesis-eeneti-3i'
DEM   girls.DIM.PL IMPERF-REDUP- well   begin-speak-3PL
these girls talk, uhh start talking,

82.2   ['group' PT: boy space ....]

'oh nuhu' honoh'oho' huu3e'
but DEM   boys.NA.PL over_there.PART.LOC
But these boys over there,

82.3   [action from boy space to girl space, back to boy space]

nih-'oon-oo3itouhu-3i'   hih'oow-ceh'e3tii-no'
PAST-REDUP-tell_stories-3PL 3.PAST.NEG-listen to-pers.PL
they told each other stories, they didn't listen.

83.1   ['group' PT: children space | 'group' breaking up ……..]

ne'-nii'i-ini   ne'- tous woow heet-nihii-nee nuhu'
that-when-DETACH then- hello! now   FUT-say-2PL   DEM
That was when... "well then now you will say it,"

83.2   "[trace PT: along wall space]"
noohow-un hinee
see-3.IMPER DEM
"look at those [pictures]."

84.1   [action in girl space ………….]
hiseihih'o' neen-e'inonkuutii-3i'
girls.DIM   REDUP-pick_up_on_s.t_quickly-3PL
The girls catch on to it real quick.

84.2   ~~~~~~~********<'fight' PT: boy space>
'oh nuhu' honoh'oho'
but DEM boys.NA.PL
But the boys,

Throughout the story, from which (48) is excerpted, the storyteller uses the lexical gesture for

'group', which is formed by the two hands in front of the chest, palms facing each other, and

fingers extended and pointed upward as seen in line 80.2. This lexical gesture is often used to

refer more specifically to the Arapaho community or to an identifying aspect of traditional

Arapaho identity, such as Arapaho language. In this personal narrative, the storyteller gives a

generalized account of her experiences as an Arapaho language schoolteacher. She uses the

'group' lexical gesture in its basic central position to refer to her students (i.e. the children) as a

whole, as seen in lines 80.2 and 83.1. However, in line 81.2 she uses this lexical gesture as a

directed lexical to metaphorically create spaces for the girl group of students and the boy group

of students. In the same way that she uses the lexical gesture to represent the children together as

a community, she uses it as a directed lexical to signal that there are in fact two relevant sub-communities that need to be distinguished. As seen throughout the excerpt, she uses this directed lexical and other gestures within these two spaces to slowly build the story about how and why the girls were better language students than the boys. For instance, in line 82.3 she refers to both groups for how they took part in class activities, but as she says *hih'oow-ceh'e3tii-no'* 'they didn't listen' she moves her hands in the boy space. In line 83.1, she again uses the lexical gesture to represent all of the children, but only to show the gesture breaking up as she starts to give them performance tasks (i.e. through her speech reenactment 'well then now you will say it'). Line 83.1 comes to mean, then, that because of their gendered difference in learning behavior, the children also performed differently in language assessments. She elaborates on this factor in the remaining lines. Notably, in line 84.2 she uses the lexical gesture for 'fight' to form a particularly meaningful directed lexical toward the boy space. It is likely that the 'fight' here has the sense of 'struggle', and thus this struggle contrasts with the girl's success (stated in line 84.1).

The full-hand movement gesture is a type of gesture that is similar to the directed lexical. It uses a specific handshape, which is a full hand with extended but not-separated fingers, and, it is always directed. However, the full-hand movement gesture is not used to point at a referent. Rather it is used by storytellers to show the motion and manner of a referent's movement through some path or with respect to some other structural feature of a narrative space. In this gesture, the hand represents a referent, or both hands can be used to represent certain referential features. The tips of the fingers represent the front of the referent, and, when orientation is important, the palm represents the bottom of the referent. The gesture thus allows a storyteller to depict the direction, speed, orientation, and other movement factors of any type of referent with respect to the structural features of narrative space. Because of this, I gloss this gesture as 'go' or 'be' with the

addition of some specifier, such as 'go back' or 'be sideways'. This gesture is frequently used in spontaneous narratives with specific actions, as it allows storytellers to provide detailed information about the physical actions of characters. For example, in excerpt (49) from "Historic events at Thermopolis", the storyteller uses a full-hand movement gesture to show the quick movement of the Mormons out of the hunting ground, recreated in the narrative space (examined in section 6.3).

(49)   (ACD 14g)

32.2   ['go quickly' PT: out of narrative space]
            nuhu'   Mormons they went on by
            DEM   Mormons   they   went   on   by
            the Mormons, they went on by.

In excerpt (50) from "Hunting, drinking, and eating", the storyteller uses two full hands to represent a pickup truck that Danny is recklessly driving through the mountains.

(50)   (ACD 44b)

77   ['go sideways' ….] ['go sideways' | 'be re-leveled' | 'go down' ……]
            too-ceib-ihcehi-t   'oh ne'-ceiboowuhcehi-t   fire pit-hiine'
            almost-aside-run-3.S   but then-run_down_off_road-3.S fire   pit-INSERT.loc
            He almost went off, and then he [almost] went off down into a fire pit.

The two full hands here allow the storyteller to emphasize the broad and bilateral nature of a vehicle, while the directionality and orientation of the hands allow him to show how the pickup truck nearly went off the road into a ditch and then into a fire pit. As this excerpt shows, the type

of detailed information about physical behavior that a storyteller can show through a full-hand

movement gesture can be as useful as reenactment for foregrounding a character and developing

a character's discourse status.

6.6 Conclusion

In this chapter, I examined a variety of different pointing practices that Arapaho

storytellers use to organize and manage the characters with respect to one another, especially in

terms of how characters are socially organized in a discourse relevance framework. I focused on

forefinger pointing, because it is the most prevalent handshape in spontaneous narratives.

Forefinger pointing is also a general resource for signaling discourse relevance. There are,

however, a variety of practices that use forefinger pointing, including linking, which builds on

characters' discourse statuses by associating them with one another. I also examined forefinger

pointing with respect to thumb pointing, the latter of which is the normal way for a speaker to

refer to an interactional co-participant in (non-narrative) turn-by-turn talk. When a storyteller

develops a narrative participation space for characters, a forefinger point in reference to a

character works to signal that the character and other characters have a socially asymmetric

relationship. I also briefly examined directed lexicals and full-hand movement gestures, as two

other pointing practices that use different handshapes and are not exclusively signals related to

discourse relevance. Although these practices are used to accomplish a number of quite different

actions, the actions all bring subtle distinctions to characters' discourse statuses. As these

practices demonstrate, the organization of characters in a discourse relevance framework is a

property of spontaneous narratives that is neither static nor precise. Rather, the discourse statuses

of characters, as developed through pointing, is subtly established, maintained, and altered as

part of the dynamic management and organization of characters by storytellers. In the next

chapter, I examine how the presence of demonstratives in overt nominals is similar to pointing in that it is a resource for signaling discourse relevance. However, a demonstrative is also a very different type of resource.

CHAPTER VII

DEMONSTRATIVES AND OVERT NOMINALS

7.1 Introduction

In this chapter, I examine storytellers' use of demonstratives in spontaneous narratives. I specifically examine the function of overt nominals when they are formulated with demonstratives in contrast to when they are formulated without demonstratives. In section 7.2, I review the grammar of Arapaho overt nominals and demonstratives. I also review the related literature. Two hypotheses emerge from this literature about the function of these nominal demonstratives. One I call the 'definiteness hypothesis' and the other I call the 'discourse relevance hypothesis'. In section 7.3, I examine the definiteness hypothesis and find no support for it, given the way storytellers use demonstratives in spontaneous narratives. In section 7.4, I demonstrate support for the discourse relevance hypothesis, which proposes that nominal demonstratives are conventional signals of discourse relevance. This may, however, be a grammatical factor that is specific to Arapaho spontaneous narratives, a possibility that I discuss in the conclusion.

7.2 Two Hypotheses for Demonstratives in Overt Nominals

In subsection 3.3.2, I defined the basic formal and functional properties of overt nominals in Arapaho grammar. In this section, I review and expand on those properties. Specifically, I review the grammatical role of demonstratives in overt nominals, especially with respect to the kind of grammatical resource an overt nominal is without a demonstrative (i.e. a bare mention).

As I situate this review in some of the relevant literature, two possible descriptive hypotheses emerge for how demonstratives work in Arapaho spontaneous narratives: The presence of a demonstrative in an overt nominal is a signal of definiteness, or the presence of a demonstrative in an overt nominal is a signal of discourse relevance. While there is substantial descriptive work on Arapaho that supports the former hypothesis, there is typologically oriented research that supports the latter.

As I discussed in subsection 3.3.2, overt nominals in Arapaho are noun phrases that make explicit lexical reference and are expressed externally from verbal expressions (i.e. they are not grammatically integrated with a verbal expression). They therefore do not include nominals that are incorporated into verbs, nor do they include pronoun-like verbal expressions (i.e. quasi-pronouns) or pronominal demonstratives. An overt nominal would include nominalized verbs that are used as mentions, but these are quite rare in spontaneous narratives. Therefore, an overt nominal consists of an explicit nominal mention, such as the name *Ben* or the more general *betebi* 'old lady', with a possible demonstrative, such as *nuhu'* 'DEM'. If there is a demonstrative in an overt nominal, it precedes the mention, as with *nuhu' betebi.* Arapaho has many different demonstratives, and the functional distinction between demonstratives is the focus of Chapter 8. Regardless of whether or not an overt nominal is a bare mention (i.e. whether there is a demonstrative or not), an overt nominal can be pre-posed or post-posed to a verbal expression. In pre-posed position, an overt nominal signals pragmatic saliency.

Demonstratives are one of the few linguistic elements that are widely claimed on functional grounds to be linguistically universal, each language having at least one (see Dixon 2003). Furthermore, the universal nature of demonstratives is claimed to be a result of how they function as resources for social interaction, specifically in relation to deictic reference (Enfield

2003; Diessel 2006; Evans and Levinson 2009). Enfield (2003) argues that all demonstratives

have in common a basic "DEM" functional meaning, which is to call forth an identifying

solution to a referential coordination problem between a speaker and other interactional

participants. Participants are able to correctly identify a referent through a speaker's use of a

demonstrative because the DEM function signals that participants' common ground, or

information they know each other to be sharing, is to be structured in a specified way and that

the referent is locatable within that common ground (cf. Hanks 1990, 1992). Different

demonstratives within a language distinguish different ways to structure the common ground,

which helps to provide for more efficient identification. When the referent can be targeted in

some space, pointing works in conjunction with a demonstrative to visually structure the

common ground and coordinate the reference.

Himmelmann (1996) also argues for this type of basic function but draws on narrative

data from a variety of languages as well as the vast literature on demonstratives in order to

develop a functional typology for how nominal demonstratives are used. This typology of use

consists of four extensions of the basic function, which may correspond to different forms or

constructions for a given language. First, there are "situational" uses. In this type of use, a

speaker uses a demonstrative deictically, to aid in the identification of a referent from some

viewpoint and thus establish it as part of the ongoing narrative discourse. The referent may be

accessible from the actual utterance situation, involving the speaker's body or any other aspect of

the physical context. The referent may also be accessible from the narrated utterance situation,

wherein referents are identified within narrative spaces. Second, there are "discourse" uses. In

this (unfortunately named) type of use, a speaker uses a demonstrative to aid others in identifying

a referent that is constituted by an entire proposition or event that has been previously stated or

described in the narrative. Third, there are "tracking" uses. In this type of use, a speaker uses a demonstrative to aid in the re-identification of a referent that has already been established in the narrative. Fourth, and finally, there are "recognitional" uses. In this type of use, a speaker uses a demonstrative to aid in the identification of a referent that is in response to or in anticipation of a potential problem of recognition (cf. demonstratives in the context of word-formulation trouble, Hayashi and Yoon 2006). Such uses usually involve much more descriptive or identifying information than just a nominal mention.

From my examination of Arapaho spontaneous narratives, the vast majority of storytellers' uses of demonstratives seem to fall within the situational and tracking types described by Himmelmann (1996). I can find no clear examples of storytellers using demonstratives to refer to previous propositions or events (i.e. the "discourse" type). Also, there are very few instances in which the storytellers seem to be dealing with a potential problem in recognition (see the discussion about the use of pointing with a lack of focusing properties, section 6.2). Arapaho storytellers, however, often use demonstratives for what would be classified as situational, in the typology. In this use, a storyteller uses an overt nominal with a demonstrative as part of how a referent is identified, introduced, and established as a referent of the narrative. This use, however, is not regular. Arapaho storytellers also use overt nominals that consist of bare mentions (i.e. without demonstratives) to identify and introduce a referent in a narrative. Arapaho storytellers also often use demonstratives for (anaphoric) tracking of referents. Some of these tracking uses might involve a speaker working to re-identify a referent in order to avoid referential problems caused by potential ambiguity in the use of verbal person affixes. More often, when an Arapaho storyteller uses an overt nominal with a demonstrative for tracking, the storyteller is doing something beyond referring. However, Arapaho storytellers also

use overt nominals without demonstratives for tracking. Therefore, although Arapaho storytellers' uses of demonstratives fall within the situational and tracking types, demonstratives do not exclusively signal these uses.

Accordingly, Arapaho demonstratives do not seem to work as prototypical demonstratives. One possibility is that Arapaho demonstratives have a functional potential that is broader than that of the prototypical demonstrative. In this analytical scenario, Arapaho speakers would have, for example, other practices for introducing and establishing referents that would still involve overt nominals but would not require demonstratives. Additionally, with a broader potential, Arapaho demonstratives could function in ways that crosscut the more prototypical situational and tracking uses, leading to some of the aforementioned inconsistencies in their use.

This analytical scenario is largely what Cowell and Moss Sr. (2008) propose in their claim that Arapaho demonstratives work as both prototypical-like demonstratives and definite markers. In Arapaho, indefinite and definite marking of nominals is not at all clear-cut. Arapaho has no set of determiners dedicated to definiteness. Cowell and Moss Sr. (2008) state, "Although in some instances [demonstratives] do have full demonstrative force, on many occasions they simply indicate that the noun in question is definite" (p.306). Accordingly, the indefiniteness of an overt nominal can be expressed through the absence of a demonstrative (p.314). In addition, they note that indefinite overt nominals can be marked with demonstratives in contrastive situations and that nominals without a demonstrative may nevertheless be definite (p.317-318). This kind of descriptive complexity is to be expected if it is the case that Arapaho demonstratives have a functional potential that includes both the basic functionality of more prototypical demonstrative determiners as well as that of definite determiners. Thus, for the purposes of this chapter, I call this the "definiteness hypothesis".

Even without a close look at actual data, there is some support for the definiteness hypothesis. To start, definite determiners and demonstratives function in similar ways. Definiteness characterizes a referent as both identifiable and recoverable (or already known) for interactional participants. Therefore, while demonstratives work to aid the identification of a referent by coordinating participants' common ground and locating the referent within that common ground, definite determiners work to signal that a referent should be identifiable to participants because the referent is already within the common ground (Diessel 2006). That is, when a speaker marks a referent as definite, the speaker presupposes that the other participants have already identified it given its perceptual salience, either on its own or as a component of some other identifiable referent. Given the similarity in function, it is not surprising that, diachronically, definite articles are often derived from nominal demonstratives (Dixon 2003; Diessel 2006). Arapaho, then, would not be cross-linguistically unique for having demonstratives that function somewhere between the poles of prototypical demonstratives and definite determiners. Arapaho would actually be typical in this way with respect to what has been described about the demonstratives of the other languages in the Algonquian language family (Cyr 1993). Thus, as a general statement in support of the definiteness hypothesis, it might be best to describe Arapaho demonstratives in terms of identifiability, given that identifiability is the functional link between definite determiners and prototypical demonstratives (cf. Lyons 1999).

The other analytical possibility, however, is that Arapaho demonstratives function in a way that is different than the prototypical typology proposed by Himmelmann (1996). It could still be argued that Arapaho demonstratives have the basic interactional function of calling participants' attention to a referent that can be identified within their common-ground knowledge

(e.g. the coordinated use of a demonstrative and pointing with full focusing properties in the example of section 6.2). However, the idea here would be that Arapaho demonstratives, as storytellers use them, have an extension of that basic function that is outside of the prototypical typology defined by Himmelmann (1996). This analytical possibility is underscored by certain non-prototypical grammatical features in the relationship between Arapaho demonstratives and nominal mentions in overt nominals. A demonstrative can occur with any type of nominal mention, generic or specific. This includes personal (and place) names, as is the case with *nehe' Robert*, as well as relational (or possessed-form) mentions, such as *nuhu' ne-besiiwoho'* literally glossed as 'DEM my-grandfathers'. Because of their uniqueness, such mentions signal identifiability on their own, which is why English grammar restricts this type of mention from being formulated with a determiner. That is, one does not use formulations such as "the Robert" or "this my uncle" in English. Furthermore, Arapaho overt nominals with demonstratives and specific mentions can be initial mentions in a narrative discourse. Himmelmann (1996), however, claims that a form is not a demonstrative if it marks an initial mention that is formulated as specific and unique (as with a person's name). Additionally, unlike prototypical determiners, Arapaho demonstratives are not always within the same intonational unit as their nominal mentions (i.e. a nominal mention can be an appositional addition to a pronominal demonstrative). For reasons such as these, Mithun (1987) argues that this type of demonstrative is not a determiner. Furthermore, just as Mithun argues for the Tuscarora language, utterances in Arapaho are grammatical without demonstratives (i.e. without their demonstratives, utterances would not seem awkward to native speakers).

Rather, in her examination of this type of demonstrative as it occurs in the narratives of a variety of genetically unrelated American Indian languages, Mithun (1987) argues that these

demonstratives have a "powerful orienting role" (p.187). As the author describes this function,

she claims that such demonstratives are used to focus or re-focus participants' attention more so

on some events and characters than others, to foreground referents from different viewpoints, as

well as to distinguish characters by certain qualities. Because these are all properties that define

the functional domain of discourse relevance (as discussed in Chapter 5 and to some degree in

Chapter 6), the argument of Mithun (1987) can be restated as follows: Such demonstratives have

the grammatical function to signal discourse relevance, at least within narrative discourses.

Although Cowell and Moss Sr. (2008) provide more support for the definiteness hypothesis, they

provide some evidence that demonstratives in initial reference work to signal high discourse

relevance. Because of this, I call this analytical possibility the "discourse relevance hypothesis"

for the purposes of this chapter.

With respect to the descriptive problems and analytical possibilities that support two

different hypotheses, Cowell (2015) provides an analysis of demonstratives using five early 20th

century Arapaho traditional narrative texts. The texts are from a period of time when the

influence of English on Arapaho would have been minimal. The implication is that an influence

of English determiners may have been a factor in the seemingly inconsistent usage of the more

recent texts that Cowell and Moss Sr. (2008) used for their analysis. Before I review Cowell's

(2015) report, I summarize the usage of English definite and indefinite articles (cf. Chafe 1976;

Du Bois 1980). In English, speakers formulate a nominal with indefinite marking when a referent

is not identifiable to participants, and so the speaker uses indefinite marking on a nominal to

represent the referent as information that the speaker presupposes is new for recipients (e.g. 'a' is

indefinite marking of 'dog' in "On my way home, a dog came up to me …"). A referent is only

new in this way when the speaker initially mentions the referent. Of course, a referent in initial

position can also represent information that a speaker presupposes is not new for recipients. Because the identifiability of such information is presupposed to be easily recoverable by recipients, a speaker formulates the information with definite marking (e.g. 'the' is definite marking of 'dog' in "Whoa! You wouldn't believe how loud the dog was being this morning …"). In subsequent-to-initial mentions of a referent, a speaker always uses definite marking, because in these situations participants have already identified the referent and so the mention of it represents easily recoverable information.

In Cowell's (2015) report, he finds that the vast majority of initial mentions of characters are formulated as nominal mentions without demonstratives (as with English). Accordingly, there are no clear cases in which an initial mention is formulated with a demonstrative. It is important to note that in these oral traditions, storytellers construct narratives whose characters were primarily bygone Arapahos to whom audience members had no relationship outside of the story being told or its cultural framing. Because the initial mentions represent new information, the finding strongly supports the idea that the absence of a demonstrative in a nominal primarily indicates indefiniteness of the character. Further support is that in these texts the majority of subsequent mentions of characters are formulated with demonstratives. Thus, Cowell provides evidence that demonstratives mark definiteness in Arapaho in an almost identical way as determiners do in English. Given the time period when this data was collected, however, it is also evidence that the similarity is not due to bilingual transfer (i.e. the English definite-marking system has not influenced the use of Arapaho demonstratives).

However, in the report, Cowell also discusses a few occasions of subsequent (i.e. clearly definite) references to characters that are nevertheless formulated as nominals without demonstratives. There are indicators that these particular characters had low overall discourse

relevance throughout their respective narratives. The most notable indicator is that the characters are only referred to a few times in their respective narratives. An additional, albeit weaker, indicator is that the nominal in each of these references is post-posed to its associated verbal expression. Storytellers use the pre-posed position to signal the momentary pragmatic saliency of a character, but it is usually only characters with high discourse relevance that are involved in such moments (see subsection 3.3.2 and section 5.2). Thus, because using nominals formulated without demonstratives in subsequent reference is attested, demonstratives cannot be described as exclusively marking definiteness. The low discourse relevance of these referents suggests that demonstratives are involved in signaling discourse relevance too. That is, the absence of a demonstrative in a nominal seems to project that a referent will not continue to be referred to in the immediate discourse. However, it is rare to formulate characters that are identifiable (and recoverable) as nominals without demonstratives in these texts, which suggests that the usage is marked.

In an addendum to the report, Cowell analyzes a more contemporary narrative. He does this for two reasons. First, he compares the pattern of demonstrative use observed in the older texts with this more contemporary text. He finds that there are no significant departures of use. Second, because of the limitations of the genre of the older texts, he uses the more contemporary narrative to understand more about demonstrative use. Specifically, he examines how demonstratives are used with respect to nominals that name a category instead of a specific referent. That is, in the contemporary narrative the storyteller involves both identifiable referents (i.e. those that can be definite) and referents in which un-identifiability is a stable property. For example, 'boys' in the saying "boys will be boys" is categorical and thus unidentifiable by nature. There is no group of boys that someone can define or point to. This is inherently different

from 'boys' in the clause "some boys walked up the street" because the referential nature of

'boys' is definable. In the comparison of these reference types, Cowell finds that nominals are

not formulated with demonstratives for inherently unidentifiable referents. This is consistent with

the use of nominals without demonstratives for indefinite referents, because indefiniteness

includes un-identifiability as a property. However, as discussed earlier, definiteness is dynamic

in that indefinite referents become identifiable upon first explicit mention. In Arapaho,

demonstratives seem to mark this referential change. Categories (as categories) are not dynamic

in this way, and so Arapaho storytellers do not use demonstratives to refer to them. In

conclusion, Cowell finds that for these traditional narratives, Arapaho demonstratives signal

definiteness, inherent identifiability, and discourse relevance, although, the latter property is rare

and highly marked. Thus, Cowell's findings provide much stronger support for the definiteness

hypothesis than the discourse relevance hypothesis.

  In sum, given the properties of Arapaho demonstratives in overt nominals, the literature

points to two different hypotheses regarding their functional description. The definiteness

hypothesis is that Arapaho demonstratives more generally signal identifiability than more

prototypical demonstratives do, whereby through this functionality storytellers use

demonstratives to signal the definiteness of characters and other referents. The discourse

relevance hypothesis is that Arapaho demonstratives have a functional potential that is

typologically distinct from prototypical demonstratives, whereby storytellers use demonstratives

to signal the discourse relevance of characters and other referents. Cowell and Moss Sr. (2008)

provide more descriptive support for the definiteness hypothesis and so does Cowell (2015) in a

more elaborate analysis of traditional narratives. In the sections that follow, I examine Arapaho

spontaneous narratives for these hypotheses. In section 7.2, I start with the definiteness hypothesis.

7.3 Do Demonstratives Signal Definiteness?

In this section, I examine storyteller's use of demonstratives in Arapaho spontaneous narratives with respect to the definiteness hypothesis, which is the claim that demonstratives primarily function to signal definiteness in spontaneous narratives. While I stay true to the interactional approach in the analytical methodology that I use for this section, I also think it would be beneficial if the overall analysis is comparable to Cowell's (2015) findings on earlier and contemporary traditional narratives (i.e. not spontaneous productions), which support the definiteness hypothesis. These findings were discussed in section 7.2. Thus, because Cowell's analysis is designed to reflect the frequency with which demonstratives are distributed in specific categories of use, I have similarly designed the analysis represented in this section. The categories of use reflect the different sequential positions as they correspond to definiteness, as discussed in section 7.2. Using these categories in conjunction with the interactional approach, my analysis does not support the definiteness hypothesis for the demonstratives in Arapaho spontaneous narratives.

As a way to make the nominals comparable to one another as well as comparable to Cowell's (2015) findings, I have made the following stipulations:

- A nominal is any overt nominal with an explicit nominal mention and with or without a preceding demonstrative;
- I count each instance of a specific nominal formulation as constituting distinct nodes of a single chain of reference, except for cases in which a nominal is repeated within the same utterance (as with some repair phenomena);

- I count different nominal formulations of a single referent as being part of a single chain of reference;

- I do not count nominals that are part of reenacted speech, because the formulations of such nominals are contingent on the reenacted event as opposed to the narrative discourse itself;

- I do not count references that are made from a mimetic viewpoint, as opposed to a diegetic viewpoint;

- Although rare, I also do not count nominals that (metalinguistically) refer to themselves, such as when a speaker uses a name to talk about the name itself as opposed to the person that the name might refer to.

The data collection of spontaneous narratives includes 113 total nominals. Half of these include demonstratives. There are only 6 demonstratives that are not counted because they are used without a nominal mention (i.e. pronominally). The high percentage of demonstratives in nominals is similar to what Cowell (2015) finds. However, this rough count comparison already demonstrates a bit of a difference between the traditional narratives that Cowell uses and the spontaneous narratives that I use. That is, if demonstratives do mark definiteness, then one would expect traditional narratives to have more incidences of demonstratives. The reason for this expectation is that traditional narratives are longer and more developed than spontaneous narratives, and so traditional storytellers often make more reference to each character (i.e. have longer chains of reference) than spontaneous storytellers. Because of this difference, traditional narratives should have more nominals that refer subsequent to some initial reference of a given referent. Because participants have already been exposed to the referents of subsequent references, subsequent references are by definition more definite (cf. Schegloff 1996). If

demonstratives mark definiteness, then the larger proportion of subsequent nominals in traditional narratives should mean a larger proportion of demonstratives. It thus follows that, in order to account for the similar proportion of demonstratives in light of the genre discrepancy, spontaneous narratives must have more initial nominal references that are formulated with demonstratives than traditional narratives.

Because such a rough count of nominals leaves a number of questions about sequential position and referent definiteness unanswered, I examine the nominals not just for the presence of demonstratives but for sequential position and referent definiteness. Accordingly, I have developed six categories, into which I have categorized each nominal mention that occurs throughout the six spontaneous narratives. If the analysis supports the definiteness hypothesis, three of these categories should describe the vast majority of nominal mentions. The six categories and the distribution of demonstratives within them are as follows:

- Initial position, indefinite referent, formulated with demonstrative (n=1);

- *Initial position, definite referent, formulated with demonstrative (n=29);

- *Subsequent position, formulated with demonstrative (n=22);

- *Initial position, indefinite, formulated without demonstrative (n=5);

- Initial position, definite, formulated without demonstrative (n=32);

- Subsequent position, formulated without demonstrative (n=24).

The three categories marked with an asterisk are those that describe the anticipated behavior of the nominals for the definiteness hypothesis (i.e. if demonstratives are primarily signals of definiteness). I am able to make this categorical divide due to the nature of the three crosscutting distinctions that the six categories aim to capture: linguistic form, sequential position, and referent definiteness. Linguistic form is binary. Either a nominal has a demonstrative with the

nominal mention or it does not. Sequential position is also binary. If a nominal represents the

first time within a narrative sequence that a referent is explicitly referred to, then the nominal is

in initial position. If a nominal represents another reference to a referent within a narrative

sequence, then the nominal is in subsequent position. The last distinction, referent definiteness, is

also binary. Referents that are either recoverable or identifiable are definite. Recoverability is the

condition in which participants can recover knowledge of a referent given some prior knowledge

that they have of the referent. Identifiability is the condition in which participants can identify a

referent because the referent is perceptually salient to a situation. Subsequent nominals are by

definition definite, and so there is no category that describes indefinite reference in subsequent

position. An initial nominal can however be definite. This happens when a referent is common-

ground knowledge and formulated as such (e.g. through a name), or when a referent has been

explicitly referred to in a previous discourse sequence. An initial nominal can also be definite

when its referent is implied by some other type of reference (e.g. 'front door' is implied by

mention of 'house') or identifiable through some other contextual affordance (e.g. an object that

is visually salient to all participants). Thus, definiteness collapses notions of recoverability and

identifiability, and so a referent is considered indefinite when it cannot be recovered or

specifically identified by hearers.

      As the category counts show, there are just as many instances of nominals in the

descriptive categories that support the definiteness hypothesis as there are in the descriptive

categories that undermine this hypothesis. Notably, there are about 30 nominals in each of the

two categories for definite referents that are referred to in initial position. One of these categories

has the reference formulated with a demonstrative, which is expected by the definiteness

hypothesis. However, the other of these categories has the reference formulated without a

demonstrative, which undermines the hypothesis. Similarly, there are just above 20 nominals in each of the two categories for subsequently positioned references. However, only the category that has the reference formulated with a demonstrative supports the definiteness hypothesis. These findings suggest that the definiteness hypothesis does not hold for the nominal demonstratives of spontaneous narratives. In the subsections that follow, I elaborate on these findings by exploring the data in more interactional depth with respect to each of the six categories.

7.3.1 Initial, Indefinite, and with Demonstrative

Out of the six categories, three describe different uses for nominals with demonstratives. As stated before, such nominals make up half of all nominal uses. However, two of the three categories constitute nearly all of the instances of nominals with demonstratives. The category discussed in this subsection is the exception. The lack of nominals in this category supports the definiteness hypothesis. There is only one nominal in the data that seems to refer to an indefinite referent but that was formulated with a demonstrative and in initial sequential position. Furthermore, this nominal is marginally in this category. The reason for my hesitation here is that in isolation the nominal mention is analyzed as an adverb, and it is unclear whether the referent is really definite. The nominal, *nuhu' beis-iihi'* 'DEM all', refers to a group of men, and it is shown in example (51).

> **(51)   (ACD 14g)**
>
> 11   {53}   tih-'eeneinoo'ei-3i'   nuhu'   beis-iihi'   hee3eb-ne'-
>   when-go_hunt-3PL   DEM   all-ADV   there-then-
>   When these [men] were all out hunting...there...

The storyteller is referring to Shoshone men, but this is not specified in this initial mention of them. In fact, this is the first utterance of the narrative, and the storyteller never specifically

identifies them as Shoshone, although another speaker confirms their identity as Shoshone much later in the narrative (see excerpt (36) in section 6.3). The participants must either have had prior knowledge of this historical event or somehow have inferred the identity of the referent from the discourse context, given that the participants had discussed Shoshones in a previous discourse sequence. This suggests that the mention is definite. However, because the group of men being referred to is a subset of all Shoshones and because it is unclear that this story is common knowledge for the participants, I have conservatively labeled the referent as indefinite. The rest of the demonstrative uses fit more clearly into the other two categories.

7.3.2 Initial, Definite, and with Demonstrative

The category discussed in this subsection is a big one, as it describes almost a quarter of the nominals. This category should be sizable if the data supports the definiteness hypothesis. The category is defined by references to definite referents that are in initial sequential position and formulated with demonstratives. Because there are many examples that fit this category, this subsection also serves to provide examples of the various ways a referent can be classified as definite. As I have defined definiteness, this subsection's category is in part constituted by initially positioned nominals that are formulated with demonstratives and make reference to recoverable referents, or those that participants have knowledge of prior to the referential act. There are a few types of reference that fall into this category. There are references to the cultural community-based knowledge that Arapaho speakers share, such as place names and specific people. In excerpt (52), from "Historic events at Thermopolis", there are two such examples.

(52)   (ACD 14g)

14.1   {53}   ['going up and down' (geyser)]
        noh   nuhu'   Thermopolis   tohuu-niinoo'ei-3i'
        and   DEM   Thermopolis   since.IMPERF-hunt-3PL
        And in Thermopolis, when they were hunting,

14.2   [continued (geyser) ..]
                he'ne'-nii'-cii3inoo'oo-t
                that-when.IMPERF-plunge_into_s.t.-3.S
                that's when [it fell in]

14.3   ****<'go in' PT: water space>
                hi'in   buffalo   in that hot water
                DEM   buffalo   in that hot water
                that buffalo fell in that hot water.

15   {34}   yeah

As the storyteller sets up this story about events at Thermopolis hot springs in line 14.1, she formulates the initial mention of this local and popular place as *nuhu' Thermopolis,* using the demonstrative *nuhu'.* In line 14.3, the storyteller refers to a well known incident in which a buffalo fell into the boiling water of the Thermopolis natural spring. Here she refers to the buffalo as *hi'in buffalo,* using the demonstrative *hi'in.* The definiteness of the buffalo (and the legend associated with the buffalo) is affirmed by speaker 34's *yeah* in line 15. The definite aspect of this subsection's category also implies that the category is constituted by nominal references to referents that can be identified (or have already been identified) by participants because the referents are perceptually salient. Such references notably include persons that are

visible within the space inhabited by participants. An example is the initial reference to Running
Deer, from "Arapaho mentoring for woman in room" and shown in line 131 of excerpt (53).

(53)   (ACD 24b)

131   ~~~~~****<PT: Running Deer>
'oh   huut   nehe'   hisei   nii-niiteheib-einoo
and   here   DEM   woman.NA   IMPERF-help-3S/1S
And here is this woman, she is helping me.

132   nookhoosei   niibei   nee'ees-ih'i-t
NAME   NAME   thus-named-3.S
Running Deer, that's her name.

133   [geo PT: Ethete]
teebe   nouxon-o'   huut   huut   konouutosei'
just_now meet-1S/3S   here   here   Ethete
I just now met her here, here at Ethete.

In this excerpt, the storyteller uses the occasion of Running Deer walking into the room to tell a
story about her. He formulates the initial mention of her as *nehe' hisei* 'DEM woman', where
nehe' is the demonstrative. It is important to note here too that the storyteller's use of *huut* 'here'
in line 131 is necessary to draw attention to Running Deer's physical presence, underscoring that
this information is not necessarily signaled by the actual demonstrative. That is, regardless of
which hypothesis is supported by this data, it is somewhat clear that demonstratives in Arapaho
spontaneous stories are usually not used on their own to draw attention.

Within the category of definite referents are also people, objects, and abstractions that are
recoverable by participants because such referents have been implied (i.e. not explicitly referred

to) previously in the narrative sequence. Line 117.3 of excerpt (54), from "Joke about little girl's translation of Arapaho", includes the first mention of a fictional shopkeeper character as *nuhu' nih'oo3ou'u* 'DEM white man', where *nuhu'* is the demonstrative.

(54)   (ACD 28a)

117.1   {45}   "[thumb PT: grandma space]"
        koo-he-et-cee'in   he-i'eibehe'
        INTERR-2S-FUT-not_know 2S-grandmother.NA.OBLPOSS
        "Do you know what your grandmother"

117.2   toon-hii-beet-otoonoo3oo
                almost-3S.IMPERF-want-thing_bought.NI.DEPPART
                "wants to buy,"

117.3   ~~****<PT: shopkeeper space>
        hee3eihi-t   nuhu'   nih'oo3ou'u
        says-3.S   DEM   white_person(s).NA.OBV
        this white man was saying.

In this spontaneous narrative, the storyteller introduces the character not initially through a mention but through a reenactment sequence, of which lines 117.1 and 117.2 are the end. The existence of the shopkeeper is thus implied by the reenactment. Definite referents of this type would also include an object that is a part of something already referred to or, likewise, an individual that is known to be a member of a group that has been referred to.

7.3.3 Subsequent with Demonstrative

The category discussed in this subsection is also relatively big and thus supports the definiteness hypothesis. The category is defined by subsequent references that are constituted by

nominals formulated with demonstratives. These references are also called "subsequent

mentions" because the referents have already been mentioned in their sequential discourse

context. Thus, because the participating audience acquires information about a referent upon the

initial mention of it, they can easily recover knowledge of the referent upon its subsequent

mention. Subsequent mentions are thus definite by definition. As expected, this category consists

mostly of characters and concepts that are important to a spontaneous narrative. In these

narratives, it is often that a concept, such as Arapaho language, or a place that is central to a

narrative will have subsequent mentions formulated with demonstratives. However, most

subsequent mentions with demonstratives are of persons, who are usually central to the narrative

theme or its development. In all cases, these person references are formulated with linguistic or

other elements that tie subsequent mentions to a chain of reference going back to the initial

mention. In this most straightforward case, the subsequent nominal repeats the formulation of the

initial nominal. In line 81.2 of excerpt (55) from "The boys had trouble learning Arapaho", the

storyteller introduces a group of girls as *nuhu' hiseihih'o'* 'DEM girls', where *nuhu'* is the

demonstrative, and then, in line 82.1, she uses the same formulation in a subsequent mention of

the girls.

(55)   (ACD 44b)

80.2   [repeated gesture.......]   ['group' PT: children space]
            nii-ni'-eeneti-3i'   tei'yoonoh'o' 'oh
            IMPERF-good-speak-3PL children.NA.PL   but
            the children speak well. But

81.1   [continued 'group' PT .……….. ……………………….]
            beebeet nii-   niitiini niit-ini-hii   cenih-'ini
            just   IMPERF- ???   where-DETACH-well to_here-DETACH
            where, where uhh, as it developed,

81.2   ～～********～～～～******<'group' PTs: girl space and boy space>

nuhu'   hiseihih'o'   noh   honoh'oho'   noh
DEM   girls.DIM.PL   and   boys.PL   and
these girls and these boys, and

82.1   ['group' action PT: girl space ..……………………………….]

nuhu'   hiseihih'o'   nii-hee-   nihii   cesis-eeneti-3i'
DEM   girls.DIM.PL   IMPERF-REDUP-   well   begin-speak-3PL
these girls talk, uhh start talking,

Throughout the narrative the storyteller keeps this formulation consistent for the most part (also for referring to 'the boys'). In other cases, a storyteller uses an alternate formulation for a subsequent mention that is formulated with a demonstrative. The continuity from initial mention to subsequent mention relies on a chain of pragmatic inferences and often cultural knowledge of possible alternate formulations. In excerpt (30) of subsection 5.3.1, I discussed how the storyteller of "Historic events at Thermopolis" transitioned mentions of the 'old men' in this way. In that excerpt, shown partially in (56), the initial mention is formulated as *nuhu' beh'eihohoh'o* 'DEM old men' on line 48, and the subsequent mention is on line 53.2, formulated with the demonstrative *nuhu'* as *nuhu' ne-besiiwoho'* 'DEM my grandfathers'.

(56)   (ACD 14g)

48   {53}   'oh nih-bis-e'inon-eit nuhu' beh'eihohoh'o huutiino
                but   PAST-all-know-4/3S   DEM   old_men.OBV.PL around_here
                But the old men here all knew her.

[skipped lines 49 - 52.2]

53.1   [PT: old-men space] [linking PTs: old-men space and speaker]
nenee-3i'   nih-'oon-oo3itoon-einoo
it_is-3PL   PAST-REDUP-tell_a_story-3S/1S
They are the ones who told me this story,

53.2   ~~~***<PT: old-men space>
nuhu' ne-besiiwoho'
DEM   1S-grandfathers.NA.OBLPOSS.PL
my grandfathers.

Again, the community knowledge of family and clan relations that is indexed by specific names, here *Ben Fry* in line 52.1, is important for how the chain of reference is made pragmatically coherent for the participants.

7.3.4 Initial, Indefinite, and without Demonstrative

The nominals discussed in this subsection should support the definiteness hypothesis. The category is constituted by initially positioned nominals that are formulated without demonstratives and that refer to indefinite referents. In subsection 7.3.1, I discussed how the one initial mention formulated with a demonstrative that seemed to refer to an indefinite referent, but the evidence was not strong enough to undermine the definiteness hypothesis. Similarly, for this subsection, there is not strong evidence of nominals formulated without demonstratives that refer to indefinite referents. Of the five nominals found that fit into this category, few of them are exemplary with respect to this category. Those that are exemplary refer to non-human referents (i.e. not characters). For example, in line 39 of (57) from "Hunting, drinking, and eating", the storyteller makes an initial reference to antelope without a demonstrative.

(57)   (ACD 56c)

39   "[trace PT ……………..]"   [clap]
                     noohob-ee3i'   nisicoho'
                     see-1PL/3PL   antelopes.NA.PL
                     We saw some antelope.

The few references to humans or characters that might fit this category, however, are problematic. For instance, in excerpt (58) from "Trip to language conference with woman in room", the storyteller initially refers to the conference goers, in line 12, through the formulation *3owo3neniteeno'* 'Indians', which is without a demonstrative.

(58)   (ACD 24c)

11.1   {5}   [geo PT: Denver …………………………….…]
                 huu3e'   nih-won-ne'-   woni-ini   noh'oub-eihi-ni'
                 over_there PAST-ALLAT-then- ALLAT-DETACH invite-PASS-1PL
                 Over there, we were invited to come

11.2   [contiued PT ………..]
                 huu3e'   niineniiniicie
                 over_there Denver (tallow river)
                 there to Denver.

12   ['all around the place' .………………………………]
                 heet-woo3ee-3i' heetn-oo'eisee-3i' 3owo3neniteeno'
                 FUT-be_many-3PL FUT-gather-3PL   indians.NA.PL
                 There will be a lot of Indians who will meet there [for a conference].

At the mention of them, the conference goers surely represent indefinite information, as they had not previously been referred to, and this group of people (i.e. Indians who are involved in language preservation efforts) are not commonly known amongst Arapaho speakers. In fact, the utterance of line 12 represents the initial allusion to the conference. However, it is not clear from which viewpoint this mention is being made. That is, there is evidence that line 12 represents a reenactment. The primary evidence is the change of tense in this line. Notably, storytellers of spontaneous narratives normally use the past-tense marker *nih-* 'PAST' to describe events from the observational narrative viewpoint. This tense marker is in line 11.1, for example. In line 12, though, the storyteller uses the future-tense marker *heet-* 'FUT', as if speaking from the narrated past before the conference had happened. Such tense changes are signals of the type of projection that is involved in creating a mimetic viewpoint through a reenactment. As I discussed in the introduction to this section, nominals that are part of reenacted speech are formulated with respect to a different set of contingencies than nominals that are formulated as part of the narration of the story. Thus, the lack of a demonstrative in this initial mention may have nothing to do with the indefinite status of the conference goers.

Another example of how nominals that I put in this subsection's category are likely marginally fit for this category is from "Joke about little girl's translation of Arapaho". In line 115 of excerpt (59), the storyteller formulates the initial mention of the little girl as *hiseihiitei'yoo* 'girl', without a demonstrative.

(59)   (ACD 28a)

112   {45}   he-i'eibehe'   hii-beet-
              2S-grandma   3S.IMPERF-want_to-
              "Your grandmother, what's she want [to buy]…"

113   {57}   yeah

114   {45}   heeyounii   'oh   hii-beet-otoonoo3oo
                what_is_it?   and   3S.IMPERF-want_to-thing_bought.NI.DEPPART
                "What is it that she wants to buy?"

115   [thumb PT: at school ………………………….]
                noh   nenee'   nih-nee-neyei3ei'i-3i'   huut   hiseihiitei'yoo
                and   it   PAST-REDUP-to_school-3PL   here   girl.NA
                And that...they went to school here, the little girl.

116   {57}   yeah

Later in the narrative, the storyteller actually formulates a subsequent mention of the little girl with a demonstrative, as *nehe' hiseihiitei'yoo* 'DEM girl' (not shown in the excerpt). However, the definiteness status of the little girl character in the initial mention is marginally indefinite, given that a child is implied by the storyteller's reference to *he-i'eibehe'* 'your grandmother' in the reenactment of the shopkeeper in line 112. Given cultural mores involving who would likely be accompanying a grandmother in the time period in which this story is situated, it is likely that a girl and not just a child was implied by this mention. For reasons such as this, I find no strong evidence in my data collection that an overt nominal without a demonstrative signals indefiniteness (even though such forms often correlate with indefinite referents).

7.3.5 Initial, Definite, and without Demonstrative

This subsection deals with a category that describes almost a quarter of the nominals. The category is constituted by initially positioned mentions that are formulated without demonstratives but refer to definite referents. Because nominals that are describe by this category represent evidence that undermines the definiteness hypothesis, the high proportion of nominals that fit into this category is strong evidence against the hypothesis. There are a variety of referent

types used in this category. With respect to definiteness, the referents are of many of the same types as those discussed in subsection 7.3.2, which involved initial mentions formulated with demonstratives that refer to definite referents. For instance, in excerpt (60) from "Hunting, drinking, and eating", the storyteller initially refers to Danny by name in line 18.1 and does so without a demonstrative.

(60)   (ACD 56c)

18.1   {40}   [clap]   [gesture]
                     hiiwo'ei3 Danny nih-   that morning   nokohu-noo
                     nevertheless NAME PAST- that morning   sleep-1S
                     Anyway Danny, that morning, I was sleeping,

18.2   [clap]   [knocking]   [clap]   "['go up' in hills]"
                     that morning   howoton-einoo   ???   heet-ce'-iinoo'ei-no'
                     that morning   wake_up-3S/1S   ???   FUT-again-hunt-12
                     that morning he woke me up. "We will go hunting again" [he said to me].

The storyteller formulates the mention of Danny without a demonstrative, and yet Danny is well known to the participants and other members of the Arapaho-speaking community. Again, it is not required by Arapaho grammar for personal names to be mentioned without demonstratives. In fact, later in "Hunting, drinking, and eating", the storyteller formulates references to Robert as *nehe' Robert*, where *nehe'* is a demonstrative.

Like other definite initial mentions, there are also referents that constitute recoverable information (i.e. prior knowledge) because the referents are implied through a previous reference

within the discourse context. In excerpt (61), again from "Hunting, drinking, and eating", line

102 shows the storyteller formulating the mention *tecenoo* 'door', without a demonstrative.

(61) (ACD 56c)

101   "['house'…………]   [PT: house space]"
              woow   no'koohu-no'   hot-o'oowu'
              now   arrive_by_car-12 2S-house.NI
              "We've arrived at your house now."

102   "[turning key]   [pushing open]"
              koonen-oot   tecenoo
              open-3S/4   door.NA
              He opened the door.

The door is definite in this instance because it is recoverable information with respect to the

house, which is referred to in line 101. There are also referents that are always definite due to

their cultural omnipresence for Arapaho speakers. This is the case with the Arapaho language,

which is a common topic and referent in the spontaneous narratives (and generally for the ACD).

For example, in "Arapaho mentoring for woman in room", the storyteller mentions *hinono'eitiit*

'Arapaho language' in line 129.2.

(62) (ACD 24b)

129.1 {5}   wohei huut   huutiino
              okay   here   around_here
              Well here,

129.2   nii-bi'-nosouni-ini   neyei-nee-neyei3eibeee-no' hinono'eitiit
              IMPERF-just-still-DETACH   try-REDUP-teach people-12   Arapaho_language
              we are still just trying to teach the Arapaho language here.

Despite the definiteness of Arapaho language, the storyteller formulates this initial mention of it without a demonstrative. In sum, it is relatively common for speakers to formulate nominals in initial position without a demonstrative in cases where the nominal refers to a definite referent. Thus, the amount of evidence that fits this categorical description undermines the definiteness hypothesis for spontaneous narratives.

7.3.6 Subsequent without Demonstrative

The final category, discussed in this subsection, describes subsequently positioned nominals that are formulated without demonstratives. Because these nominals are subsequent to some initial mention of a referent, the referents referred to by subsequent nominals are easily recoverable by participants and are therefore definite. According to the definiteness hypothesis, then, subsequent nominals should be formulated with a demonstrative. However, the category in this subsection, which is constituted by subsequent nominals that are formulated without a demonstrative, describes about a fifth of the nominals in the spontaneous narrative data. As with other subsequent mentions, there are a variety of referent types and formulations within this category. The first example, shown in excerpt (63) from "Hunting, drinking, and eating", has multiple subsequent mentions referring to Danny, and none of them are formulated with a demonstrative.

(63)   (ACD 56c)


```
69     {40}    [thumb PT: Danny space] [taking a drink]          [laughter …….]
               hiiwo'ei3                Danny           nih-cih-nonsih'ebi-t   ???
               nevertheless             NAME            PAST-to_here-drunk-3.S  ???
               So then Danny got drunk [laughing].
```

70   {3}   [laughter]
                        noo'eiyeihii
                        driver.NA
                The driver.

71   {40}   ['driving' and laughing]
                noo'eiyeihii howoh
                driver.NA   right?
                The driver, right.

In line 69, the storyteller transitions from focusing on Robert to focusing on Danny (see

subsection 3.3.2) and he mentions Danny without a demonstrative. The storyteller, however, has

explicitly referred to Danny many times throughout the narrative prior to this moment. In line 70,

a rare moment of co-narration in the data collection, speaker 3 reformulates the reference to

Danny in terms of the category *noo'eiyeihii* 'driver', and the primary storyteller aligns with this

reformulation in the next turn (line 71). Both of these mentions use the same term, *noo'eiyeihii*,

and neither formulates the nominal with a demonstrative. This use of a category in these

subsequent mentions works to make explicit what has been implied, which is that Danny is drunk

driving. Note too that regardless of who it is, the driver itself is a definite referent here because

the narrative event is taking place within a car. That is, a driver is implied by the existence of a

moving car.

Characters that are constituted by generalized groups can also be subsequently mentioned

without a demonstrative. Line 84.1 of excerpt (64), from "The boys had trouble learning

Arapaho", shows the subsequent mention *hiseihih'o'* 'girls' formulated without a demonstrative.

(64)   (ACD 44b)

84.1   [action in girl space ………….]
              hiseihih'o'   neen-e'inonkuutii-3i'
              girls.DIM   REDUP-pick_up_on_s.t_quickly-3PL
              The girls catch on to it real quick.

84.2   ~~~~~~*********<'fight' PT: boy space>
              'oh   nuhu'   honoh'oho'
              but   DEM   boys.NA.PL
              But the boys,

The reference to the girls in this excerpt is juxtaposed with a reference to the boys in line 84.2, but only the reference to the boys is formulated with a demonstrative. Both of these references are, though, subsequent mentions and both of them use the exact same nominal mention as their initial mentions (for a discussion involving the initial references, see excerpt (48) in section 6.5). Despite the clear definiteness of the girls in line 84.1, the storyteller does not formulate this subsequent mention with a demonstrative. There are also subsequent references to non-human referents in this category. However, characters, such as those I provided examples of in this subsection, represent clearer cases of definite referents. Thus, the data that is described by this subsection's category provides strong evidence undermining the definiteness hypothesis (although there is some correlation).

7.4 Demonstratives and Discourse Relevance

In section 7.3, I tested the definiteness hypothesis for Arapaho spontaneous narratives, and I found strong evidence against this hypothesis. The definiteness hypothesis proposes that

nominal demonstratives are definite determiners, much like the definite article 'the' of English. From the perspective of the definiteness hypothesis, I found that there is a high degree of inconsistency with respect to when a storyteller uses and does not use a demonstrative in the formulation of an overt nominal. Specifically, just as many references to definite referents are formulated with a demonstrative as references to definite referents that are not, despite where these references are sequentially positioned. In this section, I show that there is a pattern, however, to the use of nominal demonstratives in spontaneous narratives. This pattern strongly supports the discourse relevance hypothesis, which proposes that the demonstratives signal the discourse relevance of characters.

Specifically, I argue that the presence of a demonstrative in an overt nominal can signal a promotion of a character's discourse status, while the absence of a demonstrative can signal a demotion of discourse status. These promotions and demotions can be quite dynamic throughout a narrative. That is, a storyteller can strategically use demonstratives not only to signal how characters or other referents relate to one another and how the audience should relate to the characters, but how such relationships change throughout the various moments, events, and sub-sequences of a narrative. In general, demonstratives are an important conventional resource for how storytellers referentially structure the discourse relevance framework of their spontaneous narratives. In the subsections that follow, I examine evidence in support of the discourse relevance hypothesis. The examination aims to demonstrate the discourse relevance hypothesis in light of section 7.3, which demonstrated seeming inconsistencies in the data from the perspective of the definiteness hypothesis. Additionally, a large part of how I support the discourse relevance hypothesis through this examination is by showing that storyteller's use of demonstratives correlates with foregrounding displays, as outlined in section 5.3.

7.4.1 The Normal Use of Demonstratives

As discussed in section 5.3, one straightforward way that storytellers develop or reinforce a character or other referent's discourse status is by giving the referent a high amount of relative presence within the discourse. One simple practice that a storyteller uses for giving a referent more presence is simply to talk more about the referent relative to other referents. Referents with high discourse relevance, then, are generally referred to more than other referents. Another practice for giving a referent more presence is to provide detailed information about the referent, through gesture, reenactment, or descriptive detail. The discourse relevance hypothesis therefore predicts that a nominal formulated with a demonstrative should be part of a longer and more informationally rich chain of reference than a nominal that is not formulated with a demonstrative (cf. unstressed 'this', Wright and Givon 1987). Excerpt (65) from "Historic events at Thermopolis" provides two examples in which a nominal formulated with a demonstrative is part of such a chain of reference.

(65)   (ACD 14g)

14.1   {53}   ['going up and down' (geyser)]
          noh   nuhu'   Thermopolis   tohuu-niinoo'ei-3i'
          and   DEM   Thermopolis   since.IMPERF-hunt-3PL
          And in Thermopolis, when they were hunting,

14.2   [continued (geyser) ..]
          he'ne'-nii'-cii3inoo'oo-t
          that-when.IMPERF-plunge_into_s.t.-3.S
          that's when [it fell in]

14.3   ****<'go in' PT: water space>
hi'in   buffalo   in that hot water
DEM   buffalo   in that hot water
that buffalo fell in that hot water.

15   {34}   yeah

16   {53}   [floating body in water space]
noh   hiis-iihi'   honoot   tih-'iisoxuh'u-t
and   PERF-ADV until   when.PAST-cooked-3.S
And it stayed [in the water] like that until it was cooked.

In line 14.1, the storyteller initially refers to Thermopolis, formulating the mention of it with the demonstrative *nuhu'*. Additionally, she gestures a narrative space of the Thermopolis hot springs geyser. This bit of visual detail specific to Thermopolis and its name is continued throughout the narrative, as I have explored in other areas of the dissertation, notably section 6.3. That is, Thermopolis is not just the place in which the narrative takes place but the place itself is central to the narrative. Thus, in accord with the discourse relevance hypothesis, each reference to Thermopolis throughout the narrative is formulated with a demonstrative. Excerpt (65), however, also shows a narrative sub-sequence that involves a buffalo and a more specific chain of reference relating to Thermopolis (which extends beyond the excerpt). In lines 14.2 and 14.3, the storyteller initially refers to an event in which a buffalo fell into the hot springs and was boiled. In the initial explicit reference to the buffalo, the storyteller formulates the mention with a demonstrative as *hi'in buffalo* 'DEM buffalo'. The storyteller continues to refer to buffalo with verbal person markers throughout each line of the sub-sequence (not shown in the excerpt), such

as -*t* '3.S' in the expression *tih-'iisoxuh'u-t* 'when it was cooked' of line 16. Additionally, each line contains detailed visual information produced gesturally within the developed narrative space, starting in line 14.3 where the storyteller uses a full-hand-movement point to show the action of the buffalo being submerged in the thermal geyser. Given this informationally rich chain of reference, the storyteller's use of a demonstrative in formulating a reference to the buffalo is expected if demonstratives signal discourse relevance.

Contrasting references to characters within "Historic events at Thermopolis" are shown in excerpt (66), wherein the nominal mention of Ben Fry is formulated without a demonstrative (line 52.1) while other mentions are formulated with demonstratives.

(66)   (ACD 14g)

48   {53}   'oh nih-bis-e'inon-eit nuhu' beh'eihohoh'o huutiino
                but   PAST-all-know-4/3S   DEM   old_men.OBV.PL around_here
                But the old men here all knew her.

[skipped lines 49 - 51]

52.1   [gesture]   ['go back' (in time)]
                heenoo Ben Fry   and heenei'isiihi' way back
                oblig   NAME NAME and   and_so_forth   way back
                You know, Ben Fry and so forth, from way back,

52.2   ~~~~~**<PT: old-men space>
                hee'inon-eit   nehe'   hisei
                know-4/3S   DEM   woman
                they knew this woman.

53.1   [PT: old-men space] [linking PTs: old-men space and speaker]
nenee-3i'   nih-'oon-oo3itoon-einoo
it_is-3PL   PAST-REDUP-tell_a_story-3S/1S
They are the ones who told me this story,

53.2   ~~~***<PT: old-men space>
nuhu'   ne-besiiwoho'
DEM   1S-grandfathers.NA.OBLPOSS.PL
my grandfathers.

As previously discussed in example (30) of subsection 5.3.1, the storyteller mentions Ben Fry to specify a more specific group of bygone elders than what is referred to in line 48. The speaker formulates this mention of Ben Fry without a demonstrative, and there is no explicit subsequent mention or other referential index specific to this individual again in the narrative. Thus, as an individual, Bud Harris is not highly relevant to the discourse. Evidence of this low discourse relevance is also made apparent by the storyteller's use of the spoken element that follows his name, *heenei'isiihi'* 'and so forth', indicating that the mention of Ben Fry was a means of referencing him in addition to his known associates. This group of bygone elders that he is associated with, however, is discourse relevant. They are referred to multiple times in the sequence. They are explicitly mentioned in lines 48 and 53.2 of this excerpt, and they are referred to through verbal person markers in lines 52.2 and 53.1. Additionally, in lines 52.2, 53.1, and 53.2, the storyteller uses a metaphorical old-men space as a visual aspect of the informational richness involved in this chain of reference. Nominals referring to the group of old men are thus formulated with a demonstrative. In line 48, the formulation is *nuhu' beh'eihohoh'o*

'DEM old men', and in line 53.2 the formulation is *nuhu' ne-besiiwoho'* 'DEM my grandfathers'. As additionally predicted by the discourse relevance hypothesis, however, the reference to Ben Fry is formulated without a demonstrative.

As with the previous discussion of Thermopolis, excerpt (67) from "Arapaho mentoring for woman in room" shows multiple types of referents in juxtaposition with one another but that are referred to in ways that support the discourse relevance hypothesis.

(67)   (ACD 24b)

131   ~~~~~~****<PT: Running Deer>
'oh huut nehe' hisei   nii-niiteheib-einoo
and here DEM   woman.NA IMPERF-help-3S/1S
And here is this woman, she is helping me.

132   nookhoosei niibei nee'ees-ih'i-t
NAME   NAME   thus-named-3.S
Running Deer, that's her name.

133   [geo PT: Ethete]
teebe   nouxon-o' huut huut konouutosei'
just_now meet-1S/3S here   here   Ethete
I just now met her here, here at Ethete.

In line 131, the storyteller formulates a mention of Running Deer (i.e. the woman in the room, although out of camera view) as *nehe' hisei* 'DEM woman', where *nehe'* is a demonstrative. In line 132, he provides her name. The reference here is to the content of her name and not to the woman herself, and so this mention does not constitute the type of nominal that would ever be formulated with a demonstrative. Nevertheless, the use of a demonstrative in the actual reference

to her, in line 131, is followed by a narrative that is largely dedicated to her activities and actions. Thus, the storyteller refers to her in nearly every line of the narrative through some combination of verbal person markers, pointing at her, reenactments of her, and so forth. Her high discourse status is thus continuously signaled and displayed in the narrative, a factor that is in accord with the discourse relevance hypothesis, given the storyteller's use of a demonstrative to refer to her. In contrast, line 133 shows the storyteller mentioning the town *konouutosei'* 'Ethete' without a demonstrative. Ethete is a local place that is important to the sociohistorical organization of the Wind River Reservation. In this case, Ethete is also notable because it is where some of the major Arapaho schools are located. Because the storyteller is a teacher, the mention of Ethete underscores the teacher-student relationship that he has with Running Deer. Thus, Ethete is an appropriate anchor for situating the narrative, which the storyteller underscores with a geographic point to Ethete. However, the narrative is not about Ethete or a set of events that is associated with Ethete. While Ethete may have such cultural value that it is important to mention that some event occurred there, it is only mentioned or otherwise alluded to this one time in the narrative. Rather, the narrative focuses on the teacher-student relationship between the storyteller and Running Deer. Thus, different from the role of Thermopolis in "Historic events at Thermopolis", Ethete has relatively low discourse relevance in "Arapaho mentoring for woman in room". As predicted by the hypothesis, the reference to Ethete in line 133, therefore, is formulated without a demonstrative.

There are also examples within a single narrative where the same type of referent is formulated differently, with respect to the use of demonstratives. In excerpt (68) of "The boys had trouble learning Arapaho", the storyteller formulates a reference to children in line 80.2 as *tei'yoonoh'o'* 'children' (without a demonstrative), whereas she formulates a reference to the

same children in line 81.2 as *nuhu' hiseihih'o' noh honoh'oho'* 'DEM girls and boys', with the

demonstrative *nuhu'*.

(68)   (ACD 44b)

80.2   [repeated gesture…….]   ['group' PT: children space]
nii-ni'-eeneti-3i'   tei'yoonoh'o'   'oh
IMPERF-good-speak-3PL children.NA.PL   but
the children speak well. But

81.1   [continued 'group' PT .……….. ……………………….]
beebeet nii-   niitiini niit-ini-hii   cenih-'ini
just   IMPERF- ???   where-DETACH-well to_here-DETACH
where, where uhh, as it developed,

81.2   ⁓⁓********⁓⁓⁓⁓******<'group' PTs: girl space and boy space>
nuhu' hiseihih'o' noh honoh'oho' noh
DEM   girls.DIM.PL and   boys.PL   and
these girls and these boys, and

As discussed in example (48) of section 6.5, the storyteller uses specific lexical gestures as well

as metaphorical spaces throughout the rest of the narrative to elaborate on the difference between

the girls and boys, as two very different subsets of her school children. In contrast, there is only

one mention of the children as a whole, and that is in line 80.2 of this excerpt. This mention and

its accompanying gesture work to situate the contrast between the gendered subset of children.

Thus, the children as a whole group do no have as high of a discourse status in relation to the

group of children as they are separated into girls and boys. Thus, in accord with the hypothesis,

while *tei'yoonoh'o'* 'children' is formulated without a demonstrative in line 80.2, *nuhu'*

hiseihih'o' noh honoh'oho' 'DEM girls and boys' is formulated with a demonstrative in line 81.2.

Therefore, given the evidence examined in this subsection, while those referents mentioned with demonstratives are most often central to the plot or theme of a narrative, the referents mentioned without demonstratives are more often an aside to the theme, used to clarify or situate some other reference.

7.4.2 Discourse Status Promotion and Demotion

In section 7.4.1, I showed that, in accord with the discourse relevance hypothesis, it is normal for a storyteller to formulate the nominal mention of a referent with a demonstrative in those cases when the storyteller foregrounds the referent, especially through informationally rich chains of reference. Conversely, a storyteller normally formulates the mention of a referent without a demonstrative in those cases when the storyteller does not foreground a referent. As such, the formulations of nominals, either with or without a demonstrative, are normally maintained throughout a narrative sequence. A referent's high or low discourse status conventionally signaled by the presence or absence of a demonstrative is reinforced by foregrounding displays or non-displays, respectively. However, there are examples in which the use of demonstratives does not align so clearly with such displays or in which the use of demonstratives is not so static across an entire narrative. Nevertheless, such examples do not undermine the discourse relevance hypothesis. Rather, they underscore the proposal of the hypothesis that Arapaho demonstratives are grammatically organized conventional signals of discourse relevance.

In this subsection, I show that while storytellers' uses of demonstratives tends to correlate with storytellers' foregrounding displays, the correlation is not absolute, especially with respect to character reference. The somewhat marked instances in which the use of demonstratives do

not so clearly reinforce foregrounding displays indicate the ways in which the demonstratives work as conventional signals of discourse relevance.

For instance, storytellers only use demonstratives to refer to those characters that are involved in the one event of the story that has the most discourse relevance. For most spontaneous narratives, storytellers focus on one event. That is, most spontaneous narratives are about a single event, from beginning to end. Thus, in these cases, the character or characters that the storyteller foregrounds are the ones that the storyteller refers to with nominal demonstratives. This, then, is what constitutes the normal use of demonstratives, as discussed in subsection 7.4.1. However, some spontaneous narratives are constituted by many connected, but separate, events. This is the case for the lengthy "Hunting, drinking, and eating", wherein the storyteller interconnects various events that make up a single day, from being woken up, to traveling with friends to a hunting ground, to dealing with the drunken behavior of Robert, to being a passenger in a car with the drunk-driver Danny, to preparing the day's kill for dinner at a friend's house. For the most part, although these events are blended into one another, they are situated quite differently from one another, notably involving different settings and references to people. The event that is foregrounded, however, is the one in which the hunting party has to deal with Robert's drunken behavior. Overall, this event involves the most reenactments and other reinforcements of discourse relevance, which is described in example (44) of subsection 6.4.3. The various references to Robert in this event constitute the longest and most informationally rich chain of reference in the entire narrative. In accord, the storyteller formulates explicit references to Robert with a demonstrative (e.g. *nehe' Robert*). None of the other characters, over the entire narrative, are explicitly referred to with nominals that are formulated with demonstratives. The storyteller refers to three other characters by name, including Danny, who is

explicitly referred to in more of the narrative's events than any other character. The storyteller even reenacts Danny on many occasions. However, the event involving Robert's drunken behavior is displayed with the most foregrounding, and the storyteller defines that event through Robert's behavior. All other events in the narrative seem to either lead up to that event or be a reflection of it. The storyteller thus signals Robert's special discourse status by referring to him and no other character with a demonstrative.

Given such a conventional capacity of demonstratives to develop the discourse statuses of characters, storytellers of any type of narrative can even exploit this capacity in very localized sequential contexts within a narrative. In this way, a storyteller may change the nominal formulation of a character from one reference to the next by including or excluding a demonstrative. The presence or absence of a demonstrative thus signals a relative change in the character's discourse status. I use the term 'promotion' to describe the situation in which a storyteller goes from a formulation involving no demonstrative to one with a demonstrative. This change signals a promotion in the character's discourse status. Likewise, I use the term 'demotion' to describe the situation in which a storyteller goes from a formulation involving a demonstrative to one involving no demonstrative. This change signals a demotion in the character's discourse status. Promotions and demotions are often subtle changes in status. In most cases, characters that undergo promotion and demotion have otherwise high discourse relevance. Thus, if such characters are conceptualized to be in the focus of participants' attention, promotion is a signal to zoom in on a character, while demotion is a signal to blur the focus on a character.

Excerpt (69), from "Joke about little girl's translation of Arapaho", shows an example of promotion, wherein the storyteller refers to the little girl without a demonstrative in line 115 and with a demonstrative in line 119.

(69)   (ACD 28a)

114   {45}   heeyounii 'oh   hii-beet-otoonoo3oo
          what_is_it?   and   3S.IMPERF-want_to-thing_bought.NI.DEPPART
          "What is it that she wants to buy?"

115   [thumb PT: at school …………….………….]
          noh   nenee'   nih-nee-neyei3ei'i-3i'   huut   hiseihiitei'yoo
          and   it   PAST-REDUP-to_school-3PL   here   girl.NA
          And that...they went to school here, the little girl.

116   {57}   yeah

117.1   {45}   "[thumb PT: grandma space]"
          koo-he-et-cee'in   he-i'eibehe'
          INTERR-2S-FUT-not_know 2S-grandmother.NA.OBLPOSS
          "Do you know what your grandmother"

117.2   toon-hii-beet-otoonoo3oo
          almost-3S.IMPERF-want-thing_bought.NI.DEPPART
          "wants to buy,"

117.3   ~~****<PT: shopkeeper space>
          hee3eihi-t   nuhu'   nih'oo3ou'u
          says-3.S   DEM   white_person(s).NA.OBV
          this white man was saying.

118   {57}   uhm

119   {45}   "[thinking]"
          ne'-ii-   -kokoh'u3ecoo-t   nehe'   hiseihiitei'yoo
          then-IMPERF-   -think-3.S   DEM   girl.NA
          Then this little girl was thinking.

In the excerpt, the storyteller promotes the little girl as part of a strategy in which he transitions from the shopkeeper's character viewpoint to the little girls' viewpoint. The storyteller begins the narrative by reenacting the shopkeeper, who is a white guy that does not speak Arapaho. The excerpt (up to line 117.2) shows most of this initial reenactment. The shopkeeper is not explicitly referred to until line 117.3, and this sequentially initial reference is formulated as *nuhu' nih'oo3ou'u* 'DEM white person'. The storyteller's use of a demonstrative in this formulation underscores the storyteller's use of reenactment to develop the shopkeeper's discourse status. In line 115, between reenactments of the shopkeeper, the storyteller makes reference to the little girl in order to better situate this introductory phase of the joke. Specifically, the storyteller explicitly introduces this girl as an Arapaho school-age girl from the past (see example (41) of subsection 6.4.2). In doing this, he formulates the nominal mention of her as *hiseihiitei'yoo* 'little girl', without a demonstrative. Although it is clear from the details of this introductory phase of the joke that the little girl has discourse relevance, the storyteller's mention of her without a demonstrative helps sustain the relatively high discourse status of the shopkeeper in this sequentially local context. This initial mention of the little girl, in the midst of the joke set up, is thus part of how the storyteller develops the narrative through both mimetic and diegetic viewpoints.

After the storyteller finishes this introductory phase featuring the shopkeeper, the storyteller anchors the predominant viewpoint on the little girl. His line 119 visible reenactment of her in deep thought, which he produces by bringing his forefinger to his temple, is accompanied by a narrated description of this act. Here, in this subsequent explicit reference to the little girl, the storyteller's formulation uses the same nominal mention as the initial reference but with the addition of a demonstrative. The formulation is now *nehe' hiseihiitei'yoo* 'DEM

girl', *nehe'* being the demonstrative. Although the visible reenactment works to foreground the

little girl, the demonstrative projects that her role in the joke now takes center stage. Her high

discourse status, in fact, is crucial for the punchline, wherein the storyteller reenacts the little girl

as she answers the shopkeeper's inquiry about what her grandma wants. However, the punchline,

which motivates the other participants to much laughter, occurs much later and is not shown in

excerpt (69). Thus, the storyteller's line 119 use of a demonstrative, in reference to the little girl,

works to promote her discourse status above that of the shopkeeper, as a means of building

audience anticipation for how she will finally respond to the shopkeeper. This promotion of the

little girl's discourse status is key to how the storyteller structures the joke, especially regarding

how the characters are effectively managed for the sake of audience engagement.

In excerpt (70), from "The boys had trouble learning Arapaho", the storyteller also uses

demonstratives to much effect in the management of two characters. Here, however, the

storyteller demotes the discourse status of one of the characters.

(70)   (ACD 44b)

82.1	['group' action PT: girl space .……………………….]
	nuhu' hiseihih'o' nii-hee- nihii cesis-eeneti-3i'
	DEM girls.DIM.PL IMPERF-REDUP- well begin-speak-3PL
	these girls talk, uhh start talking,

82.2	['group' PT: boy space ….……]
	'oh nuhu' honoh'oho' huu3e'
	but DEM boys.NA.PL over_there.PART.LOC
	But these boys over there,

[skipped lines 82.3 - 83.2]

84.1   [action in girl space ………….]
hiseihih'o'   neen-e'inonkuutii-3i'
girls.DIM   REDUP-pick_up_on_s.t_quickly-3PL
The girls catch on to it real quick.

84.2   ~~~~~~~*********<'fight' PT: boy space>
'oh nuhu' honoh'oho'
but DEM   boys.NA.PL
But the boys,

In this narrative, the characters are constituted as two groups of children, a girl group and a boy group. They are initially introduced as such with a demonstrative, as discussed in subsection 7.4.1. Although the initial mention is not shown in excerpt (70), the first part of the excerpt shows subsequent mentions of the two characters, each formulated with a demonstrative. In line 82.1, the storyteller's reference to the girls is formulated as *nuhu' hiseihih'o'* 'DEM girls', and, in line 82.2, a reference to the boys is formulated as *nuhu' honoh'oho'* 'DEM boys'. As the storyteller develops the characters' discourse relevance through the use of metaphorical spaces (also see subsection 6.5), the storyteller's use of demonstratives reinforces this discourse relevance. As the story progresses, however, the storyteller begins to focus specifically on the language-learning incompetence of the boys. This development in the story is first signaled in lines 84.1, when the storyteller refers to the girls through the nominal *hiseihih'o'* 'girls', which does not include a demonstrative. This demotion of the girl's discourse status is reinforced in line 84.2, as the storyteller continues to refer to the boys with the nominal formulation *nuhu' honoh'oho'* 'DEM boys', which includes a demonstrative. This demotion is additionally

reinforced by the use of the 'fight' directed lexical to point (with a punch) to the boy space. The effect is to foreground the boys with respect to the girls, so as to change the story from a simple comparison of the two groups to one in which the boys' resistance to learning is highlighted. Further in the narrative than what the excerpt shows, the storyteller continues to use both metaphorical spaces and various reenactments of the involved characters. The conventional power of the formulation of the girls without a demonstrative (line 84.1), however, allows the storyteller to signal a subtle change in focus, which involves a blurring of the girls' discourse relevance.

7.5 Discussion and Conclusion

In section 7.3, I tested the definiteness hypothesis, which proposes that a demonstrative, as used by Arapaho storytellers in the formulation of over nominals, signals that a referent is definite. Accordingly, an overt nominal formulated without a demonstrative would signal indefiniteness. I found no support for this hypothesis in my analysis of Arapaho spontaneous narratives. Notably, I found that storytellers referred to just as many definite referents as not through overt nominals that are formulated with demonstratives. In section 7.4, I provided evidence instead for the discourse relevance hypothesis, which proposes that demonstratives signal the discourse relevance of referents. Notably, I showed how even the most glaring demonstrative inconsistencies from the perspective of the definiteness hypothesis can be explained by the discourse relevance hypothesis, such as cases in which an initial mention of a referent includes a demonstrative and a subsequent mention of the same referent does not. In general, storytellers use demonstratives to conventionally reinforce other signals of referents' discourse relevance. Storytellers, however, also use this conventional capacity of demonstratives to subtly organize and manage the characters' discourse statuses with respect to one another.

Notably, storytellers can change how they formulate a reference to a character by adding a demonstrative to a nominal that was initially formulated without one. This works to promote the discourse status of a character. Storytellers can also change how they formulate a reference to a character by taking away a demonstrative from a nominal that was initially formulated with one. This works to demote the discourse status of a character.

My findings in support of the discourse relevance hypothesis, however, do not necessarily undermine the definiteness hypothesis with respect to all of the ways in which the Arapaho language is used. As discussed in section 7.2, there is much evidence in support for this hypothesis, notably from a report by Cowell (2015). This evidence, though, comes from Arapaho traditional narratives or oral traditions, such as those found in Cowell and Moss Sr. (2005) and Cowell, Moss Sr., and C'Hair (2014). This genre of narrative is very different than the more casually produced spontaneous narratives that I analyze. Levinson (1979) uses the term "activity type" instead of 'genre', and argues that different activity types often involve quite different pragmatic norms. With regard to the two narrative types, such difference may result in grammaticalized differences in how Arapaho speakers use demonstratives. For instance, definiteness may be more useful for storytellers to signal in traditional narratives than in spontaneous narratives because traditional narratives deal with referents that are more newsworthy, or at least treated as such. That is, different from the productions of spontaneous interactions, traditional narratives are constituted initially by storytellers as isolated sequences, not needing to be connected to a prior sequential discourse. As storytellers introduce characters and other referents into such a narrative, it seems that it would be useful for the storytellers to signal that the referents are new or indefinite, with respect to the narrative context. With spontaneous narratives and other types of casual talk, in contrast, speakers work to make their

talk relevant to a prior topic. One common strategy is for a storyteller to continue talking about people or events that were mentioned, or at least implied, in the talk of a prior sequence. For all six spontaneous narratives that I draw from in this dissertation, each is structured as a relevant continuation of or addition to some topic of talk that preceded it. Pragmatically, then, it might be more useful for a storyteller of a spontaneous narrative to assume the definite status of most of what is referred to and instead have more resources for establishing and managing the relevance of characters and other aspects of the production.

Regardless of the pragmatic pressures that may have motivated grammatical differences between the use of demonstratives in the different narrative genres, there is other supporting evidence for the idea that Arapaho might make this type of grammatical differentiation. For one, Arapaho traditional narratives have other specific grammatical features that differentiate it from other uses of Arapaho, such as the special "narrative past-tense" form *he'ih-* (Cowell and Moss Sr. 2008: 260). In spontaneous narratives, storytellers exclusively use the more common past-tense form *nih-*. Cowell and O'Gorman (2015) have additionally found that many grammatical features are differently distributed across a variety of language-use genres, including various genres related to narrative. In section 6.4, I also show that such differences in genre (or activity type) extend to conventional gestures, whereby thumb pointing for person reference is exclusively used to refer to a co-participant in (non-narrative) talk that is otherwise situated in the here and now of an ongoing interaction and its respective participation framework. Thus, my findings in support of the discourse relevance hypothesis may very well be a descriptive fact of spontaneous narratives and nothing else.

Considering the finding that demonstratives signal discourse relevance in spontaneous narratives, there are also grammatical implications that are more important for this dissertation.

These implications involve the nature of Arapaho bimodalism. In Chapter 6, I outlined how pointing, typically practices involving forefinger pointing, is a signaling resource for discourse relevance in spontaneous narratives. Storytellers can therefore develop characters' discourse statuses through both pointing and demonstratives. In this general way, these two resources are linguistically similar, constituting a grammatical paradigm. There are differences, however. In Chapter 9, I examine these differences as part of how I describe a complex bimodal construction that integrates the two resources together. In the next chapter, I examine the functional distinctions that are signaled by different demonstrative forms. Similar to the different pointing handshapes and practices, different demonstratives signal subtle qualitative differences in characters' discourse statuses.

CHAPTER VIII

DEMONSTRATIVE FORMS

8.1 Introduction

Although a demonstrative, categorically, is a signal of discourse relevance in spontaneous

narratives, Arapaho has three distinct demonstrative forms (and probably more) that provide

storytellers with a variety of ways to fine-tune the discourse status of a character. The three

demonstratives are *nuhu'*, *nehe'*, and *hini'* (or *hi'in*). One distinction that is made by these

demonstratives, which was briefly discussed in subsection 3.3.2, is obviation. In such a

distinction, two characters are marked with either proximate morphology or obviative

morphology. Storytellers use proximate morphology to signal that a character not only has high

discourse status but also that the status is important for the predominant narrative viewpoint. The

demonstrative forms that are used to signal obviation, however, also conflate other functional

distinctions. Specifically, when referring to characters, *nuhu'* is exclusively used to refer to

groups of people, except for cases in which it is used to signal obviative status for individual

characters. *Nehe'*, then, is used to signal proximate status for individual characters. *Nehe'*,

however, is also exclusively used to refer to individual characters, and storytellers follow a norm

in which no more than one character is signaled with *nehe'* in a narrative sequence. The

demonstrative *hini'* (alternatively *hi'ni*) has a unique quality in that it signals the individuation of

a character who was previously established in a narrative as a member of a group or an associate

of someone else. Thus, *hini'* is used to develop the discourse status of a group through a

reference to one of its individuals. In the following sections, I review the discourse-relevance

conceptual foundations of demonstrative functional distinctions and provide a descriptive

analysis of these three Arapaho demonstratives as used by storytellers of spontaneous narratives.

8.2 Review of Demonstrative Distinctions

In this section, I review some general concepts about how different demonstrative forms

make distinctions with respect to discourse relevance. Additionally, I provide a brief overview of

the various Arapaho demonstrative forms. This section thus builds on section 7.2, where I

reviewed the basic function of demonstratives, the extensional uses of demonstratives, and the

different hypotheses for the extensional meaning of Arapaho nominal demonstratives as they are

used in narratives. Throughout Chapter 7, I provided evidence for the hypothesis that the

presence of a demonstrative in an overt nominal is a signal of discourse relevance. In accord with

this functional meaning, the various distinctions made by the Arapaho demonstratives that

storytellers use allow storytellers to fine tune the discourse relevance framework, which is how

characters and other referents relate to one another as well as to other properties of the narrative

and interactional context.

Himmelmann (1996), focusing on the use of demonstratives in narratives, describes four

functional extensions of a more basic demonstrative function. In section 7.2, I argued that, while

it does seem valid to propose a typology of extensions, the typology that Himmelmann (1996)

outlines is missing the extension type in which demonstratives are used to signal discourse

relevance. Although not using the term 'discourse relevance' to describe this use of

demonstratives, Mithun (1987) examines the phenomenon in some depth and implies that it is

likely restricted to a few Native American languages. Importantly for this chapter, she shows that

for those languages, storytellers use the 'this' vs. 'that' distinction to establish how characters are

related to one another through some viewpoint (or "vantage point"), which is especially important for developing character viewpoints. The 'this' demonstrative is the most basic in this sense, as it is used for its proximal value to deictically situate the most relevant aspects of a central narrative space, including not just characters but also time and place. The 'that' demonstrative is used to identify characters and other referents that are not situated in the narrative space, or who are otherwise outside of it. The 'this' vs. 'that' distinction is also exploited in such languages to distinguish two characters from one another over the entire narrative, regardless of spatial or temporal deixis. In such cases, a storyteller uses the 'this' demonstrative for the character whose viewpoint the storyteller is motivating the audience to take. Thus, when the two demonstratives are used in this way, characters designated by a 'this' demonstrative are often protagonists, whereas characters designated by a 'that' demonstrative are often antagonists.

This manner of distinguishing characters from one another has been grammaticalized in some languages into two distinct forms for third-person reference. Known as 'obviation', the dual third-person markers are unique to Algonquian languages. Such referential systems involve 'proximate' morphology for a character that helps define a narrative viewpoint and 'obviative' morphology to distinguish a character that is otherwise relevant. Thus, for demonstratives in Algonquian languages, a 'proximate' vs. 'obviative' distinction is separate from a 'this' vs. 'that' (i.e. 'proximal' vs. 'distal') distinction (Proulx 1988). Obviation is most often discussed as a typologically exotic system that has developed as a means to facilitate the ease of person-reference tracking (e.g. Comrie 1989). However, it seems that the function of obviation is better understood in light of discourse relevance, which is a functional domain that has been relatively unexplored by linguists. In section 8.3, I show that it is the case for Arapaho that obviation is a grammatical reflection of discourse relevance. Here, though, is a summary of the discussion thus

far regarding the relationship between obviation and demonstratives. First, I provided strong evidence in Chapter 7 that Arapaho is a language in which demonstratives signal discourse relevance, a language of the type described by Mithun (1987). Second, Mithun's (1987) examination of such languages shows that 'this' and 'that' demonstratives are used to distinguish characters from one another in terms of discourse relevance. Third, obviation is the grammaticalization of such a distinction in Algonquian languages, which includes Arapaho.

Along with an obviation-related distinction, Arapaho demonstrative forms are used to make a variety of other distinctions too. In a relatively short section of their grammar, Cowell and Moss Sr. (2008) describe the various demonstrative forms in light of their argument that the main function of demonstratives is to signal the definite status of a referent, an argument that I outlined in section 7.2. What follows is a bulleted list and discussion, based on the authors' brief description, of the seven basic Arapaho demonstrative forms.

- *nuhu'* 'this'

  - Can mark obviative status for animate referents, especially when *nehe'* is used to mark proximate status for some other referent;

  - Can indicate a proximal location for a referent, especially in contexts where *hinee* is used to indicate the distal location of another referent;

  - Used more generally to signal the definiteness of inanimate referents and clausal nouns.

- *nehe'* 'this'

  - Can mark proximate status or indicate proximal location of a referent, but not strictly so.

- *nuh(u)'uuno* 'this emphatic'

  - Can indicate emphatic, indefinite, or approximative status for *nuhu'*-type

    referents.

- *neh(e)'eeno* 'this emphatic'

  - Can indicate emphatic, indefinite, or approximative status for *nehe'*-type referents.

- *hinee* 'that'

  - Indicates distal location and signals general definiteness of referents.

- *hi'in / hini'* 'that aforementioned'

  - Possible use for indexing shared knowledge of a referent.

- *hini'iit* 'that aforementioned emphatic'

  - General function is a not well known.

The demonstrative forms can be divided into two groups, corresponding to the proximal and

distal oppositional deictic parameters. The upper group of the bulleted list is glossed with 'this',

the lower glossed with 'that'. Additionally, *nuhu'* and *hinee* signal basic definiteness. The two

basic forms of 'this', *nuhu'* and *nehe'*, were traditionally markers of obviative and proximate

status, respectively, for animate referents. Correspondingly, *nuhu'* is also used for inanimate

referents, and so *nehe'* is exclusive to animate referents. However, the use of demonstratives for

obviation (often redundantly with nominal and verbal morphological marking) does not hold for

many speakers. The longer 'this' forms, *nuh'uuno* and *neh'eeno*, are classified as emphatics and

based on the two basic forms (i.e. they can be analyzed as *nuhu'-uuno* and *nehe'-eeno*), and so

any referent distinctions should be shared by the basic and emphatic forms. The use of the term

'emphatic' with these forms is historically based in the literature, but it is probably not an

accurate label as these forms are more apt in uses to mark an indefinite or approximative status of referents. Nevertheless, there is some evidence for emphatic functioning. The form *hinee* indicates a distal distinction in its deictic functioning. In general, however, the deictic (or demonstrative functional) force of any of these forms is weak. The lower two of the bulleted list consists of demonstratives that are more oriented specifically to discourse-based parameters. The *hi'in* and *hini'* forms are glossed as 'that aforementioned' because they are likely to be used to refer to given and identifiable discourse referents, which usually involves referents that have already been explicitly mentioned in a discourse. Thus, they are often used in relative clause constructions, but they are also used to signal some status of assumed knowledge about a referent. The two forms are treated together, because a difference between them has not been found. Besides being grouped with *hini'* on formal and functional grounds, *hini'iit* is found to have "unclear form and function" (p.307).

It is beyond the scope of this dissertation to examine all seven of these demonstrative forms, because only half of them regularly occur in spontaneous narratives. Specifically, I do not analyze *hini'iit*, *neh'eeno*, or *nuh'uuno*, because they are so rarely used by storytellers of spontaneous narratives. Additionally, I do not examine *hinee* in this chapter, because its use by storytellers outside of reenactments is also rare. However, because the use of *hinee* in reenactments is illustrative of spatially and visually oriented referential practices involving demonstratives, I do include *hinee* in the analysis of Chapter 9, along with the three remaining demonstratives, *nuhu'*, *nehe'*, and *hini'* (or *hi'in*). In this chapter, I examine the features that distinguish the functions of these three remaining demonstrative forms, because they are the most used demonstratives by storytellers of spontaneous narratives. In my analysis of these demonstratives, I build on the description of Cowell and Moss Sr. (2008) and do not drastically

diverge from the authors' description. The differences that do occur between our descriptions are the result of factors that I have previously outlined in a few sections of this dissertation, a summary of which is as follows. First, I am examining video recordings of spontaneous narratives, whereas their data mostly consists of audio recordings of traditional narratives. Second, I use the interactional approach to linguistic description, whereas they take more of a classic approach. Third, I examine the demonstrative forms in light of my finding that storytellers of spontaneous narratives use demonstratives to signal discourse relevance, whereas they examine demonstrative forms in accordance with their finding that demonstratives are primarily signals of definiteness. Given these differences, my description of these demonstratives in the following sections also builds on Mithun (1987), by showing that paradigmatic functional differences in the three demonstratives, including the expression of obviation, are additional resources through which storytellers referentially fine-tune and manage the discourse statuses of characters and other referents.

8.3 Nuhu'

The demonstrative form *nuhu'* is the demonstrative most used by storytellers. In comparison with any other form, *nuhu'* seems to be the most general way for a storyteller to conventionally signal that a referent has high discourse relevance, as discussed in Chapter 7. As evidence that *nuhu'* works on its own as such a signal, it only occurs with a pointing gesture in about half of its uses, and it does not otherwise regularly co-occur with any other type of foregrounding display. The relatively high frequency of use of *nuhu'*, then, is because it is more of a general signal of discourse relevance and has a broader range of use, in terms of referent type, than other demonstrative forms. Storytellers use *nuhu'* in formulating nominals for all referent types, although there are functional and semantic conditions on how it is applied to

characters. Specifically, *nuhu'* is restricted to nominals that refer to group characters, except for cases in which storytellers use obviation to distinguish two individual characters.

For place reference, *nuhu'* is the only demonstrative that storytellers use to signal that a place has a high discourse status, which is not a factor of some other referent's discourse relevance. For example, in "Historic events at Thermopolis", the storyteller uses *nuhu'* in her various nominal formulations of 'Thermopolis' (see example (65) of subsection 7.4.1). *Nuhu'* is also used for reference to objects and more abstract referents, with the same functional stipulations that it has in its use for place reference. For example, the storyteller in "Arapaho mentoring for woman in room" uses *nuhu'* in references to the Arapaho language, formulating one nominal as *nuhu' hinono'eitiit* 'DEM Arapaho language'. The use of *nuhu'* is also used in that story to signal a relevant temporal viewpoint of the narrative, as it changed from the past to today, wherein the storyteller uses the nominal formulation *nuhu' huusi'* 'DEM day' (in conjunction with the word *hiiwoonhehe'* 'now'). In "Hunting, drinking, and eating", the storyteller uses the formulation *nuhu' kokiy* 'DEM gun' in reference to a gun that the drunken Robert has in his position, making the gun highly relevant.

For character reference, storytellers use *nuhu'* mostly to refer to characters that are defined as groups (i.e. plural referents), but in certain circumstances storytellers use it to refer to individual characters as well. This *nuhu'* sensitivity to person reference reflects the interplay of semantic saliency and obviation. In subsection 3.3.2, I discussed the saliency hierarchies that are grammatically encoded in Arapaho. As a feature of this semantic saliency, individual referents are ranked higher than group (i.e. plural) referents. Storytellers thus have a demonstrative that is exclusively used for individual characters, which is the demonstrative *nehe',* discussed in section

8.4. In general, then, *nuhu'* cannot simply be described as the obviative demonstrative for person reference, and *nehe'* the proximate.

When a storyteller wants to signal that a group character has discourse relevance in a context where there is also an individual character with discourse relevance, the storyteller uses *nuhu'* in nominal formulations that refer to the group character. In accordance with the demonstrative distinction, the group character will be distinguished from the individual character through other morphology, as the group is indexed by obviative inflectional morphology and the individual by proximate morphology. The excerpt (71), from "Historic events at Thermopolis", serves as an example.

(71)   (ACD 14g)

48   {53}   'oh nih-bis-e'inon-eit nuhu' beh'eihohoh'o huutiino
                but PAST-all-know-4/3S DEM old_men.OBV.PL around_here
                But the old men here all knew her.

In the excerpt, the storyteller uses *nuhu'* to formulate the nominal reference to the old men as *nuhu' beh'eihohoh'o* 'DEM old men'. The nominal mention for 'men', *beh'eihohoh'o*, used within that formulation is the obviative form of that lexeme. Additionally, in the verbal expression, the person affix *-eit* '4/3s' indexes the old men through obviative marking (i.e. 4), while the actress is indexed through proximate marking (i.e. 3s) (see also example (8) of subsection 3.3.2). However, even though such referents are distinguished through demonstratives and other obviation-related morphology in this way, this is not a case of functional obviation. In cases such as this, storytellers are following grammatical norms, using proximate and obviative morphological forms in accord with higher and lower semantic saliency rankings, respectively.

The semantic restriction of demonstrative practices involving *nuhu'* is further evident in cases where *nuhu'* is not used in conjunction with obviative inflectional morphology. In such

cases, a storyteller is signaling that a group character has high discourse status in a context where there are no individual characters with discourse relevance. Thus, the storyteller uses *nuhu'* in nominal formulations that refer to the group character, but the storyteller refers to this group character through proximate (instead of obviative) morphology otherwise. For example, in "The boys had trouble learning Arapaho", the storyteller contrasts two group characters, the boys and the girls, nearly to the exclusion of any other type of character referent throughout the narrative. As discussed in excerpt (70) of subsection 7.4.2, the storyteller uses a demonstrative in nearly every mention of the two groups. The demonstrative used is *nuhu'*, whereby a typical reference to the girl group is formulated as *nuhu' hiseihih'o'* 'DEM girls', as excerpt (72) shows.

(72)   (ACD 44b)

82.1   ['group' action PT: girl space ..…………………………]
               nuhu'   hiseihih'o'   nii-hee-   nihii   cesis-eeneti-3i'
               DEM   girls.DIM.PL   IMPERF-REDUP-   well   begin-speak-3PL
               these girls talk, uhh start talking,

However, even as the storyteller uses *nuhu'* to explicitly refer to the girls, the storyteller uses the proximate nominal mention *hiseihih'o'* 'girls' and indexes them with the proximate verbal person marker *-3i'* '3PL'. The use of *nuhu'* in conjunction with proximate inflectional morphology is consistent throughout the narrative, for references to both the girls and the boys. Thus, even as group characters are indexed through proximate inflectional morphology in the absence of individual characters (which have higher semantic saliency), *nuhu'* remains the demonstrative to signal discourse relevance for group characters.

Obviation, as a functional and not just a formal distinction made through demonstratives,

however, can come into play when there are two individual characters of equal semantic ranking

and discourse status. As discussed in section 8.2, obviation distinguishes one character as more

relevant than another not so much by degree but rather by quality (i.e. how they are relevant).

The character referred to with proximate marking is the one that is most central to how a

narrative viewpoint is defined, the one whose viewpoint the storyteller is otherwise motivating

the audience to take. A character referred to with obviative marking also has a high discourse

status, but only in relation to the proximate-marked character. This is the situation in "Joke about

little girl's translation of Arapaho", where the shopkeeper is marked as the obviative, and the

little girl as the proximate, as shown in excerpt (73).

(73)   (ACD 28a)

117.3   ~~****<PT: shopkeeper space>
                 hee3eihi-t   nuhu'   nih'oo3ou'u
                 says-3.S   DEM   white_person(s).NA.OBV
                 this white man was saying.

118   {57}   uhm

119   {45}   "[thinking]"
                 ne'-ii-   -kokoh'u3ecoo-t   nehe'   hiseihiitei'yoo
                 then-IMPERF-   -think-3.S   DEM   girl.NA
                 Then this little girl was thinking.

In line 117.3, the storyteller refers to the shopkeeper with the nominal *nuhu' nih'oo3ou'u* 'DEM

white person'. In accord with this somewhat marked use of *nuhu'* for an individual character, the

mention of the shopkeeper uses the obviative form of 'white person' *nih'oo3ou'u* instead of the proximate *nih'oo3oo*. The grammatical accord, however, is not perfect, given that the person marker in the verbal expression is the proximate *-t* '3.S' instead of the obviative *-ni3*. Nevertheless, this use of *nuhu'* for the shopkeeper contrasts with the nominal referring to the little girl in line 119, which is formulated as *nehe' hiseihiitei'yoo* 'DEM little girl'. Even though both characters have high discourse statuses, the storyteller thus signals that the girl is more central to the overall narrative viewpoint. This is part of the storyteller's strategy to motivate more focused attention on the actions of the girl, possibly to the point of audience empathy, as it is through her confusion in translating Arapaho to English later in the joke (not shown) that the punchline is established (see also example (37) of section 6.3). The storyteller, however, does not develop the shopkeeper as a passive character, like the little girl's grandma. Instead, the shopkeeper incessantly pressures the little girl to translate her grandma's needs, which causes the little girl to act rashly in her interpretation (see also example (69) of subsection 7.4.2). Thus, the storyteller is referred to with *nuhu'* (and not the little girl or her grandma), because his discourse status is defined by his relationship to the character that is more central to the overall narrative viewpoint.

Actual obviation is also possible when there are two group characters of high discourse relevance (and no individual characters). In these cases, *nuhu'* is used to formulate explicit references to both group characters, but one is referred to with proximate inflectional morphology, while the other with obviative. This situation is rare in spontaneous narratives, however, which is likely a factor of the low saliency of group characters (i.e. in accord with the Arapaho saliency hierarchy, individual characters are the preferred type). To be sure, obviation does not describe the type of relationship between the boys and the girls that is constructed by

the storyteller in "The boys had trouble learning Arapaho". That is, even though the two characters have equal semantic ranking, they have equal discourse statuses too, because the storyteller contrasts the two group characters from her own viewpoint as a teacher, which, by its nature, does not privilege one group over the other. Thus, the storyteller would undermine her narrative by using obviation to differentiate these characters. Instead, as discussed in excerpt (70) of subsection 7.4.2, the storyteller, at one moment, formulates a reference to the girls without a demonstrative as part of a strategy for demoting (or blurring) their discourse status, thereby drawing more focus on the boys.

8.4 Nehe'

Storytellers use the demonstrative *nehe'* exclusively for explicit nominal references to individual characters that have relatively high discourse statuses. Storytellers also use other demonstratives to refer to individual characters. However, in using another demonstrative to refer to an individual character, a storyteller is signaling that the character's discourse status is in some relation to another character or other referent. As discussed in section 8.3, this is the case when obviation is in play. In such instances, *nuhu'* is used to mark the obviative status of an individual character, which signals that the character's discourse status is defined through the character's interaction with the proximate-marked character. In the next section, I show that the demonstrative *hini'* is used to signal that a character has discourse relevance only as a member of a previously defined group, whereby the reference to the character is more so an articulation of the group's discourse status. Thus, other demonstratives signal that a character's discourse status is contingent on another referent, whereas *nehe'* generally signals that an individual character's discourse status is high or otherwise special, given the status of other characters.

Just as *nehe'* is restricted to signaling discourse relevance for individual characters, who also have the highest semantic saliency, *nehe'* is also typically applied to one and only one character per narrative. This underscores the power that *nehe'* has as a resource for motivating an audience's orientation to a predominant narrative viewpoint, as discussed with obviation in section 8.3. The seeming restriction on *nehe'* to one character is so strong that, even in relatively long spontaneous narratives with multiple individual characters, *nehe'* is only applied to one character. This is even the case when the other individual characters are otherwise foregrounded. An example comes from "Hunting, drinking, and eating", wherein the storyteller formulates nominal references to Robert with *nehe'* but no one else, not even Danny who is explicitly referred to more times and in more of the narrative's events than Robert. It is Robert's drunken actions, however, that define the main event of the narrative, making it newsworthy and subject to spontaneous talk (for further analysis, see subsection 7.4.2).

The tendency for a narrative to involve at least one character referred to with *nehe'* is also strong, so much so that a storyteller will seemingly create an ephemeral character for just that purpose. This is evident in "The boys had trouble learning Arapaho", as shown in excerpt (74).

(74)   (ACD 44b)

89.1   ['woman']   "[imperative hand PT: girl space]"
            nehe'   hisei 'oh   nei'towuun-in
            DEM   woman and tell-3.IMPER
            To this girl, "tell them" [I would say to her],

89.2   "[PTs: boy space to board space …………] [PT: board space]"
noh   ne'nih'iisiini   heetn-ei'towuuneti-nee   heet-nee'ees-nihii-nee
and   that_was_how   FUT-tell each other s.t.-2PL   FUT-thus-say-2PL
"and that's how it is. You will talk to each other, you will say it like that."

Just before this excerpt starts, the storyteller has been explaining how she, as an Arapaho teacher, would have the girls and the boys compete with one another to see who was better at coming up with the Arapaho word for a picture on the wall. The narrated explanation included reenactments of the storyteller as a teacher, reenactments of the boys making excuses for why they were losing, and descriptions of how much better the girls were at the task because they would talk and work with one another. Thus, up till the moment in the narrative shown in excerpt (74), there were three characters, the storyteller as herself, the boys, and the girls. There were no individual (3rd person) characters that could be referred to with *nehe'*. In line 89.1, however, the storyteller quickly creates a generic individual member of the girl group in order to demonstrate to the boys the ease with which she could motivate a girl student to name a picture on the wall in Arapaho and tell the other girls about it. This moment, then, helps define the storyteller's narrative viewpoint, in that how she was able to instruct the girls underscores her struggle with the boys. The storyteller thus formulates a reference to this girl with *nehe'*, as *nehe' hisei* 'DEM woman'. In line 89.2, the storyteller returns to the boys, telling them through talk and gesture that they should follow the example of this girl. This excerpt comes right at the end of the narrative, which shows how such a brief use of *nehe'* can be important for completing a plot.

All else being equal, then, characters that are referred to through nominals formulated with *nehe'* have either a relatively higher relative discourse status, as with Robert in "Hunting,

drinking, and eating", or a discourse relevance that is markedly special relative to other characters, as with the individual girl in "The boys had trouble learning Arapaho". Storytellers, then, might have to do special work to downplay some aspect of this conventionalized signaling capacity of *nehe'* in situations where semantic hierarchal rankings motivate how the demonstrative is used, despite characters' relative discourse relevance. A good example comes from "Historic Events at Thermopolis". As I discussed about this narrative in example (71) of section 8.3, it is because of semantic saliency and not functional obviation that the actress is referred to with *nehe'* and other proximate morphology, while the old men are referred to with *nuhu'* and corresponding obviative morphology. That is, these characters are distinguished through different demonstratives because of grammatical norms that reflect semantic saliency, whereby individuals are ranked higher than groups. Despite this difference in saliency ranking, however, the old men have a relatively higher discourse status than the actress. Excerpt (75) shows the storyteller referring to both the old men and the actress through a variety of referential resources.

(75)   (ACD 14g)

52.1   {53}   [gesture]   ['go back' (in time)]
        heenoo Bud   Harris and   heenei'isiihi'   way back
        oblig   Bud   Harris and   and_so_forth   way back
        You know, Bud Harris and so forth, from way back,

52.2   ~~~~~**<PT: old-men space>
        hee'inon-eit   nehe'   hisei
        know-4/3S   DEM   woman
        they knew this woman.

53.1   [PT: old-men space] [linking PTs: old-men space and speaker]
nenee-3i'   nih-'oon-oo3itoon-einoo
it_is-3PL   PAST-REDUP-tell_a_story-3S/1S
They are the ones who told me this story,

53.2   ~~~***<PT: old-men space>
nuhu'   ne-besiiwoho'
DEM   1S-grandfathers.NA.OBLPOSS.PL
my grandfathers.

Although the actress is central to a particular legend about Thermopolis, the storyteller spends more time on the old men who witnessed the famous actress at Thermopolis than on the actress herself. As I discussed in excerpt (30) of subsection 5.3.1 and excerpt (45) of subsection 6.4.3, the storyteller works to establish a kin relation and personal connection to these old men through a series of nominal mentions (lines 52.1 and 53.2) and the pointing practice of linking (line 53.1). The association she makes with the old men gives her epistemic rights to the narrative (i.e. establishing the direct way in which she came to have knowledge of the narrative events). The reference to the actress, thus, provides an occasion for the storyteller to establish the authenticity of her narrative viewpoint, given that she has appropriated the viewpoint directly from the old men. The special relevance of the actress to the narrative, then, is in accord with the storyteller's use of *nehe'* in line 52.2, where her nominal formulation of the actress is *nehe' hisei* 'DEM woman'. However, it is the old men who are central to what the storyteller is accomplishing through this sequence. Their relatively higher discourse status is evident in the same line (i.e. 52.2), which the storyteller displays by pointing to the metaphorical old-men space instead of

pointing to a space dedicated to the actress, thereby reinforcing the use of *nehe'*. Thus, the

storyteller uses *nehe'* in its capacity to establish the narrative viewpoint, while at the same time

the storyteller has to block the capacity of *nehe'* to signal a relatively higher discourse status.

8.5 Hi'in and Hini'

Hini', as well as its seemingly free variant *hi'in*, is a demonstrative that functions

specifically to index that a referent is a part of some other referent or is a member of some group.

More importantly, however, the demonstrative has a very unique function with respect to

discourse relevance, because it signals that its referent is relevant through its super-referent. Or,

to turn that around, *hini'* signals that the storyteller is elaborating on the discourse status of the

super-referent through the referent. Thus, because of this, the demonstrative serves to individuate

a referent and therefore is restricted to individual referents. Besides that, there are no other

referent-type restrictions for *hini'*.

A nice example of the use of *hini'* for object reference is in the comments from speaker

57 in excerpt (76), which occasion speaker 45's "Joke about little girl's translation of Arapaho".

(76)   (ACD 28a)

107.1 {57}   huut   tih-no'uuhu-3i'
              here   when-arrive-3PL
              When they moved here,

107.2   [PT: at tipi]   [cover | buffalo]
              wohoe'- hini'   canvas no3oon
              DUBIT-   DEM   canvas   instead
              maybe [that's when they began using] that canvas instead [of buffalo hide],

107.3   ['past']
         teecxo'
         long_ago
         way back then.

Just before the excerpt, the interactional participants are sitting around, surveying a cultural event that involves a full-scale model of a traditional tipi, made of buffalo hide. The excerpt shows one speaker speculating about when Arapahos changed tipi materials, from buffalo hide to canvas. In line 107.2, this speaker formulates a mention of canvas as *hini' canvas*, while pointing at the tipi. The tipi is thus the super-referent of canvas, because a canvas cover is one part of a tipi. It is not canvas on its own that has discourse relevance, but the use of canvas in tipi construction.

In character reference, *hini'* is used similarly to individuate a character from a previously established group. As part of this practice, the storyteller is elaborating on the discourse status of the group through the surrounding description or action of the character referred to through *hini'*. An example comes from "Trip to language conference with woman in room", shown in excerpt (77).

(77)   **(ACD 24c)**
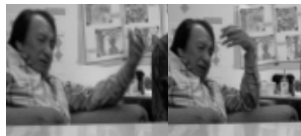
14   ['come' …….]
         noh'oub-ei'ee3i'
         invite-3PL/1PL
         They invited us.

15.1   [hand PT: self] [PT: Running Deer]
neneeni-noo   nookhoosei niibei
it_is-1S   NAME   NAME
Me [and] Running Deer,

15.2   ['two' geo PT: Denver]
                  nih-won-ceitee-ni'   yihkoohu-ni'
                  PAST-ALLAT-visit_people-1PL   drive_over_there_to-1PL
we went to visit, we drove down there.

16   ['speaking'……….….…]
ne'-hee   ne'-heeneti-noo
then-???   then-speak-1S
Then, then I spoke.

17   ['speaking' ……..…]   ~~~~~~~*****<'speak' PT: Deer>
hooxohoen-iini nih-'eeneti-t hi'in nookhoosei   niibei
in_return-DETACH PAST-speak-3.S DEM NAME   NAME
Then Running Deer took her turn to speak.

In lines 14 and 15 of the excerpt, the storyteller describes how the conference organizers invited

him and Running Deer to the conference. In this, he refers to the two of them as a group, notably

linking a point from himself to her. Note that the nominal reference to Running Deer in line 15.1

is not formulated with a demonstrative, because the storyteller is working to develop their

discourse status as a duo. This discourse status is further signaled by the use of the 'two' gesture

in the geographic point to Denver, as part of the description in line 15.2 of traveling to the

conference. In the lines that follow, the storyteller elaborates on their individual actions as conference presenters, using the lexical 'speak' gesture to highlight the parallel actions of each of them (for further analysis, see example (47) in section 6.5). Thus, her actions at the conference, like his, are part of their group effort. In line 17, then, he use *hi'in* to explicitly refer to her as *hi'in nookhoosei niibei* 'DEM Running Deer', in an utterance where she is the only referent. *Hi'in* thus works to signal that her discourse relevance is subordinate to that of the group in which she is a member.

8.6 Conclusion

In this chapter, I described the function of the three Arapaho demonstratives that are most used by storytellers of spontaneous narratives. These demonstratives are *nuhu'*, *nehe'*, and *hini'* (alternately *hi'in*). Although there are many other Arapaho demonstrative forms, these three demonstratives are likely used more by storytellers because they provide additional functionality with respect to discourse relevance. That is, as the presence of a demonstrative in the formulation of an overt nominal generally signals that the referent has a relatively high discourse status, these demonstrative forms signal further distinctions. *Nuhu'* is the most general demonstrative in that it does not usually make much of a finer distinction in terms of discourse relevance, except in expressions of obviation. Specifically, *nuhu'* can be applied to any referent type, although it is only used to refer to an individual character when that character is marked with obviative status in contrast to another character marked with proximate status. *Nehe'*, as the proximate-marking demonstrative, also generally signals the highest discourse status. This signaling capacity is conflated with a semantic restriction to individual characters and a discourse restriction to one character for a narrative sequence. Whether used for expressions of obviation or otherwise, *nehe'* is thus a powerful resource, and storytellers specifically use it to refer to a character that is

important for establishing the narrative viewpoint. The demonstrative *hini'*, in contrast, is used to refer to characters (or other referents) that are part of something previously established. Storytellers thus use *hini'* to establish the discourse status of a group or other character that the referent of *hini'* is associated with.

CHAPTER IX

A BIMODAL CONSTRUCTION

9.1 Introduction

In this Chapter, I examine the viewpoint anchoring construction, defined by the template DEM.PT+MENT (i.e. the simultaneous production of a demonstrative and a point, followed by a nominal mention), as a bimodal construction of Arapaho grammar. I examine the concept of constructions and multimodal constructions. I use the term 'bimodal construction', however, to underscore the high degree of linguistic relationship between gesture and speech in Arapaho. The degree of this bimodal relationship is also supported by the function of DEM.PT+MENT, which is much more particular and specialized than other multimodal constructions described in the literature. I argue that the construction is particular to spontaneous narratives, and that storytellers use it to visually establish a special type of referential anchor. The anchor is constituted by a character and an area of space that represents the character. The character has a high discourse status, notably because storytellers use this character's actions as the defining property of a narrative event. The character space is equally important because it constitutes the dialogic pole, which is opposite the storyteller's pole in the narrative participation space. As additional support of the construction, I provide evidence of the similar construction DEM.PT. Besides differences in form and function, the DEM.PT construction is used in (non-narrative) turn-by-turn talk as a resource to identify and locate referents. Thus, the two constructions differ in the interactional talk types in which they are used. The analysis of DEM.PT, however, provides support for the main construction of interest, DEM.PT+MENT, by showing that despite

their conventional differences, the common aspect of their forms (i.e. DEM.PT) motivates

similar functions with respect to the domains of space and other visual structure.

9.2 Multimodal Constructions

Most research involving co-speech gesture examines questions about its cognitive nature,

its semiotic relationship with speech, and its modality-specific uniqueness as a communicative

resource. Although the research has been conducted from a variety of disciplinary approaches, it

generally supports the idea that gesture and speech, although distinct signaling mechanisms, are

at least highly coordinated and integrated in language production, if not inextricable components

of a multimodal expression's meaning (Kendon 2004; McNeill 2005; Enfield 2009). Building on

this general finding, researchers have started to examine the possible extent of gesture-speech

coordination and integration by positing multimodal constructions (Harrison 2010; Mondada

2012; Andrén 2014). A construction, as conceptualized in classic linguistic description, is a

conventionalized pairing of form and function. The form is conceptualized as a template, usually

a syntactic template, for combining specific linguistic elements and element types together. The

function is the basic meaning, use, or action that is signaled by the form. For example, in 3.3.2, I

discussed how a nominal that is pre-posed to a verbal expression signals pragmatic saliency (see

"focus position", Cowell and Moss Sr. 2008: 403). This can be thought of as a construction of the

form *NOM+V* (or *NP+VP*), whereby in this notation a "NOM" is any overt nominal, a "V" is any

verbal expression, and the "+" between indicates that the nominal is both a distinct element from

the verbal expression and ordered before it in the construction. Thus, the *NOM+V* construction

contrasts with the more normal syntactic formulation of *V+NOM*. Because a construction is a

conventionalized form-function pairing, then, a construction can involve anything from an

idiomatic expression to a more abstract template with many variable slots, as theorized in

"Construction Grammar" approaches to linguistics (Kay and Michaelis 2012). With a multimodal construction, then, the form template combines gesture elements with spoken elements.

The few descriptions of multimodal constructions have highlighted some general properties of the constructions as well as possibilities for the type of elements involved and the way in which the elements of gesture and speech can be combined. Andrén (2014), for example, finds that gestures involved in multimodal constructions are more likely to be those that are highly conventionalized themselves, which he describes as "core" gestures. This contrasts with the idea that the more conventional a gesture is, the less it is used with speech (e.g. McNeill 2005). Core gestures include pointing and headshakes, and they are highly conventionalized because they are used frequently for their communicative functionality. A core gesture thus is more stable over time and has a broader range of use than non-core gestures, which are epitomized by one-off highly iconic gestures. Andrén focuses on Swedish children's use of a multimodal construction that is formed by a headshake (head-gesture), as a gesture of negation, in conjunction with a spoken marker of negation, such as *nej* 'no'. In my template notation, this multimodal construction could be represented as *HEADSHAKE.NEG*, wherein a "." between two elements shows that they are simultaneously produced. In support of findings from construction grammar, Andrén shows that the multimodal construction factors into a child's language acquisition process just as any other type of construction would. Specifically, he shows that a child starts off producing a fixed and limited set of form-function pairings that define the construction while later the child is more productive with it.

The form of a multimodal construction can be more complex than a gesture that co-occurs with a type of spoken element. The gesture and speech involved in a multimodal construction can each involve multiple elements and other components that are synchronized

together in a specific arrangement. In general, synchronization is a somewhat ubiquitous strategy for speakers to display that gesture and speech have cooperating meaning. Treffner, Peter, and Kleidon (2008), through an experimental approach, show that, in interpreting the meaning of sentences in which gesture production is the only variable, people perceive an emphasis on words that are produced simultaneously with a gesture. However, synchronization can have much more internal complexity, especially when manual gesture is involved. Notably, just as a typical spoken construction orders its elements in a specific morphosyntactic pattern, the articulation of a manual gesture is composed of different phases. Thus, elements of speech can be synchronized with the phases of a gesture. Kendon (2004) has provided a terminology for these phases. A gesture starts in a "preparation" phase, whereby the manual articulators are brought from rest or some previous task to form the gesture. The "stroke" phase is the moment when the hand or hands reach an apex, furthest from rest position, in the shape that the gesture is recognized by (which may involve movement). There may be a "post-stroke hold", which is when the stroke or part of the stroke is held for a period of time. Afterwards, there is a "recovery" phase. The "nucleus" of a gesture is the entire formation of the gesture's recognized shape, which includes the stroke and a possible post-stroke hold. Thus, for a speaker to produce gesture and speech so that the gesture and a specific word (or words) are displayed in some functional association with one another, the speaker synchronizes the gesture nucleus so that it is simultaneously produced with the word. Given the different phases of gesture, then, gesture-speech synchronization is a semiotic resource with much potential for multimodal constructions.

Although not using the term 'construction', Harrison (2010) provides a nice example of a multimodal construction that involves a specific synchronization between phases of a gesture and the syntactic positions of spoken elements. The construction he examines is commonly used by

English speakers in utterances that involve negation. The spoken component involves a negative node, such as "no", and the scope of the node's negation across the utterance. A simple example that Harrison provides from his data is the utterance "I don't have to pay". In this utterance, *-n't* is the node of negation, and "have to pay" is the scope of what is negated. The gesture component is called "PDacross", and the gesture is formed with a hand near the torso, palm down, and an arced movement away from the torso and across the horizontal plane. In the multimodal construction, the PDacross is prepared before the node, the stroke is synchronized with the node, and the post-stroke hold is sustained through the scope. In my template notation, then, I would represent the construction as follows:

- *PDacross[prep]+NEG[node].PDacross[stroke]+NEG[scope].PDacross[hold]*

Given the particularities of this synchronization, then, Harrison describes how the preparation itself (i.e. hand near torso with palm down) can signal that a speaker is about to make a negative statement. Additionally, the post-stroke hold of the gesture can signal the exact scope of negation in utterances that involve speech with multiple possible scopes.

It is not just features of the linguistic context, such as semantic scope, that multimodal constructions can be sensitive to. They can also be quite sensitive to features of the broader interactional context, or even constitutive of the interactional context itself. From such a perspective, Mondada (2012) examines two related multimodal constructions that are differentiated (in part) by how the gesture and spoken element are synchronized. Specifically, the two constructions are both used by French speakers to introduce a new and visible object, and each construction involves the spoken element *ici* 'here' along with a pointing gesture. Through her findings, Mondada is critical of the classic descriptions of *ici* as a referential deictic element. She thus teases out the different functional roles of *ici* by involving the entire ensemble of

interaction in the analysis, including other participants and their modalities of expression, such as the gaze of the recipient, as well as the temporal arrangement and sequential positioning of the constructions. As such, Mondada proposes the two following multimodal constructions. In the first construction, the recipient of the speech is looking in the general direction of the targeted object. At the beginning of a turn at talk, the speaker produces *ici* simultaneously with a point that is targeted at the object. The recipient's gaze follows the gesture to the object. Then the speaker provides a descriptive noun phrase for the object. In the second construction, the recipient is looking away from the object. At the beginning of a turn at talk, the speaker produces *ici* followed by a descriptive noun phrase of the object. As the recipient's gaze moves to the general direction of the object during the noun phrase, the speaker produces a point that further guides the recipient's gaze to the object. Mondada thus describes the role of *ici* as having different roles in the two constructions. In the first pattern, *ici* introduces and refers to the object, whereas in the second pattern *ici* acts as an attention-getting device. In my template notation, I use "PT" for the pointing action and represent the two constructions as follows:

- Construction 1: *ici.PT+NP*

- Construction 2: *ici+NP.PT*

To paraphrase Mondada's conclusions, the first construction has the function of referring to and introducing a visible object that is in the visually shared common ground of the recipients. The second construction has the same function with the addition of reorienting the recipient's gaze. Thus, even though each construction involves the same elements, their differing patterns show how gesture-speech synchronization can be motivated by interactional factors that go well beyond the semantic properties of the linguistic context.

In the next section, I examine the construction, which I represent as DEM.PT+MENT. Although I use the term 'bimodal' instead of 'multimodal', I am adding to this broader literature to understand the possibility and potential in the synchronization of gesture and speech, generally, and multimodal constructions, more specifically. Similar to the multimodal constructions examined in this section, DEM.PT+MENT involves a core gesture, pointing, as well as types of spoken elements and other properties that allow for productivity. Additionally, the form of the construction is defined by a specific synchronization pattern, and the DEM.PT component of this pattern motivates some of the constructions functionality. However, different from the other constructions, DEM.PT+MENT is not as commonly used by Arapaho speakers as the multimodal constructions examined in this section. While resources for negation and referential locating are very practical for navigating the everyday social world, DEM.PT+MENT is particular to spontaneous narratives. Its specialized function within narratives further differentiates it from these other multimodal constructions. Thus, the existence of DEM.PT+MENT supports a broader potential for multimodal constructions, in that they are not limited to the language used for highly frequent social actions. However, DEM.PT+MENT and any constructions like it are conventionalizations of gesture and speech that are probably particular to languages that have developed a high degree of bimodalism in other areas of grammar as well.

9.3 Review of Arapaho Pointing and Demonstratives

In this section, I provide some background on pointing and overt nominals as well as some preliminary support for the construction DEM.PT+MENT. First, with respect to the dissertation up till this section, I provide a summary of pointing and demonstratives. I also discuss their general distribution in the data. Then, I examine instances other than

DEM.PT+MENT in which pointing and an overt nominal with a demonstrative are synchronized together. I find a variety of functions associated with other patterns, notably where the point is synchronized with the nominal mention. However, I do not postulate another construction, such as DEM+MENT.PT, because patterns not matching DEM.PT+MENT are the result of storytellers synchronizing pointing and overt nominals as distinct resources or laminated practices (as opposed to a unified construction). More importantly, patterns of overt nominals that do not match DEM.PT+MENT also differ in how they function. Thus, this supports the claim that the way in which storytellers use overt nominals and pointing together is associated with how these resources are synchronized together.

In Chapter 6, I examined pointing as a resource for storytellers of spontaneous narratives. I showed that the basic and most frequent type of point that storytellers use is the forefinger point. For the most part, storytellers use pointing as a resource for visually developing a discourse relevance framework. This involves pointing to situate and structure a narrative space. It also involves pointing in reference to characters, as part of how their discourse status is established, maintained, and changed. Besides forefinger pointing, there are other handshapes that storytellers use too, which bring additional meaning or functionality to the pointing action. Despite the handshape used, storytellers usually design a pointing action with medial focusing properties, so as to be fully recognized as a gesture but without motivating participants to heighten their visual attention on the target. Focusing properties include stretched out arm and head-aligned eye gaze directed at the target of the point. Storytellers do use points with high focusing properties, but they are relatively rare. Focusing properties, however, are features of the bimodal construction that I examine in section 9.5 of this chapter. Points with a lack of focusing

properties are even more rare, because they are used within insecure reference environments, which is not a common property of the narratives of practiced storytellers.

In Chapter 7, I examined overt nominals with respect to the function of demonstratives. I showed that an overt nominal formulated as DEM+MENT (i.e. a demonstrative followed by a mention) signals that the referred-to character (or other referent) has a relatively high discourse status. An overt nominal formulated as MENT (i.e. a bare nominal mention without a demonstrative), then, signals that a character (or other referent) has a relatively low status. Because discourse relevance frameworks are dynamic, a storyteller promotes a character's discourse status by adding a demonstrative, when one was not used before, to the formulation of an overt nominal that refers to the character. A storyteller similarly demotes a character's discourse relevance by subtracting a demonstrative from the formulation of an overt nominal. In Chapter 8, I examined the different demonstrative forms that storytellers use, and showed how they are each used to fine tune the discourse status of characters (and other referents) in different ways. Generally, a referent's discourse status is in some relation to other referents, be it by ranking or some how they are differently relate to the narrative viewpoint. Storytellers can also use demonstratives, along with pointing, for actions that involve visual locating, which is a function that is more typically associated with demonstratives as a type of deictic element (e.g. Enfield 2003). As I show with the bimodal constructions of the next two sections, such uses of demonstratives are not functionally divorced from discourse relevance, but in a special relation to it.

In preparation for my examination of the two bimodal constructions, I provide background on other ways that storytellers combine demonstratives and pointing. I start with a brief overview of how pointing (broadly construed), overt nominals, and (more specifically)

demonstratives are distributed, in relation to each other, throughout the data collection of narratives. In general, pointing and overt nominals are both resources for referring to characters, places, and other referents, and they are used to refer to these various types of referents with similar frequencies. Additionally, there are about as many instances of pointing as there are instances of overt nominals (i.e. constituted by at least a bare nominal mention). However, the actual distribution of these resources underlines that they are, for the most part, distinct resource. In the first place, slightly more pointing is synchronized with verbal expressions than with some sort of overt nominal. With respect to overt nominals, more than twice as much pointing is synchronized and co-referential with DEM+MENT than with MENT. This is expected if DEM+MENT and pointing both work, albeit in different ways, as signals of discourse relevance. It is additionally expected if demonstratives and pointing are elements that are brought together in constructions. With respect to just DEM+MENT, just under half of these nominals are synchronized with pointing. Only about an eighth of those are synchronized as the bimodal construction DEM.PT+MENT. About a sixth of pointing instances occur in contexts of reenactment, and a few of these points are synchronized as DEM.PT, with a pronominal demonstrative, which are otherwise very rare in spontaneous narratives. Overall then, DEM.PT+MENT and DEM.PT occur in different narrative contexts, and they are relatively rare. Specifically, DEM.PT+MENT makes up about five percent of all instances of pointing and about the same percent of all instances of overt nominals. This supports the overall argument that pointing and demonstratives are distinct resources that are used for a variety of different practices, even as they are brought together in a few of those practices.

I argue that DEM.PT+MENT has a special function, because on top of the function that the DEM+MENT component of it signals, the DEM.PT component of it works to visually

anchor a narrative participation space (at least in character reference). In most other occasions when pointing and overt nominals are synchronized together, the point is produced simultaneously with the mention instead of the demonstrative, which can be represented as DEM+MENT.PT. Line 53.2 of excerpt (78) from "Historic events at Thermopolis" shows an instance of this pattern.

(78)   (ACD 14g)

52.2   ~~~~~**<PT: old-men space>
hee'inon-eit   nehe'   hisei
know-4/3S   DEM   woman
they knew this woman.

53.1   [PT: old-men space] [linking PTs: old-men space and speaker]
nenee-3i'   nih-'oon-oo3itoon-einoo
it_is-3PL   PAST-REDUP-tell_a_story-3S/1S
They are the ones who told me this story,

53.2   ~~~***<PT: old-men space>
nuhu'   ne-besiiwoho'
DEM   1S-grandfathers.NA.OBLPOSS.PL
my grandfathers.

In line 53.2, there is point to the old-men space, which is co-referential with the overt nominal *nuhu' ne-besiiwoho'* 'DEM my grandfathers'. The "~~~" shows that the preparation of the point is produced during the demonstrative *nuhu'*, while the actual stroke of the point, shown as "***",

is produced right as the storyteller begins to produce the mention *ne-besiiwoho'* 'my grandfathers'. Thus, the pattern is DEM+MENT.PT.

In what follows, I examine some of the reasons for why storytellers produce the DEM+MENT.PT pattern. Given the wide variety of uses associated with this pattern, I do not claim that it constitutes a construction. Excerpt (78), then, provides an example of one common reason that storytellers produce this pattern, which is to signal a discourse status for a character that is sequentially consistent. I discussed this particular instance in more detail in excerpt (75) of section 8.4. In short, the storyteller uses pointing as a resource to raise the discourse status of the old men above that of the actress. Pointing is a useful resource for that in this instance because the actress would otherwise be understood as having a higher discourse status than the men. This is because the actress is marked with the demonstrative *nehe'* (line 52.2) while the old men are marked with *nuhu'*. However, as I explain in section 8.3, this use of these demonstratives is constrained by the Arapaho semantic hierarchy, which ranks individuals higher than groups. Thus, the storyteller's use of a point targeted at the old-men space in the DEM+MENT.PT pattern of line 53.2 is part of her consistent and frequent use of it throughout the small excerpt. Notably, in line 52.2, the storyteller synchronizes the point with the person-marking affix *-eit* '4/3S' of the verbal expression instead of the overt nominal *nehe' hisei* 'DEM woman'.

In other instances, storytellers produce the DEM+MENT.PT pattern as part of how they visually and otherwise develop a referent. In line 81.2 of excerpt (79), from "The boys had trouble learning Arapaho", the storyteller distinguishes two group characters and their spaces through a compound overt nominal version of DEM+MENT.PT.

(79)   (ACD 44b)

80.2   [repeated gesture…….]   ['group' PT: children space]
nii-ni'-eeneti-3i'   tei'yoonoh'o'   'oh
IMPERF-good-speak-3PL   children.NA.PL   but
the children speak well. But

81.1   [continued 'group' PT .………. ……………………….]
beebeet   nii-   niitiini   niit-ini-hii   cenih-'ini
just   IMPERF- ???   where-DETACH-well   to_here-DETACH
where, where uhh, as it developed,

81.2   ~~********~~~~~******<'group' PTs: girl space and boy space>
nuhu'   hiseihih'o'   noh   honoh'oho'   noh
DEM   girls.DIM.PL   and   boys.PL   and
these girls and these boys, and

As I discussed in example (48) of section 6.5, the storyteller uses the 'group' lexical gesture

throughout the narrative to establish a group of children and develop a comparison between the

gendered groups of school children. Although the storyteller first establishes a central children

space in line 80.2, she elaborates on that space in line 81.2. In this first transition from

tei'yoonoh'o' 'children' to *hiseihih'o'* 'girls' and *honoh'oho'* 'boys', she refers to them through the

single overt nominal *nuhu' hiseihih'o' noh honoh'oho'* 'DEM girls and boys'. As line 81.2 shows,

she synchronizes the 'group' lexical gesture with these mentions of 'girls' and 'boys' to spaces on

either side of the original children space. Thus, the mentions and the points both work in

synchronized collaboration to develop a version of children that is more relevant to the narrative

than the use of the single 'group' gesture and overt nominal *tei'yoonoh'o'* 'children' in line 80.2.

This is why the demonstrative *nuhu'* is used for the formulation of line 81.2, while it is not used

in the original formulation of line 80.2 (for further analysis, see example (68) of subsection 7.4.1).

In a different way that draws on both the point and the mention, the DEM+MENT.PT pattern might be produced as part of how a storyteller orients or reorients the time and place of the narrative viewpoint. In line 152.1 of excerpt (80) from "Arapaho mentoring for woman in room", the storyteller produces the pattern in reference to Running Deer as he shifts from talking about her in the past to talking about her in the present.

(80)   (ACD 24b)

151   "*****"<PT: woman space>   ['speaking' …….]
             hinee   nenei   neeni3io'   nih-'iisiiten-o'
             DEM   ?????   ???????   PAST-seize/take-3S
             "That", she caught on to it.

152.1   ['now' …………………….]   ~~~~**************<PT: Deer>
             hiiwoonhehe' nuhu' huusi' nehe' nookhoosei niibei
             now   DEM   day   DEM   NAME   NAME
             Now, today, this Running Deer,

152.2   ['declarative' …..]   [PT: Deer]
             ceniinonooneihi-t   hinono'eitiit
             pretty_good_at_s.t.-3.S Arapaho_language
             she is pretty good at Arapaho language.

Prior to line 152.1, the storyteller had been narrating about the past, including a long sequence of reenactments of himself and Running Deer in which he showed the various techniques he used to

teach her the Arapaho language. Line 151 is the end of that sequence, wherein the demonstrative *hinee* and a point are part of the storyteller reenacting himself instructing Running Deer to look at a woman and describe her. Note also the past tense marker *nih-* in the final verbal expression of that line. In line 152.1, then, the storyteller shifts the time frame to *hiiwoonhehe'* 'now', producing a series of other words and gestures to reinforce that shift. One thing that he does is explicitly mention Running Deer, which is the first time he has done that since the beginning of the narrative sequence. He formulates the overt nominal with a demonstrative as *nehe' nookhoosei niibei* 'DEM Running Deer'. Simultaneously with the mention of her name, he also produces a point that targets her (i.e. she is actually in the room), and in doing so he produces the pattern DEM+MENT.PT. The point targeting her and the mention of her name work to explicitly refer to her as the person who is present in the room, helping to shift the time frame from the past to the present and thus reorient the audience.

In this section, I discussed the relationship between pointing, overt nominals, and demonstratives as I have described it thus far. I provided a sketch of the distribution of these resources in the data, which demonstrates, among other things, that pointing and demonstratives are distinct resources from one another. Certain aspects of their distribution, however, highlight how they are similar resources. For example, they are both used in reference to the same types of referents in about the same overall frequencies. Additionally, as both demonstratives and pointing both function as signals of discourse relevance, there is a relatively high occurrence of pointing that is synchronized with overt nominals that have demonstratives. In preparation for the next section, in which I examine the bimodal construction DEM.PT+MENT, I examined the other common pattern, which is DEM+MENT.PT. I provided examples of some of the reasons that storytellers produce this pattern, showing that the pattern itself does not function as a whole

construction but rather is the confluence of many other factors of the spontaneous narratives. For many cases, storytellers likely produce the DEM+MENT.PT pattern in situations in which they require both pointing and an overt nominal with a demonstrative, but functionally they need to distinguish what they are doing from the very specific practice of using the DEM.PT+MENT construction, which I turn to next.

9.4 The DEM.PT+MENT Viewpoint Anchoring Construction

In this section, I describe the DEM.PT+MENT bimodal construction and analyze its use in three examples from the data collection. The description includes an analysis of its basic elements, how they are synchronized, and the function that it has for storytellers. In line with my interactional approach, this description is also a bit broader, however, because I account not just for the form-function pairing of the construction but also features of the broader referential practice around its use. However, as part of this approach, I only describe this construction with respect to its use by storytellers for character reference. Although more rare, I have also observed the construction (formally defined) being used for place and other types of reference by storytellers. The function of DEM.PT+MENT in these other uses seems to be similar to its use in character reference, but the overall practices are different enough to consider them apart. The goal here is not to describe or make a claim about every bimodal construction and related practice, but rather to establish one bimodal construction with sufficient evidence. In general, I argue that the construction, as used for character reference, has a very special and particular function for storytellers of spontaneous narratives: It is used to make initial explicit and visible reference to a character with high discourse status who serves as a visual anchor for a narrative space. More specifically, storytellers use the construction to establish the character who occupies

the dialogic pole, which is opposite to the storyteller's pole in the predominant narrative viewpoint.

There are various structural properties that define both the form of DEM.PT+MENT as well its broader use as a resource for character reference. First, there is the fidelity of the construction's synchronization itself. For overt nominals consisting of a demonstrative, a nominal mention, and a point, Arapaho storytellers typically display the point's nucleus either within the phonetic boundaries of the demonstrative or overlapping with the front edge of those boundaries. Thus, using my notation, one might argue that there are technically two templates for the construction: DEM.PT+MENT and PT+DEM+MENT. I have found no functional difference between these two construction patterns. I thus represent the construction as DEM.PT+MENT because it is the more common production pattern and also because it underscores the reality that the point is always produced so that its nucleus is temporally closer to (if not simultaneous with) the demonstrative than any other surrounding element. In the next section, 9.5, I provide evidence of a DEM.PT construction (no mention) that is used to target the attention of participants on a visual referent, in order to identify the referent and thus structure the visual field. I examine the DEM.PT construction in order to support my claim that the particular synchronization between the demonstrative and point in DEM.PT+MENT motivates how this construction is also used to structure the visual field. In what follows, I provide the three examples of DEM.PT+MENT that I analyze throughout this section. Example (81) from "Arapaho mentoring for woman in room" shows an instance of DEM.PT+MENT, which is constituted by the storyteller's point and the overt nominal *nehe' hisei* 'DEM woman'.

(81)   (ACD 24b)

131   ~~~~~~****<PT: Deer>
'oh huut nehe' hisei   nii-niiteheib-einoo
and here DEM   woman.NA   IMPERF-help-3S/1S
And here is this woman, she is helping me.

In (81), the preparation of the point (i.e. "~~~~~") overlaps with the words prior to the

demonstrative, while the nucleus of the point (i.e. "****") is produced almost entirely within the

phonetic boundaries of the demonstrative *nehe'*. Example (82) from "Joke about little girl's

translation of Arapaho" shows a similar case.

(82)   (ACD 28a)

117.3   ~~****<PT: shopkeeper space>
hee3eihi-t nuhu' nih'oo3ou'u
says-3.S   DEM   white_person(s).NA.OBV
this white man was saying.

In (82), the storyteller synchronizes his point with the overt nominal *nuhu' nih'oo3ou'u* 'DEM

white man' in reference to the shopkeeper. As in the previous example, the preparation of the

point overlaps with a prior word, while the nucleus of the point and the demonstrative *nuhu'* are

simultaneously produced. There is no overlap with the nucleus of the point and the nominal

mention *nih'oo3ou'u* 'white man'. Example (83), from "Hunting, drinking, and eating", provides

a demonstration of the slightly different production pattern.

(83) **(ACD 56c)**

38	~~**<PT: Robert space>	[drinking]	[clap] [PT: Robert space]
	nehe' Robert	beex-bee-bene-'	
	DEM NAME	a_little-REDUP-drink-3S	

This Robert was drinking a little.

The storyteller here produces the nucleus of the point just before he begins producing the demonstrative *nehe'* of the overt nominal *nehe' Robert* 'DEM Robert'. The story produces the point at the beginning of the utterance, and so the point does not overlap otherwise with any other word. In fact, to end the prior utterance (not shown), the storyteller produces a clap as opposed to a spoken word. With respect to all three examples, then, a storyteller synchronizes the point and the overt nominal so that the nucleus of the point is produced in closer temporal proximity to the demonstrative than any other spoken element of the overt nominal or any other surrounding element of speech. In most cases, storytellers achieve this by producing the nucleus of the point and the demonstrative simultaneously.

Besides how the elements that make up the construction are synchronized, there are other defining features of the construction. I provide these features here and, for each one, I include a brief summary relating the feature to the function of the construction. Afterward, I provide a more in-depth functional analysis of the construction. First, not just any type of element can be used. The demonstrative is usually *nehe'*, although it can be *nuhu'*. There are a few reasons for this, which are discussed in sections 8.3 and 8.4. In general, the construction is used to refer to individual characters with a relatively high and prominent discourse status, and so *nehe'* is most common. However, when obviation is in play, as with "Joke about little girl's translation of

Arapaho", then *nuhu'* might be used. The handshape of the point is a forefinger point. This is an additional factor of the construction being used to refer to individual characters. Additionally, as discussed in subsection 6.4.3, storytellers generally use forefinger pointing to index a diegetic narrative viewpoint (i.e. the descriptive work of storytelling, as opposed to character reenactments), and the construction is used in such instances.

Outside of the conventional properties of the elements themselves, there are broader discourse-structural features that are part of storytellers' practice of using the construction. When storytellers use this construction to refer to a character, the construction represents the initial explicit reference to the character in the narrative sequence. However, the construction is not used to refer to a character unless the character is already part of the participants' common-ground knowledge. That is, the construction refers to characters that have a definite status. For example, in "Arapaho mentoring for woman in room", the storyteller's use of the DEM.PT+MENT represents the initial explicit reference to Running Deer in the narrative sequence. She was, however, already known to the other participants because she had just physically entered the room prior to the reference and, as a teacher, she was at least somewhat relevant to the broader topic of talk, which was about Arapaho language education. In "Hunting, drinking, and eating", the storyteller similarly uses the construction to refer to Robert. The narrative is the storyteller's personal account of a hunting trip, and the other participant (i.e. audience) has been part of such hunting trips with the same people (if he was not actually part of the one being retold). Thus, although Robert had not been explicitly referred to prior to the storyteller's use of the construction, Robert was already known by the other participant, especially given the context. In "Joke about little girl's translation of Arapaho", the situation is a bit different, since the narrative is fictional. Prior to the storyteller's use of the construction to

refer to the shopkeeper, the storyteller had started the joke with a series of reenactments of the shopkeeper. That is, the storyteller starts the joke by reenacting the shopkeeper even before he explicitly identifies the shopkeeper (see example (69) of subsection 7.4.2). Thus, the participants had information about the shopkeeper prior to the storyteller's initial explicit reference to the shopkeeper through the construction. This feature of the practice of using DEM.PT+MENT underscores its special function to establish something about the referred-to character and in relation to the character, as opposed to establishing the character. Storytellers use other means to establish the character, if the character is not already contextually given or associated with the narrative context.

Another discourse-structural feature that is part of storytellers' practice of using the construction is much more directly related to what it is about the character that a storyteller actually uses the construction to establish. In developing a narrative participation space and its associated predominant viewpoint, the characters are visually and referentially organized around two poles (cf. Liddell 2003). This is the case even when there are more than two characters. Each polar region, however, is occupied by one character. A character referred to by the DEM.PT+MENT construction occupies one of the two polar regions in the narrative participation space. The opposite polar region is the 'storyteller's pole', which I describe first. As a default, the storyteller's body represents one of the poles, and thus the storyteller's pole is occupied by a specific character. The storyteller refers to other characters from the viewpoint defined by this character's position. In personal narratives, therefore, it is a pragmatic necessity for the storyteller's own character to occupy the storyteller's pole. For instance, in "Arapaho mentoring for woman in room", the storyteller points to himself to refer to his own personal character (i.e. a past version of himself), which is shown in example (84).

(84)   (ACD 24b)

134.1   [PT: Deer]   "[PT: addr. space]" [PT: to self]
                             hei'towuun-einoo ho3o' nookeihi   nih-'ii3-einoo
                             tell_s.o.-3S/1S   NAME NAME   PAST-say_to_s.o.-3S/1S
                             She told me, "Red Sky," she said to me,

The excerpt shows that this default of having the storyteller's own character occupy the storyteller's pole is manifest most specifically from the diegetic narrative viewpoint, which is when the storyteller is describing the characters' actions. In the beginning of the excerpt (84) utterance, the storyteller points at Running Deer (in the room) as he says *hei'towuun-einoo* 'she told me'. During the last expression of the utterance, *nih-'ii3-einoo* 'she said to me', he points to himself. Note that in both diegetic expressions, the person marking affix *-einoo* '3S/1S' is used. Thus, he refers to Running Deer as the 3rd person agent and himself as the 1st person undergoer. The initial point to her works to signal that Running Deer is this agent described in the expression. This initial point and the later point to himself, reinforce the reenactment that happens between the two verbal descriptions. In the reenactment, Running Deer says his name, *ho3o' nookeihi* 'Red Sky' and points forward, as to address him in this particular projection. Thus, the storyteller has to shift from the default viewpoint to that of Running Deer's character. The initial point to Running Deer signals that it is her that is being reenacted. After the reenactment, the storyteller points back to himself, in order to reorient the viewpoint. The initial and final point in this utterance thus work to anchor the reenactment with respect to the storyteller's pole, which is occupied by the storyteller's own character. As I briefly described for example (44) of subsection 6.4.3, the storyteller of "Hunting, drinking, and eating", which is also

a personal account, similarly occupies the storyteller's pole with his own character. As that

example illustrates, though, the character that occupies the storyteller's pole is not necessarily a

character that is ever reenacted in the narrative, even as the character defines the predominant

viewpoint. In contrast to the other two narratives, "Joke about little girl's translation of Arapaho"

is not a personal narrative. In this narrative, the storyteller occupies the storyteller's pole with the

little girl, whose internal thoughts and actions are central to the joke. Thus, he refers to the other

characters from her viewpoint, as I discussed for example (37) of section 6.3. In sum, for all

cases, a storyteller can shift to other viewpoints and reenact other characters, but the character

occupying the storyteller's pole defines the default viewpoint.

The pole other than the storyteller's pole is the 'dialogic pole'. It is the one occupied by

the character that is referred to by DEM.PT+MENT. Here I describe the features of the dialogic

pole and a character that occupies the pole. With respect to the predominant viewpoint of the

narrative participation space, the dialogic pole is developed opposite the storyteller's pole so that

the storyteller is facing the dialogic pole. Thus, any characters occupying these two poles are

understood to be facing one another so as to structure a participation space that privileges a

dialogue centered on the two characters. For most narratives, storytellers designate an otherwise

empty space that is to their front as the dialogic pole. The dialogic pole is thus the same as the

character space of the character that occupies the pole. In "Joke about little girl's translation of

Arapaho", the shopkeeper space is the dialogic pole. In "Hunting, drinking, and eating", the

Robert space is the dialogic pole. When the character that occupies the dialogic pole is a real

person that is physically present with the storyteller, then that person's body is designated as the

dialogic pole. That person's character thus occupies the dialogic pole in the same way that a

storyteller's character occupies the storyteller's pole in a personal narrative. If need be in such

cases, a storyteller changes position or posture in order to face the person that defines the dialogic pole. For instance, in "Arapaho mentoring for woman in room", the storyteller and Running Deer are seated across from each other, as seen on the far left and the far right, respectively, of image (85).

(85)

ACD (24c)

In the actual video recording of "Arapaho mentoring for woman in room", Running Deer is out of the camera view. In excerpt (86), though, it is clear that the storyteller changes his posture to face her after he begins the narrative.

(86)   (ACD 24b)

131   ~~~~~~****<PT: Deer>
'oh   huut   nehe' hisei   nii-niiteheib-einoo
and   here   DEM   woman.NA   IMPERF-help-3S/1S
And here is this woman, she is helping me.

132   nookhoosei   niibei   nee'ees-ih'i-t
NAME   NAME   thus-named-3.S
Running Deer, that's her name.

133   [geo PT: Ethete]
           teebe   nouxon-o'   huut   huut   konouutosei'
           just_now meet-1S/3S   here   here   Ethete
           I just now met her here, here at Ethete.

In line 131, the storyteller is sitting back in his chair, which has been his posture for many

minutes. Just before that, Running Deer had just walked into the room and sat down behind the

desk, as in image (85). In line 131, then, as the storyteller initially refers to her, he maintains his

posture. During line 133, however, he changes his posture, sitting up and turning his torso in

Running Deer's direction. He maintains this posture throughout the duration of the spontaneous

narrative, only to relax his posture again during the final utterances.

By pointing to the dialogic pole, a storyteller thus is referring to the character that

occupies that pole. Other characters, such as Danny in "Hunting, drinking, and eating", are

defined by a space at either side of the line between the two poles. The character occupying the

dialogic pole is thus important not just for how the narrative participation space is organized but

also for the discourse statuses of the characters involved. Specifically, a storyteller uses the

dialogic pole for a character whose actions stimulate the defining activity of a narrative event. In

"Arapaho mentoring for woman in room", this character is Running Deer, and the narrative is

about how she prompts the storyteller's character to teach her Arapaho. Excerpt (87) shows the

storyteller's initial reenactment of the narrative, which is of Running Deer making this request.

(87)   (ACD 24b)

134.1   [PT: Sage]   "[PT: addr. space]" [PT: self]
hei'towuun-einoo   ho3o' nookeihi   nih-'ii3-einoo
tell_s.o.-3S/1S   NAME NAME   PAST-say_to_s.o.-3S/1S
She told me, "Red Sky," she said to me,

134.2   "['declarative' ..…………………..]"
nii-beet-hinono'eiyeiti-noo   nih-'ii3-einoo
IMPERF-want_to-speak_Arapaho-1S PAST-say_to_s.o.-3S/1S
"I want to speak Arapaho," she said to me.

Excerpt (87) comes right at the beginning of the narrative, just after the storyteller introduces her, as discussed for excerpt (86). In "Joke about little girl's translation of Arapaho", the storyteller occupies the dialogic pole with the shopkeeper, who aggressively requests that the little girl mediate the exchange between himself and the little girl's grandma. Excerpt (88) shows how the storyteller reenacts the shopkeeper to initiate the joke.

(88)   (ACD 28a)

112   {45}   he-i'eibehe' hii-beet-
                2S-grandma   3S.IMPERF-want_to-
                "Your grandmother, what's she want [to buy]…"

113   {57}   yeah

114   {45}   heeyounii 'oh hii-beet-otoonoo3oo
                what_is_it?   and   3S.IMPERF-want_to-thing_bought.NI.DEPPART
                "What is it that she wants to buy?"

The joke starts in line 112 with the storyteller reenacting the shopkeeper questioning the little

girl. In line 114, the request is repeated. The storyteller reenacts the shopkeeper making different

versions of this same request two more times in the joke. The joke hinges on how the little girl

responds, under pressure from the shopkeeper. As I discussed in excerpt (73) of section 8.3, the

storyteller also uses obviation to distinguish the high discourse statuses of these two characters,

whereby the little girl is marked with proximate morphology and the shopkeeper with obviative.

In "Hunting, drinking, and eating", the storyteller occupies the dialogic pole with Robert, whose

drunkenness and dangerous behavior provoke a variety of reactions from the other characters,

thereby defining the narrative event (see subsection 7.4.2). As I discussed in example (32) of

subsection 5.3.1, the storyteller's reenactments of Robert staggering around with a loaded gun,

among other things, are quite vivid. For narratives in which a storyteller uses a dialogic pole,

then, the character that occupies the pole and that character's actions are central for how a

narrative and its main event is structured.

The function of the DEM.PT+MENT construction in character reference is thus to anchor

the predominant narrative viewpoint by establishing the dialogic pole and the character who

occupies it. The storyteller's pole is a given in a narrative space, but the storyteller has to

explicitly structure a dialogic pole. Additionally, because a character that occupies a dialogic

pole is so central to a narrative, the initial explicit reference to the character must simultaneously

label the character, distinguish the character's relative discourse status, and locate the dialogic

pole (i.e. the character's space). As a resource, the DEM.PT+MENT is designed for this task. The

mention provides a label for the character, the demonstrative distinguishes the character's relative

discourse status, and the synchrony of the demonstrative and the point work to visually situate a

dialogic pole. In "Arapaho mentoring for woman in room", the storyteller produces the

DEM.PT+MENT as the first utterance of the narrative, shown again in (89).

(89)   (ACD 24b)

131   ~~~~~~****<PT: Deer>
'oh   huut   nehe' hisei   nii-niiteheib-einoo
and   here   DEM   woman.NA   IMPERF-help-3S/1S
And here is this woman, she is helping me.

The construction is comprised of the synchronized product of a forefinger point and *nehe' hisei*

'DEM woman'. The point of the construction is targeted at Running Deer, defining her body as

the dialogic pole, and her character is marked with *nehe'*, signaling her high discourse status. As

part of using this construction to referentially target an actual person, the storyteller uses the

spatial locative *huut* 'here' just before the construction, which reinforces the actuality of the

target (as opposed to designating an empty space as the dialogic pole). In "Joke about little girl's

translation of Arapaho", the storyteller produces DEM.PT+MENT after the series of shopkeeper

reenactments that initiate the joke. This instantiation of the construction is shown again in (90).

(90)   (ACD 28a)

117.3   ~~****<PT: Shopkeeper space>
hee3eihi-t   nuhu'   nih'oo3ou'u
says-3.S   DEM   white_person(s).NA.OBV
this white man was saying.

The construction is comprised of the synchronized product of a forefinger point and *nuhu'*

nih'oo3ou'u 'DEM white man'. The point of the construction is targeted at an empty space in

front of the storyteller, defining it as the dialogic pole. The shopkeeper's discourse status is

defined by the obviative *nuhu'*. In "Hunting, drinking, and eating", the storyteller produces the

DEM.PT+MENT construction after a long sequence in which he geographically situates the

hunting trip. The storyteller's use of the construction initiates the next sequence as well as serves

as the initial reference to Robert. The construction is shown again in (91).

(91)   (ACD 56c)

38   ~~**<PT: Robert space>   [drinking]   [clap] [PT: Robert space]
                     nehe'   Robert   beex-bee-bene-'
                     DEM   NAME   a_little-REDUP-drink-3S
                   This Robert was drinking a little.

The construction is comprised of the synchronized product of a forefinger point and the overt

nominal *nehe' Robert* 'DEM Robert'. As with "Joke about little girl's translation of Arapaho",

this storyteller's point is directed at an empty space to his front, designating it as the dialogic

pole. Robert is the one and only character of many in the narrative that is referred to with a

demonstrative. It is toward this space, the dialogic pole, that many of the other characters' actions

are directed or otherwise focused on, as the storyteller reenacts their responses to Robert's

behaviors.

9.5 The DEM.PT Construction

        In this brief section, I examine the bimodal construction DEM.PT as used by Arapaho

storytellers. My goal is not to showcase this construction but rather to support my section 9.4

analysis of DEM.PT+MENT. The support comes by showing that there are other ways in which Arapaho storytellers use demonstratives and pointing in the DEM.PT configuration for a type of visual locating. Although the forms and the functions of the two constructions overlap, they constitute quite different practices. These differences add another layer of support, demonstrating that the constructions have a conventionalized meaning that is not reducible to demonstratives and pointing alone.

In general, the DEM.PT construction is used by Arapaho speakers in (non-narrative) turn-by-turn talk for visual locating in situations where a speaker is motivating an interactional participant to look at and attend to the referent targeted by the point. The referent, in this case, is not part of the participants' common-ground knowledge, and so it is indefinite. In this way, the pronominal demonstrative motivates a classic deictic function, working to draw attention to the pointing action for what is being identified by the point (Dixon 2003; Mondada 2012). Additionally, there is a spatial 'this' vs. 'that' contrast made by different demonstrative forms in Arapaho, and so a demonstrative also works to guide the visual attention to an interactionally relevant space. Examining Lao, Enfield (2003) argues that in such bifurcated demonstrative distinctions, the demonstrative corresponding to 'this' is actually a general purpose demonstrative that speakers use to target any visible entity for cases in which the interactionally relevant space is open, without a regional differentiation that the participants embody or otherwise occupy in their engagement with one another. However, the meaning of this general purpose demonstrative changes when there is a regional differentiation, wherein a 'here space' region contains the action of the interaction and the boundaries of the 'here space' also define an outside spatial region. The 'here space' is often the spatial region embodied by the interactional co-participants. When there is a regional differentiation, there is a contextual possibility that one of the two spatial regions

contains an entity that a speaker needs to refer to. Thus, the two demonstratives come into play, and their opposing values hinge on the contextually relevant 'here space'. In such cases, a 'proximal' vs. 'distal' classic description is not sufficient. Rather, Enfield shows that the 'this' demonstrative indexes the 'here-space' of the relevant interactional space, whereas the 'that' demonstrative indexes the 'not-here space' of the relevant interactional space. Thus, what is distinguished by one demonstrative or the other is not a referent itself, but a referent's background (cf. Hanks 1990).

As I discussed in section 9.4 and in more depth in Chapter 7, storytellers do not generally need to make a practice of visually identifying or explicitly referring to characters or objects that are not already part of the participants' common-ground knowledge. Thus, while describing from a diegetic viewpoint, storytellers do not use DEM.PT as a resource. However, because DEM.PT is used by speakers in turn-by-turn talk to locate, identify, and draw attention to things in the world during other types of situated activities that make up everyday life, storytellers use DEM.PT from a mimetic viewpoint, during reenactments. In other words, DEM.PT is a resource that a storyteller uses to index a reenactment. I provide two examples, each of which is from a reenacted interaction involving a character that occupies the dialogic pole, discussed in section 9.4. In each example, the storyteller produces a point with high focusing properties, and continues to point at and describe the referent afterwards. However, one way that each instance of the construction is unique is that the storytellers use different demonstrative forms, which signal differing spatial distinctions. In line 41.1 of excerpt (92), from "Hunting, drinking, and eating", the storyteller is reenacting Danny's use of DEM.PT.

(92)   (ACD 56c)

41.1   "~~**" <'follow' PT: Robert space>
                 nehe'   Danny
                 DEM   NAME
              "Watch this one," Danny [said],

41.2   "[PTs: Robert space ………………]"   [intoxicated]
              watch him watch him watch him   he's   nonsih'ebi-t
              watch him watch him   watch him   he's   drunk-3.S
              "watch him, he's drunk."

This instance of DEM.PT is constituted by a directed lexical 'follow' point that is produced just before the demonstrative *nehe'*. The storyteller's reenactment of Danny using this construction to refer to Robert, includes head-aligned gaze and outstretched arm targeting the dialogic pole, which defines the Robert space. The construction is used not to identify Robert as a new character, but to draw visual attention to Robert's new and uncontrolled behavior. Thus, he follows the use of the construction with further highly focused points and stated warnings. The demonstrative *nehe'* is consistently used by the storyteller in reference to Robert, whether describing Robert's actions or reenacting a character referring to Robert. Thus, the use of *nehe'* here is not so surprising. However, its use (along with *nuhu'*) to signal either a neutral or a 'this' spatial distinction, is evident by the contrasting use of *hinee* to signal a 'that' distinction, as described by Cowell and Moss Sr. (2008). In line 149.2 of excerpt (93), from "Arapaho mentoring for woman in room", the storyteller produces a DEM.PT construction using the demonstrative *hinee*.

(93)   (ACD 24b)

149.2   [PT: Deer]   "~~~~~~~~~~~***" <PT: woman space>
             heenei'towuun-o'   noohow-unee   hinee
             tell_things-1S/3S   see-3.IMPER   DEM
             I told her, "look at that [woman]."

149.3   "[PT: woman space]"
             3ii'ookuu-t   hisei
             stand-3.S   woman.NA
             "She is standing there."

In this instance, the storyteller is reenacting his own character as he acts as an Arapaho language

mentor for Running Deer. In the reenactment, he is using Arapaho to describe the world,

motivating Running Deer to follow along. In line 149.2, as part of this reenactment, he uses the

DEM.PT to locate and identify a woman who is off in the distance (in the narrative event). As

before, the storyteller produces the point with head-aligned gaze and outstretched arm. He also

follows the point, in line 149.3, with an additional point at the woman and detailed description of

her. As part of the reenactment, the storyteller and Running Deer constitute and exclusive

participation framework and space. The woman, who is targeted by DEM.PT, is out of this

interactional space. The storyteller thus uses the demonstrative *hinee* to reinforce that

interactionally relevant spatial separation. Outside of such reenactments, *hinee* is rare in

spontaneous narratives.

In sum, the existence of the DEM.PT construction supports the analysis of the viewpoint

anchoring construction, DEM.PT+MENT, by showing that the simultaneous production of a

demonstrative and a point motivate some type of action to constitute or draw out visual structure. DEM.PT is used to draw visual attention to a referent, usually as a means to locate the referent and identify it. The DEM.PT+MENT construction is used to visually establish a referential anchor. However, the very different uses of these two resources also underscores their conventional nature as constructions. Another factor that reinforces this conventionality is that the practice of using each construction is fit for a specific interactional context. While the DEM.PT construction is more common to non-narrative situated interactions, the DEM.PT+MENT construction is particular to spontaneous narratives.

9.6 Conclusion

In this chapter, I described the bimodal construction DEM.PT+MENT as a unique resource that storytellers use to anchor a narrative viewpoint. To start, I reviewed the concept of multimodal constructions as well as some related research. I then reviewed pointing, overt nominals, and demonstratives in Arapaho, as they each constitute a distinct resource for storytellers. I showed that the distinction between demonstratives and pointing as well as their overlapping function is supported by how they are distributed throughout the data collection. I also showed that other patterns of synchronization between pointing and overt nominals with demonstratives, notably DEM+MENT.PT, do not constitute separate constructions. I then provided an in-depth description of the DEM.PT+MENT construction, showing that it is used by storytellers to anchor a predominant narrative viewpoint. Specifically, the construction functions to establish a dialogic pole in a narrative participation space, which is opposite the storyteller's pole. Just as important, the construction functions to establish the character that occupies the dialogic pole. This character has very high discourse status and is otherwise a central and defining character in the respective narrative event. Finally, as further supporting evidence for

my analysis of the construction, I examined the similar yet different bimodal construction

DEM.PT.

CHAPTER X

CONCLUSION

One of the most defining research questions for the general discipline of linguistics is what constitutes a language. The question has historically been broken up into more manageable questions, many of which have defined sub-disciplines of linguistics. Through my inquiry into the unique relationship between gesture and speech in Arapaho, I have engaged most specifically with two of these sub-disciplinary questions. One is how to accurately describe a language on its own terms, which is central to classic descriptive linguistics. Another is how a language reflects general properties of human social interaction, which is central to interactional linguistics. I have taken the interdisciplinary position that these two questions and their associated sub-disciplines are not mutually exclusive. I have taken this position because an accurate description of the nature of gesture and speech in Arapaho requires the examination of Arapaho as an interactional production. This realization about Arapaho is in line with those made by other linguists for other languages, including Fox (1987), Hanks (1990), Enfield (2003), and Blythe (2009). In order to define this interdisciplinary position as its own emerging area of inquiry, I have called it the "interactional approach to language description". With respect to my specific inquiry, I have used the term 'bimodalism' to underscore the particular relationship between Arapaho gesture and speech.

In this dissertation, then, I have had two primary goals. First and foremost, my goal has been to use the interactional approach to build on the description of Arapaho grammar presented

in Cowell and Moss Sr. (2008), with special attention to Arapaho bimodalism, which has not previously been accounted for. My secondary goal has been to demonstrate the effectiveness of the interactional approach, not just for the sake of analyzing and describing bimodalism but for the sake of analyzing and describing how language is grammatically organized, how linguistic resources function with respect to one another, and how language is social practice. In order to achieve these goals, I focused my examination on a specific area of Arapaho speakers' language use that is rich with bimodalism: Spontaneous narratives and the explicit reference to characters within those narratives. I showed how, within these narratives, Arapaho storytellers use hand points and overt nominals to make explicit reference to characters. Hand points are complicated because they involve not only a variety of ways to refer, such as direct pointing and metaphorical pointing, but also a variety of forms, such as forefinger pointing and thumb pointing. Overt nominals are complicated because they involve a nominal mention, such as a person's name, and the possibility of a demonstrative, of which there are three distinct forms that storyteller's commonly use. I further showed that these resources are complementary to one another, as storytellers use them to develop the relational statuses and spatial arrangements of the characters in their narratives. I argued that this use of statuses and arrangements to organize characters can be conceptualized by the single functional domain of discourse relevance. Therefore, despite very important modality differences, pointing and overt nominals are functionally related by discourse relevance. I showed the depth of this relationship through the viewpoint anchoring construction, an instance of which requires a specific synchronized arrangement of a hand point, a demonstrative, and a nominal mention.

Throughout the dissertation, I unpacked this research agenda and its resulting argument, providing background where needed on Arapaho, on aspects of the approach, and from the

relevant literature. In Chapter 2, I defined the interactional approach to language description, as I understand it and with respect to the Arapaho language. I discussed how the interactional approach brings together elements of the classic approach as well as interactional linguistics in order to fill the interdisciplinary niche between them. I then provided further detail of the interactional approach by defining it in terms of five principles, which further establish the interdisciplinarity of the approach. The five principles are titled "descriptive relativism", "sociocultural sensitivity", "enriched documentary data", "prioritizing spontaneous situated interaction", and "interactional-linguistic description". The last of these principles specifically involves analytical methodology, which is rooted in the discipline of Conversation Analysis. The methodology involves the phases of transcription, close observation, sample collection, and data-based evidence.

I then discussed why Arapaho, specifically, makes an interesting case study for the interactional approach. First, Arapaho is unique for an underrepresented language because of the recent creation of the Arapaho Conversational Database, a fully glossed and transcribed source of interactional data that is video-based and includes ethnographic notes. This database constitutes the type of data most suited for the interactional approach. In addition, Arapaho bimodalism and other unique properties of the language are characteristic of interactional language use. However, because of the nature of Arapaho bimodalism, it has been given almost no attention by researchers working from a classic approach. This is despite the fact that Arapaho has a considerable legacy in the literature as the subject of classic language description. Thus, the application of the interactional approach to the analysis of Arapaho, and Arapaho bimodalism specifically, is a clear demonstration of how the interactional approach can add to the descriptive literature.

In Chapter 3, I provided sociohistorical and structural background on the Arapaho language. I discussed how as a spoken language it is classified as a member of the Algonquian language family, while much of its conventional gesture repertoire has areal relations to other Plains tribes through their historic use of Plains Indian Sign Language as a lingua franca. Other aspects of Arapaho conventional gesturing might be better classified as part of an absolute gesture system, given Arapaho speakers' frequent and accurate reference to local geography. Furthermore, I discussed how Arapaho is currently classified as an endangered language, as the language has undergone significant loss since the beginning of the reservation period, over a century ago. It is not certain how Arapaho bimodalism has been affected by such sociohistorical shifts and language loss. In this chapter, I also summarized some basic properties of Arapaho grammar and conventional gesture. Notably, I based my discussion of Arapaho grammar on "The Arapaho Language" by Cowell and Moss Sr. (2008) and their argument that saliency is a primary organizing parameter for Arapaho morphosyntax. I showed that although it is common for utterances in Arapaho to be formulated as single verbal expressions, explicit person reference is almost exclusively formulated as an overt nominal expression. Overt nominals are formally separated from verbal expressions and are constituted by a nominal mention, with the possibility of a preceding demonstrative. Overt nominals can be pre-posed or post-posed to a verbal expression, because word order is not syntactically constrained.

In Chapter 4, I provided specific detail about data, including fieldwork. I focus this chapter on the collection of spontaneous narratives that I use for the primary data of the dissertation as well as the special conventions that I use to transcribe the data. There are six spontaneous narratives, which present a good variety of narrative type, narrative length, speakers, and other contextual features with respect to the social interactions in which the

narratives were produced. I provided a sketch of each narrative and the name I use for each

narrative. The use of such a limited set of diverse narratives allowed me to showcase good

examples while also demonstrating how different speakers use the same linguistic resources in

different contexts. I then discussed the special transcription conventions that I use, such as the

annotation of lexical gestures and referential spaces on the gesture line. I also discussed

conventions that are normally used in interactional transcriptions that I however did not use

(such as showing overlap in turn-taking). My goal was to elucidate my transcript conventions as

well as justify their use in terms of balancing relevant information with readability.

In Chapter 5, I defined the concept of discourse relevance as a functional domain that is a

property of narration. A storyteller signals discourse relevance, with respect to what is most

relevant and how, through a variety of referential practices. More specifically, discourse

relevance involves the relational statuses and spatial arrangements of characters, which

storytellers use to organize characters relative to one another as well as to motivate the audience

to adopt a certain viewpoint. The overall dynamic process can be understood as the development

of a framework based on discourse relevance. I also classified discourse relevance as a type of

saliency, thereby situating my use of the concept with the idea that saliency is an organizing

parameter of Arapaho grammar, as argued in Cowell and Moss Sr (2008). Furthermore, I

described two ways that a storyteller develops discourse relevance. The first is through

foregrounding displays. Such displays are not particular to Arapaho but are general interactional

resources for foregrounding one character (or other referent) in contradistinction to others. In

order to foreground a character relative to another character, a storyteller could, for instance, talk

more about that character, use gesture more often to refer to that character, or reenact that

character's speech and visual behavior. The second way that storytellers can develop discourse

relevance is through more conventional linguistic resources. If a language has such resources, they are much more particular to the language and the practices of using that language than are foregrounding displays. In the subsequent chapters, I described a variety of Arapaho linguistic resources in terms of how they conventionally function with respect to discourse relevance. This analysis was in large part based on how storytellers correlate their use of these Arapaho-particular conventional resources with their more general foregrounding practices.

In Chapter 6, I examined Arapaho storytellers' use of hand pointing. I showed how storytellers design most of their points as medial points, with some focusing properties, but not too many. This is because storytellers are not working to draw actual visual attention to a targeted referent when using pointing for discourse relevance. I additionally described the forefinger as the normal handshape that storytellers use. When a storyteller refers to a character within a narrative participation space, however, a forefinger point indexes a social asymmetry between characters, while a thumb point indexes social alignment between characters. These handshapes thus constitute conventional resources through which Arapaho storytellers signal different discourse statuses of characters. I also discussed other pointing practices, such as linking, as well as other handshapes, such as directed lexicals. These provide storytellers with further resources for developing discourse relevance.

In Chapter 7, I examined the use of demonstratives in overt nominals. There are two possible syntactic templates for a basic overt nominal: a demonstrative followed by a mention, DEM+MENT, or just a bare mention, MENT. There are also two well-supported hypotheses for how demonstratives function in overt nominals. One is that the presence of a demonstrative signals the definiteness of the nominal referent. The other is that presence of a demonstrative signals the discourse relevance of the nominal referent. I provided evidence against the former

and in support of the latter hypothesis. In describing how the presence of a demonstrative signals discourse relevance, I showed that it can be quite dynamic. Specifically, a storyteller can formulate an initial reference to a character as a bare mention and a subsequent reference to the same character as DEM+MENT as a means to promote the character's discourse relevance. The opposite pattern (i.e. going from DEM+MENT to MENT) is a practice for demoting a character's discourse relevance. Thus, just as the use of pointing to refer to a character can signal a relatively higher discourse status for that character, the general presence of a demonstrative in an overt nominal can do the same.

In Chapter 8, I examined the three demonstrative forms that storytellers most commonly use: *nuhu'*, *nehe'*, and *hini'* (or *hi'in*). I argued that these forms are used to fine tune how an overt nominal signals discourse relevance. I showed that while *nuhu'* is more general with respect to what it can refer to, it is semantically restricted in interesting ways. With respect to character reference, *nuhu'* cannot be used in reference to an animate individual character except in situations where a storyteller distinguishes characters through obviation. In that case, *nuhu'* marks the obviative character, and *nehe'* marks the proximate character. Other than obviation, which is not too common, *nehe'* is used exclusively to refer to individual characters. However, a storyteller usually refers to one and only one character in a narrative with *nehe'*. In general, *nehe'* signals a character with a very high discourse status or that otherwise has a special relationship to the storytellers development of the predominant viewpoint. The demonstrative *hini'* is also used to refer to individual characters. However, in contrast with *nehe'*, *hini'* signals that a character is a member of a group (or otherwise part of something else that has been established), and its the group's discourse status that is being developed. Thus, similar to the different pointing hand shapes, the different demonstrative forms are used to signal different types of discourse status.

In Chapter 9, I examined an Arapaho bimodal construction that is particular to spontaneous narratives. I call it the viewpoint anchoring construction, and define it by the template DEM.PT+MENT. I showed that the construction can be defined as such because its function is not predictable from the combined functions of the elements that constitute the construction. Furthermore, the construction is synchronized differently than other patterns produced when pointing is in the context of an overt nominal with a demonstrative. Notably, I showed that the pattern DEM+MENT.PT does not have a paired conventionalized function, but rather it is produced as the intersection of two practices, one using pointing and the other using overt nominals. For DEM.PT+MENT, however, I showed that storytellers use it to establish a space as the dialogic pole, as well as to establish the character that occupies the dialogic pole. The storyteller's pole is a space defined by the storyteller's actual body, and so the dialogic pole is important for how the narrative participation space is structured. Additionally, because the character that occupies the dialogic pole is the character whose actions are most important for the narrative event, the establishment of the dialogic pole (and its character) serves as an anchor for the predominant narrative viewpoint. Thus, the viewpoint anchoring construction demonstrates the extent to which pointing and demonstratives are linguistically complementary. More than just elements of a common paradigm, they can work as parts of a whole construction.

Beyond a relativistic description of Arapaho, there are many ways to understand this research and its implications, most of which I have at best only alluded to. For instance, the concept of bimodalism can be situated more broadly, for how it relates to other languages and practices. The term 'bimodal bilingualism' is used for those who are fluent in both a sign language and a spoken language, such as English and ASL, and who have developed bilingual practices (Emmorey et al. 2008; cf. 'SimCom' Liddell 2003: 2). However, even though I have

provided evidence that Arapaho bimodalism is sociohistorically rooted in Arapaho speakers' use

of Plains Indian Sign Language, Arapaho bimodalism is not a bilingual practice. That is,

Arapaho speakers do not (and, for the most part, cannot currently) separate their conventional

gestures from their speech (cf. Farnell 1995). Furthermore, Arapaho bimodalism likely

developed from the bimodal-bilingual practices of past Arapaho speakers that were fluent in

Plains Indian Sign Language, but there are few Arapaho speakers left, if any, who can fluently

use the sign language. Thus, Arapaho bimodalism is qualitatively very different from bimodal

bilingualism.

     In a different way, Kendon (2011), among other gesture researchers, argues that language

is essentially bimodal, at least as it is rooted in human evolution. This use of the term 'bimodal' is

meant to include gesture with speech in the general conceptualization of language, given the rich

and intricate ways in which gesture and speech are coordinated and cooperative in the expression

of any language. The use of gesture together with speech, then, is not particular to Arapaho. It is

not even the case that Arapaho is unique in having a repertoire of conventional gestures. All

spoken languages (or rather all speech communities) are associated with a repertoire of

conventional gestures. Thus, with respect to this more general sense that language is bimodal,

Arapaho bimodalism does not seem so significant. In this regard, however, it might make sense

to think of Arapaho bimodalism in terms of bimodal complexity. Just like other linguistic

phenomena, the possible bimodal relationships between gesture and speech might exist on a

continuum (see also Enfield 2009). On one end, this relationship would include very few

functional or semiotic parallels between gesture and speech. On the other end, the relationship

would include complexity. Bimodal complexity, then, specifically would involve conventions for

integrating speech and gesture that increase the functional potential or categorical nature of the

language. Thus, Arapaho bimodalism could be understood as a complex elaboration of the bimodal potential inherent in language. There is some research suggesting that other languages involve a similar degree of bimodal complexity as Arapaho, but this research is quite limited (e.g. Farnell 1995; Wilkins 2003).

The idea of bimodal complexity begs the question of how connected or integrated the vocal and gestural linguistic resources are for such languages. A variety of cross-linguistic research has demonstrated that much can be learned about a language through analyzing the role that gesture plays, including language-specific gesture conventions and gesture-speech relationships (Seyfeddinipur 2011). However, the matter seems more pressing for languages with bimodal complexity. Is the repertoire of conventional gestures and associated bimodal practices of one of these languages primarily based on the semantics and morphosyntax of the language as it is vocally produced? Are the gestural resources not so tied to the particularities of the vocal speech? Is the vocally produced component of a language somehow developed for its particular gestural resources? One way to begin to examine this area of inquiry for Arapaho or other languages with bimodal complexity, then, could involve the idea of gesture transportability: Can the conventional gestures and related practices associated with a language's bimodalism be transported to (or adapted to) another spoken language?

Because Arapaho speakers are also speakers of English, one could begin to uncover the depth of the relationship between gesture and speech in Arapaho by examining the English-based interactions of Arapaho speakers. Following up on the research in this dissertation, such research might involve examining the pointing practices used by Arapaho speakers in the spontaneous narratives they produce when speaking English. In my preliminary observations, I have found that Arapaho speakers (and other members of the Arapaho community) point in similar ways and

with similar handshapes when speaking English as they do when speaking Arapaho. It is not

clear, however, how their Arapaho English might have developed with respect to these pointing

practices. It is also not clear if the same kind of grammatical complexity or sociocultural values

are involved with Arapaho English pointing practices as I have described in this dissertation.

Based on what I know of English and Arapaho, however, it seems likely that, at least, some of

the bimodal complexity associated with pointing practices is particular to the Arapaho language.

This is because the grammar of Arapaho, as it is spoken, seems uniquely suited for the more

complex aspects of the bimodal practices that I describe. For instance, the bimodal construction

that I describe in Chapter 9 depends on the use of demonstratives to signal discourse relevance,

which is a property of Arapaho demonstratives but not of English demonstratives, as described in

Chapter 5.

Given other social and historical factors of the Arapaho language and its use, there are

additional ways that future research on Arapaho could add to our understanding on the

relationship between gesture and speech. First, it is important to continue to describe, in detail,

how Arapaho language resources, grammar, and practices differ from one social context of use to

another. In the dissertation, I provided some evidence for a number of differences, most notably

how the use of bimodalism is heightened in spontaneous narratives and how demonstrative

functionality might be different in traditional (non-spontaneous) narratives than it is spontaneous

narratives (*see also* Cowell and O'Gorman 2015). With a rich comparative description of

different contexts of Arapaho language use, research can begin that examines, for example, the

ways in which the grammars of spontaneous narratives and traditional narratives might differ and

how such differences might be tied to how bimodalism is more so a property of spontaneous

narratives than traditional narratives.

Second, it is important that research on the gesture-speech relationship in Arapaho take a historical perspective. Notably, there are historically based implications for Arapaho bimodalism, because it is rooted in both Arapaho, as a language of the Algonquian family, and Plains Indian Sign Language. Although precise dates are unknown, it is fairly certain that the Arapaho tribe migrated to the Great Plains area within the last millennia from the northeast, possibly near the Great Lakes, where the Algonquian language family is historically situated (see Anderson 2001). The development and spread of Plains Indian Sign Language across the various Plains tribes is not known for sure, but the historical record suggests that the sign language was in wide use five hundred years ago, at least (see Davis 2010). It is fairly certain, then, that the Arapaho community was not exposed to Plains Indian Sign Language until they had migrated to the Plains, and so Arapaho bimodalism (as described in this dissertation) likely emerged within the last millennia. However, the linguistic practices (along with the story lines) of traditional Arapaho narratives are likely rooted in a much earlier time period, which may explain why bimodalism is much less a property of traditional narratives than spontaneous narratives. Spontaneous narratives, as conversational practices, are not so regulated by formalized tradition. Thus, for any grammatical or other linguistic differences between traditional and spontaneous narratives, a starting hypothesis might be that traditional narratives have the more conservative features. Arapaho would then need to be compared to other Algonquian languages to see which features of Arapaho are more characteristically Algonquian (i.e. the majority of Algonquian languages have not been historically associated with Plains Indian Sign Language). This type of analysis would make for a good initial step in examining the various ways that Arapaho might have been changed by the incorporation of Plains Indian Sign Language.

Much of this type of comparative analysis, however, presents a problem with respect to the language descriptions serving as the comparative basis. I have argued in this dissertation that the interactional approach made it possible to uncover details of Arapaho bimodalism, pointing, demonstratives, and other examined phenomena, details that are largely obscured or even invisible through the classic approach. However, the interactional approach is not yet widely used in linguistic research, and almost all the descriptive work done on any Algonquian language has used the classic approach. Because the approaches differ in both the data type of primary focus and analytical methodology, there are limits to the type of claims one can make by comparing interactional descriptions of Arapaho and the existent descriptions of other Algonquian languages. For instance, in Chapter 7, I showed that, for spontaneous narratives, Arapaho demonstratives signal discourse relevance rather than definiteness. In contrast, using the classic approach, Cowell and Moss Sr. (2008) had earlier argued that Arapaho demonstratives were generally used to signal definiteness, which is in line with Cyr's (1993) argument that the use of demonstratives to signal definiteness is a characteristic of Algonquian languages. Because this research uses a classic approach, I cannot be certain that my findings contradict their findings. It is possible that their research has overlooked the possibility of discourse relevance as a function for demonstratives because their use of the classic approach did not provide them with the resources to see such a possibility. It is also possible, as I discussed in Chapter 7, that spontaneous and traditional narratives are grammatically organized differently, and demonstratives represent one area of this difference. A future line of research, therefore, would be to use the interactional approach to analyze traditional narratives of Arapaho more thoroughly so that a more robust comparison between the grammars of traditional and spontaneous narratives can be made. The next step would be to use the interactional approach in work on

other Algonquian languages, both those that have an association with Plains Indian Sign Language and those that do not. This, of course, would be a monumental task, given that the vast majority of the data available for other Algonquian languages likely does not meet the requirements of the interactional approach. Additionally, most Algonquian languages are similar to Arapaho in that they are endangered, which makes it very difficult to even develop a documentary database of social interactions. There is thus an immediate need for this kind of research.

However, to reiterate an argument of Chapter 2, regardless of what the interactional approach can uncover about gesture and speech or the typological uniqueness of Arapaho grammar, there is another reason to advocate for the use of the interactional approach in future research. In the case of Arapaho, not only does Arapaho bimodalism seem to be typologically unique, but also Arapaho speakers themselves argue for the importance of gesture in understanding Arapaho language. Thus, the use of a more inclusive approach in language description is especially important for native languages, such as Arapaho, where gesture is thought of as a dimension of talk and also incorporated into traditional practices, ranging from spiritual ceremonies to education. For such languages, gesture is part of the indigenous model of what language is. A language documentation project, including description, should begin from such a model. Thus, it is because the interactional approach to language description supports such a model of language, as much as the approach relies on robust empirical methods, that the approach is important for consideration in future work on Arapaho and, more generally, in descriptive linguistics.

BIBLIOGRAPHY

Arapaho Conversational Database. (2011). Data collected and processed by Dr. Andrew Cowell, University of Colorado, 2007-2011. Funded by Hans Rausing ELDP. Deposited at ELAR Archive, SOAS, University of London.

Anderson, J. D. (2001). *The four hills of life: Northern Arapaho knowledge and life movement*. Lincoln, NE: University of Nebraska Press.

Anderson, J. D. (2009). Contradictions across space-time and language ideologies in Northern Arapaho language shift. In P. V. Kroskrity & M. C. Field (Eds.), *Native American language ideologies: Beliefs, practices, and struggles in Indian country* (pp. 48-76). Tucson, AZ: The University of Arizona Press.

Anderson, J. D. (2011). The history of time in the Northern Arapaho Tribe. *Ethnohistory, 58*(2), 229-261.

Andrén, M. (2014). Multimodal constructions in children: Is the headshake part of language? *Gesture, 14*(2).

Basso, K. H. (1970). "To give up on words": Silence in Western Apache culture. *Southwestern Journal of Anthropology, 26*(3), 213-230.

Blythe, J. (2009). *Doing referring in Murriny Patha conversation.* (PhD), University of Sydney, Sydney. Retrieved from http://hdl.handle.net/2123/5388

Blythe, J. (2010). Self-association in Murriny Patha talk-in-interaction. *Australian Journal of Linguistics, 30*(4), 447-469.

Brown, P. (2007). Principles of person reference in Tzeltal conversation. In N. J. Enfield & T. Stivers (Eds.), *Person reference in interaction: Linguistic, cultural and social perspectives* (pp. 172-202). Cambridge: Cambridge University Press.

Bucholtz, M. (2000). The politics of transcription. *Journal of Communication, 32*, 1439-1465.

Bucholtz, M., & Hall, K. (2005). Identity and interaction: A sociocultural linguistic approach. *Discourse Studies, 7*, 585-614.

Bühler, K. (1982). The deictic field of language and deictic words. In R. J. Jarvella & W. Klein (Eds.), *Speech, place, and action: Studies in deixis and related topics* (pp. 9-30). New York: John Wiley & Sons.

Chafe, W. (1976). Givenness, contrastiveness, definiteness, subjects, topics and point of view. In C. Li (Ed.), *Subject and topic*. New York: Academic Press.

Chiarcos, C. (2011). *On the dimensions of discourse salience.* Paper presented at Beyond Semantics: Corpus-based Investigations of Pragmatic and Discourse Phenomena, Gottingen, Germany.

Chiarcos, C., Claus, B., & Grabski, M. (Eds.). (2011). *Salience: Multidisciplinary perspectives on its function in discourse*. Berlin: Walter de Gruyter.

Clark, H. H. (1996). *Using language*. Cambridge: Cambridge University Press.

Clark, H. H., & Gerrig, R. J. (1990). Quotations as demonstrations. *Language, 66*(4), 764-805.

Clark, W. P. (1982). *The Indian sign language*. Lincoln: University of Nebraska Press.

Comrie, B. (1989). Some general properties of reference-tracking systems. In D. Arnold, M. Atkinson, J. Durand, C. Grover, & L. Sadler (Eds.), *Essays of grammatical theory and universal grammar* (pp. 37-51). Oxford: Oxford University Press.

Coulmas, F. (Ed.) (1986). *Direct and indirect speech*. Berlin: De Gruyter.

Couper-Kuhlen, E., & Selting, M. (2001). Introduction. In E. Couper-Kuhlen & M. Selting (Eds.), *Interactional Linguistics* (pp. 1-10). Amsterdam: John Benjamins.

Cowell, A. (2002). The poetics of Arapaho storytelling: From salvage to performance. *Oral Tradition, 17*(1), 18-52.

Cowell, A. (2002). Bilingual curriculum among the Northern Arapaho: Oral tradition, literacy, and performance. *The American Indian Quarterly, 26*(1), 24-43.

Cowell, A. (2015) *Arapaho "demonstratives" in traditional narratives*. Unpublished Manuscript.

Cowell, A., & Moss Sr., A. (2003). Arapaho place names in Colorado: Form and function, language and culture. *Anthropological Linguistics, 45*(4), 349-389.

Cowell, A., & Moss Sr., A. (2004). The linguistic structure of Arapaho personal names. In H. C. Wolfart (Ed.), *Papers of the 35th Algonquian Conference*. Winnipeg: University of Manitoba Press.

Cowell, A., & Moss Sr., A. (Eds.). (2005). *Hinono'einoo3itoono: Arapaho historical traditions, told by Paul Moss*. Winnipeg: The University of Manitoba Press.

Cowell, A., & Moss Sr., A. (2008). *The Arapaho language*. Boulder: University of Colorado Press.

Cowell, A., Moss Sr., A., & C'Hair, W. J. (Eds.). (2014). *Arapaho stories, songs, and prayers: A bilingual anthology*. Norman, OK: University of Oklahoma Press.

Cowell, A., & O'Gorman, T. (2015). *Towards a computational database of Arapaho*. Paper presented at the 45th Algonquian Conference, Chicago.

Cyr, D. (1993). Cross-linguistic quantification: Definite articles vs demonstratives. *Language Sciences, 15*(3), 195-229.

Darnell, R. (1998). *And along came Boas: Continuity and revolution in Americanist Anthropology* (Vol. 86). Amsterdam: John Benjamins Publishing Company.

Davis, J. E. (2010). *Hand Talk: Sign language among American Indian nations*. New York: Cambridge.

Diessel, H. (2006). Demonstratives, joint attention, and the emergence of grammar. *Cognitive Linguistics, 17*(4), 463-489.

Dingemanse, M., & Floyd, S. (2014). Conversation across cultures. In N. J. Enfield, P. Kockelman, & J. Sidnell (Eds.), *The Cambridge handbook of linguistic anthropology* (pp. 445-480). Cambridge: Cambridge University Press.

Dixon, R. M. W. (2003). Demonstratives: A cross-linguistic typology. *Studies in Language, 27*(1), 61-112.

Dixon, R. M. W. (2014). Basics of a language. In N. J. Enfield, P. Kockelman, & J. Sidnell (Eds.), *The Cambridge handbook of linguistic anthropology* (pp. 29-47). Cambridge: Cambridge University Press.

Du Bois, J. (1980). Beyond definiteness: The trace of identity in discourse. In W. Chafe (Ed.), *The Pear Stories*. New Jersey: Ablex.

Efron, D. (1941). *Gesture and environment*. New York: King's Crown Press.

Emmorey, K., Borinstein, H. B., Thompson, R. L., & Gollan, T. H. (2008). Bimodal bilingualism. *Bilingualism: Language and cognition, 11*(1), 43-61.

Enfield, N. J. (2001). 'Lip-pointing': A discussion of form and function with reference to data from Laos. *Gesture, 1*(2), 185-212.

Enfield, N. J. (2003). Demonstratives in space and interaction: Data from Lao speakers and implications for semantic analysis. *Language, 79*(1), 82-117.

Enfield, N. J. (2003b). Producing and editing diagrams using co-speech gesture: Spatializing nonspatial relations in explanations of kinship in Laos. *Journal of Linguistic Anthropology, 13*(1), 7-50.

Enfield, N. J. (2009). *The anatomy of meaning: Speech, gesture, and composite utternaces*. Cambridge: Cambridge University Press.

Enfield, N. J., Kita, S., & De Ruiter, J. P. (2007). Primary and secondary pragmatic functions of pointing gestures. *Journal of Pragmatics, 39*, 1722-1741.

Engberg-Pedersen, E. (2003). From pointing to reference and predication: Pointing signs, eyegaze, and head and body orientation in Danish Sign Language. In S. Kita (Ed.), *Pointing: Where language, culture, and cognition meet* (pp. 269-292). London: Lawrence Erlbaum Associates.

Evans, N., & Levinson, S. C. (2009). The myth of language universals: Language diversity and its importance for cognitive science. *Behavioral and Brain Sciences, 32*(5), 429-492.

Farnell, B. (1995). *Do you see what I mean? Plains Indian sign talk and the embodiment of action*. Austin: University of Texas Press.

Fox, B. (1987). *Discourse structure and anaphora*. Cambridge: Cambridge University Press.

Fox, B. (2007). Principles shaping grammatical practices: an exploration. *Discourse Studies, 9*, 299-318.

Fox, B., Hayashi, M., & Jasperson, R. (1996). Resources and repair: A cross-linguistic study of syntax and repair. In E. Ochs, E. Schegloff, & R. Thompson (Eds.), *Interaction and grammar* (pp. 185-237). Cambridge: Cambridge University Press.

Gipper, S. (2014). Intersubjective evidentials in Yurakaré: Evidence from conversational data and a first step toward a comparative perspective. *Studies in Language, 38*(4), 792-835.

Givon, T. *(1983). Topic continuity in discourse.* Amsterdam: John Benjamins.

Goffman, E. (1981). *Forms of talk*. Philadelphia: University of Pennsylvania Press.

Goodwin, C. (1984). Notes on story structure and the organization of participation. In M. Atkinson & J. Heritage (Eds.), *Structures of social action* (pp. 225-246). Cambridge: Cambridge University Press.

Goodwin, C. (1986). Audience diversity, participation and interpretation. *Text, 6*(3), 283-316.

Goodwin, C. (1996). Transparent vision. In E. Ochs, E. A. Schegloff, & S. Thompson (Eds.), *Interaction and grammar* (pp. 370-404). Cambridge: Cambridge University Press.

Goodwin, C. (2000). Action and embodiment within situated human interaction. J*ournal of Pragmatics, 32*, 1489-1522.

Goodwin, C. (2003). Pointing as situated practice. In S. Kita (Ed.), *Pointing: Where language, culture and cognition meet* (pp. 217-241). Mahwah, NJ: Lawrence Erlbaum.

Goodwin, C. (2003b). Conversational frameworks for the accomplishment of meaning in aphasia. In C. Goodwin (Ed.), *Conversation and brain damage* (pp. 90-116). Oxford: Oxford University Press.

Goodwin, C. (2007). Interactive footing. In E. Holt & R. Clift (Eds.), *Reporting talk* (pp. 16-46). Cambridge: Cambridge University Press.

Greymorning, S. (1997). *Going beyond words: The Arapaho immersion program*. Flagstaff, Arizona: Division of Educational Services, CEE, Northern Arizona University.

Gross, F. (1951). Language and value changes among the Arapaho. *International Journal of American Linguistics, 17*(1), 10-17.

Hanks, W. F. (1990). *Referential practice: Language and lived space among the Maya*. Chicago: The University of Chicago Press.

Hanks, W. F. (1992). The indexical ground of deictic reference. In A. Duranti & C. Goodwin (Eds.), *Rethinking context: Language as an interactive phenomenon* (11 ed.). New York: Cambridge University Press.

Hanks, W. F. (2009). Fieldwork on deixis. *Journal of Pragmatics, 41*, 10-24.

Harrison, S. (2010). Evidence for node and scope of negation in coverbal gesture. *Gesture, 10*(1), 29-51.

Haviland, J. B. (1996). Projections, transpositions, and relativity. In J. J. Gumperz & S. C. Levinson (Eds.), *Rethinking linguistic relativity* (pp. 271-323). Cambridge: Cambridge University Press.

Haviland, J. B. (2003). How to point in Zinacantán. In S. Kita (Ed.), *Pointing: Where language, culture, and cognition meet* (pp. 139-170). Mahwah, N.J.: Lawrence Erlbaum Associates.

Haviland, J. B. (2005). Linguistic anthropology: Gesture as cultural and linguistic practice. In A. Sujoldzic (Ed.), *Encyclopedia of life support systems (EOLSS)*. Oxford: Developed under the Auspices of the UNESCO, Eolss Publishers [http://www.eolss.net].

Hayashi, M., & Yoon, K.-E. (2006). A cross-linguistic exploration of demonstratives in interaction: With particular reference to the context of word-formulation trouble. *Studies in Language, 30*(3), 485-540.

Hepburn, A., & Bolden, G. B. (2013). The conversation analytic approach to transcription. In J. Sidnell & T. Stivers (Eds.), *The handbook of conversation analysis* (pp. 57-76). Malden, MA: Wiley-Blackwell.

Heritage, J. (2008). Conversation analysis as social theory. In B. Turner (Ed.), *The new Blackwell companion to social theory* (pp. 300-320). Oxford: Blackwell.

Himmelmann, N. P. (1996). Demonstratives in narrative discourse: A taxonomy of universal uses. In B. Fox (Ed.), *Studies in anaphora*. Amsterdam: John Benjamins.

Himmelmann, N. P. (1998). Documentary and descriptive linguistics. *Linguistics, 36*, 161-195.

Himmelmann, N. P. (2012). Linguistic data types and the interface between language documentation and description. *Language Documentation and Conservation, 6*, 187-207.

Hopper, P., & Thompson, S. (1980). Transitivity in grammar and discourse. *Language, 56*, 251-299.

Hymes, D. (1962). The ethnography of speaking. In T. Gladwin & W. C. Sturtevant (Eds.), *Anthropology and human behavior* (pp. 13-53). Washington, DC: Anthropological Society of Washington.

Johnston, T. (2013). Towards a comparative semiotics of pointing actions in signed and spoken languages. *Gesture, 13*(2), 109-142.

Kay, P., & Michaelis, L. (2012). Constructional meaning and compositionality. In C. Maienborn, K. von Heusinger, & P. Portner (Eds.), *Semantics: An international handbook of natural language meaning* (Vol. 3, pp. 2271-2296). Berlin: de Gruyter.

Kendon, A. (1992). Some recent work from Italy on quotable gestures (emblems). *Journal of Linguistic Anthropology, 2*(1), 92-108.

Kendon, A. (2004). *Gesture: Visible action as utterance*. New York: Cambridge University Press.

Kendon, A. (2011). Vocalisation, speech, gesture, and the language origins debate: An essay review on recent contributions. *Gesture, 11*(3), 349-370.

Kendon, A., & Versante, L. (2003). Pointing by hand in "Neapolitan". In S. Kita (Ed.), *Pointing: Where Language, Culture, and Cognition Meet* (pp. 109-137). Mahwah, NJ: Lawrence Erlbaum.

Kroeber, A. (1916). *Arapaho dialects* (Vol. 12). Berkeley: University of California Press.

Kuhn, T. S. (1970). *The structure of scientific revolutions* (2nd ed.). Chicago: University of Chicago Press.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. New York: Cambridge University Press.

Le Guen, O. (2011). Modes of pointing to existing spaces and the use of frames of reference. *Gesture, 11*(3), 271-307.

Lemly, H. (1880). Among the Arrapahoes. *Harper's Magazine, LX*, 494-501.

Levinson, S. C. (1979). Activity types and language. *Linguistics, 17*, 365-399.

Levinson, S. C. (2003). *Space in language and cognition: Explorations in cognitive diversity*. Cambridge: Cambridge University Press.

Levinson, S. C. (2006). On the human "interaction engine". In N. J. Enfield & S. C. Levinson (Eds.), *Roots of human sociality: culture, cognition and interaction* (pp. 39-69). Oxford Berg.

Levinson, S. C., & Evans, N. (2010). Time for a sea-change in linguistics: Response to comments on 'The myth of language universals'. *Lingua, 120*, 2733-2758.

Liddell, S. K. (2003). *Grammar, gesture, and meaning in American Sign Language*. Cambridge: Cambridge University Press.

Lyons, C. (1999). *Definiteness*. Cambridge: Cambridge University Press.

Mallery, G. (2001). *Sign language among North American Indians*. Mineola: Dover Publications, Inc.

Mazeland, H. (2013). Grammar in conversation. In J. Sidnell & T. Stivers (Eds.), *The handbook of conversation analysis* (pp. 475-491). Malden, MA: Wiley-Blackwell.

McNeil, D., Cassell, J., & Levy, E. T. (1993). Abstract deixis. *Semiotica, 95*(1), 5-19.

McNeill, D. (2005). *Gesture and thought*. Chicago: University of Chicago Press.

Michael, L. (2008). *Nanti evidential practice: Language, knowledge, and social action in an Amazonian society*. (Ph.D. Dissertation), The University of Texas at Austin.

Mithun, M. (1987, Feb. 14-16). *The grammatical nature and discourse power of demonstratives*. Paper presented at the Thirteenth Annual Meeting of the Berkeley Linguistics Society, UC Berkeley.

Mithun, M. (1987b). Is basic word order universal? In R. Tomlin (Ed.), *Coherence and grounding in discourse*. Amsterdam: John Benjamins.

Moerman, M. (1988). *Talking culture: Ethnography and conversation analysis*. Philadelphia: University of Pennsylvania Press.

Mondada, L. (2007). Multimodal resources for turn-taking: Pointing and the emergence of possible next speakers. *Discourse Studies, 9*(2), 194-225.

Mondada, L. (2012). Deixis: An integrated interactional multimodal analysis. In P. Bergmann & J. Brenning (Eds.), *Interaction and usage-based grammar theories. What about prosody and visual signals?* (pp. 173-206). Berlin: De Gruyter.

Mondada, L. (2013). The conversation analytic approach to data collection. In J. Sidnell & T. Stivers (Eds.), *The handbook of conversation analysis* (pp. 32-56). Malden, MA: Wiley-Blackwell.

Mulkern, A. E. (2007). Knowing who's important: Relative discourse salience and Irish pronominal forms. In N. Hedberg & R. Zacharski (Eds.), *The grammar-pragmatics interface*. Amsterdam: John Benjamins.

Næss, Å. (2011). Case on the margins: Pragmatics and argument marking in Vaeakau-Taumako and beyond. In S. Kittilä, K. Västi, & J. Ylikoski (Eds.), *Case, animacy and semantic roles*. Amsterdam: John Benjamins.

Orie, O. l. O. l. (2009). Pointing the Yoruba way. *Gesture, 9*(2), 237-261.

Payne, T. E. (1997). *Describing morphosyntax: A guide for field linguists*. Cambridge: Cambridge University Press.

Proulx, P. (1988). The demonstrative pronouns of Proto-Algonquian. *International Journal of American Linguistics, 54*(3), 309-330.

Sacks, H., & Schegloff, E. A. (1979). Two preferences in the organization of reference to persons in conversation and their interaction. In G. Psathas (Ed.), *Everyday language: Studies in ethnomethodology* (pp. 15-21). New York: Irvington Publishers, Inc.

Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A Simplest Systematics for the organization of turn-taking for conversation. *Language, 50*(4), 696-735.

Salzmann, Z. (1961). Bibliography of works on the Arapaho division of Algonquian. *International Journal of American Linguistics, 27*(2), 183-187.

Sandoval, R. A. (2013). The forefinger/thumb alternation in Arapaho Pointing: Participation space as a frame of reference. In *Proceedings of the 39th Meeting of the Berkeley Linguistics Society. Special session on space and directionality in language*. Manuscript in preparation.

Sandoval, R. A. (2014). Gestures in northern Native America: Bimodal talk in Arapaho. In C. Müller, E. Fricke, S. Ladewig, A. Cienki, D. McNeill, & S. Tessendorf (Eds.), *Body-language-communication: An international handbook on multimodality in human interaction* (Vol. Volume 2). Berlin: Mouton De Gruyter.

Sapir, E. (1921). *Language: An introduction to the study of speech*. New York: Harcourt, Brace.

Saville-Troike, M. (2003). *The ethnography of communication: An Introduction* (3rd ed.). Malden, MA: Blackwell Publishing.

Schegloff, E. A. (1993). Reflections on quantification in the study of conversation. *Research on Language and Social Interaction, 26*(1), 99-128.

Schegloff, E. A. (1996). Some practices for referring to persons in talk-in-interaction: A partial sketch of a systematics. In B. Fox (Ed.), *Studies in anaphora* (pp. 437-485). Amsterdam: John Benjamins.

Schegloff, E. A. (2006). Interaction: The infrastructure for social institutions, the natural ecological niche for language, and the arena in which culture is enacted. In N. J. Enfield & S. C. Levinson (Eds.), *Roots of human sociality: Culture, cognition and interaction* (pp. 71-96). Oxford: Berg.

Schegloff, E. A. (2007). Categories in action: Person-reference and membership categorization. *Discourse Studies, 9*, 433-461.

Schmid, H.-J. r. (2007). Entrenchment, salience, and basic levels. In D. Geeraerts & H. Cuyckens (Eds.), *The Oxford handbook of cognitive linguistics*. Oxford: Oxford University Press.

Seyfeddinipur, M. (2011). Reasons for documenting gestures and suggestions for how to go about it. In N. Thieberger (Ed.), *The Oxford handbook of linguistic fieldwork*. Oxford: Oxford University Press.

Shibatani, M. (2006). On the conceptual framework for voice phenomena. *Linguistics, 44*(2), 217-269.

Sidnell, J. (2006). Coordinating gesture, talk and gaze in reenactments. *Research on Language and Social Interaction*, 39, 377-409.

Sidnell, J. (2007). Repairing person reference in a small Caribbean community. In N. J. Enfield & T. Stivers (Eds.), *Person reference in interaction: Linguistic, cultural, and social perspectives*. Cambridge: Cambridge University Press.

Sidnell, J. (2010). *Conversation Analysis: An Introduction* (1st ed.). Malden, MA: Wiley-Blackwell.

Sloetjes, H., & Wittenburg, P. (2008). Annotation by category – ELAN and ISO DCR. In *Proceedings of the 6th International Conference on Language Resources and Evaluation (LREC 2008)*.

Spiro, M. E. (1992). Cultural relativism and the future of anthropology. In G. E. Marcus (Ed.), *Rereading cultural anthropology*. Durham, NC: Duke University Press.

Stivers, T. (2007). Alternative recognitionals in person reference. In N. J. Enfield & T. Stivers (Eds.), *Person reference in interaction: Linguistic, cultural, and social perspectives* (pp. 73-96). Cambridge: Cambridge University Press.

Stivers, T. (2008). Stance, alignment, and affiliation during storytelling: When nodding is a token of affiliation. *Research on Language and Social Interaction, 41*(1), 31-57.

Stokoe, W. C. (2005). Sign language structure: An outline of the visual communication systems of the American deaf. *Journal of Deaf Studies and Deaf Education, 10*(1), 3-37.

Treffner, P., Peter, M., & Kleidon, M. (2008). Gestures and phases: The dynamics of speech-hand communication. *Ecological Psychology, 20*, 32-64.

Vagner, I. (2014). *Language Revitalization on the Web: Technologies and ideologies among the Northern Arapaho.* (M.A.), University of Colorado.

van Dijk, T. (1979). Relevance assignment in discourse comprehension. *Discourse Processes, 2*, 113-126.

Van Valin, R. D., Jr., & Foley, W. A. (1980). Role and reference grammar. In E. A. Moravcsik & J. R. Wirth (Eds.), *Current approaches to syntax* (pp. 329-352). New York: Academic Press.

West, L. M. (1960). *The sign language, an analysis.* (PhD Dissertation), Indiana University.

Wilkins, D. (1997). Handsigns and hyperpolysemy: Exploring the cultural foundations of semantic association. In D. Tryon & M. Walsh (Eds.), *Boundary rider: Essays in honour of Geoffrey O'Grady* (Vol. 136, pp. 413-444). Canberra, A.C.T., Australia: Pacific Linguistics, Research School of Pacific and Asian Studies, Australian National University.

Wilkins, D. (2003). Why pointing with the index finger is not a universal (in sociocultural and semiotic terms). In S. Kita (Ed.), *Pointing: Where language, culture, and cognition meet* (pp. 171-215). London: Lawrence Erlbaum Associates.

Wright, S., & Givon, T. (1987). The pragmatics of indefinite reference: Quantified text-based studies. *Studies in Language, 11*(1), 1-33.

APPENDIX A

Joke about little girl's translation of Arapaho (ACD 28a)

rough length: 1minute, 10 secs; 20 lines

107.1   {57}   huut   tih-no'uuhu-3i'
                     here   when-arrive-3PL
                     When they moved here,

107.2   [PT: at a tipi]   [cover | buffalo]
                     wohoe'-   hini'   canvas no3oon
                     DUBIT-   DEM   canvas   instead
                     maybe [that's when they began using] that canvas instead [of buffalo hide],

107.3   ['past']
                         teecxo'
                         long_ago
           way back then.

108   {45}   beniiinen-iini   nih-'ii-3i'
                     soldier-DETACH PAST-said-3PL
                     Soldier [cloth] they said.

109   {57}   yeah   beniiinen-
                     yeah   soldier-
                     yeah. Soldier...

110   {45}   beniiinen-iini   bee3o'ooti-'
                     soldier-DETACH hard_cloth-0S
                     Soldier hard cloth.

111   {57}   yeah

112   {45}   he-i'eibehe'   hii-beet-
                2S-grandma   3S.IMPERF-want_to-
                "Your grandmother, what's she want [to buy]…"

113   {57}   yeah

114   {45}   heeyounii   'oh   hii-beet-otoonoo3oo
                what_is_it?   and   3S.IMPERF-want_to-thing_bought.NI.DEPPART
                "What is it that she wants to buy?"

115   [thumb PT: at school ……………….………….]
                noh   nenee'   nih-nee-neyei3ei'i-3i'   huut   hiseihiitei'yoo
                and   it   PAST-REDUP-to_school-3PL   here   girl.NA
                And that...they went to school here, the little girl.

116   {57}   yeah

117.1   {45}   "[thumb PT: grandma space]"
                koo-he-et-cee'in   he-i'eibehe'
                INTERR-2S-FUT-not_know 2S-grandmother.NA.OBLPOSS
                "Do you know what your grandmother"

117.2   toon-hii-beet-otoonoo3oo
                almost-3S.IMPERF-want-thing_bought.NI.DEPPART
                "wants to buy,"

117.3   ~~****<PT: shopkeeper space>
                hee3eihi-t   nuhu'   nih'oo3ou'u
                says-3.S   DEM   white_person(s).NA.OBV
                this white man was saying.

118   {57}   uhm

119   {45}   "[thinking]"

ne'-ii-   -kokoh'u3ecoo-t   nehe'   hiseihiitei'yoo
then-IMPERF-   -think-3.S   DEM   girl.NA
Then this little girl was thinking.

120.1   ['speaking']   [thumb PT: grandma space]

nii-cowoo3itee-t   heeneis-beet-
IMPERF-translate-3.S whatever-want_to-
She's translating what [her grandmother] wants [to buy].

120.2   [PT: at tipi model]

hini-i'iiwoho   niiinon
3S-grandma.OBLPOSS.OBV   tipi.NI
Her grandmother [wants material for] a tipi.

121   {57} yeah

122   {45} wohei   noxuhu heeyounii he-i'eibehe' hii-hoobeihiit
              okay   hurry   what_is_it? 2S-grandma   3S.IMPERF-thing_lacking
              "Well hurry up! What is it that your grandmother needs?"

123.1   [gesture ………………]

bee3o'ooti-'   nenee' hih-'oobeihiit
hard_cloth-0S   it   3S.PAST-thing_lacking
Canvas was what

123.2   ~~~~***<thumb PT: grandma space>

hini' betebi
DEM   old_woman.NA
that old lady needed.

123.3 {57}   yeah

123.4   {59}   [laughter]

124   {45}   "[thumb PT: grandma space]"
               "Old Lady wants hard rag" [the little girl said].

125   {57}   [laughter …..]
                              hard rag.

126   {45}   [gesture …………………………………………….………]
               hoowoe'in   toh-nee'eesi-nihii-   heetcihnee-   -woow   niisnee'ee-
               not_know   since-thus-say-   ???   -now.PERF ???
               She didn't know that it was called... Not how [she knew it in Arapaho].

127   {57}   bee3o'ooti-'
               hard_cloth-0S
               Canvas.

[45 goes on to explain the joke in English]